

EFFECTS OF CLOTHING INTEREST AND KNOWLEDGE
ON PERCEPTIONS AND EVALUATION OF
CLOTHING PRODUCTS: MODERATING EFFECTS ON
PRICE-PERCEIVED QUALITY RELATIONSHIPS

by

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Clothing and Textiles

(ABSTRACT)

The differential effects of clothing interest and knowledge on the utilization of price and intrinsic attributes on product evaluation and behavioral intentions were investigated. The impact of clothing interest and knowledge, price, and intrinsic attributes on attitude toward advertisements and perceptions of relevance, typicality, and fashionability were examined. Causal relationships among constructs were verified through path analysis.

A conceptual model was developed and tested. To test the proposed model and additional propositions, a survey was conducted with manipulated variables. Data were collected in Clothing and Textiles departments of three universities and Communications and Marketing departments in one university. Respondents evaluated a pair of dress slacks inclusive of manipulated price and intrinsic attributes. A total of 417 questionnaires were subjected to statistical analysis. The items used to measure the theoretical constructs were thoroughly tested to assure the reliability of the measures and manipulation checks were conducted. The data were analyzed by multiple regression to test the

significance of the proposed relationships. To test the differences between the high and low clothing interest and knowledge conditions, subjects were divided into two groups based on median scores on clothing interest and clothing knowledge scales. Then the data were subjected to analysis of variance and Duncan's Multiple Range Test.

The results indicate that taken together, price, intrinsic attributes, clothing interest and knowledge significantly help to predict perceptions of quality, monetary sacrifice, perceptions of benefits, perceptions of value, willingness to buy, search intention, and attitude toward advertisements. Intrinsic attributes were significant in predicting the perceptions of quality, benefits, monetary sacrifice, value, and subjects' willingness to buy, search intention, attitude toward advertisements, and perceptions of typicality. Clothing interest was significant in predicting perceptions of monetary sacrifice, perceptions of benefits, perceptions of value, and willingness to buy. The proposed effect of clothing knowledge was significant in predicting subjects' perceptions of quality and intentions to search. The model specifying the causal relationships among the proposed variables was analyzed by Path Analysis. The results indicated that the relationships were significant and thus the proposed model was supported.

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CHAPTER I

INTRODUCTION

The Problem

Manufacturers, retailers, and academicians have increased interest in apparel quality. This interest arises in part from consumers' increased expectations and from the intensification of competition in the industry. Style changes happen more rapidly than in the past because of innovations in fabric and also because consumers adopt new fashions more quickly. Today's consumer has become a wiser shopper, insisting on superior quality and better value as a justification for higher prices (Havinoviski, 1988).

Influenced by heavy import penetration and changes in the U.S. consumer market, the domestic apparel industry began to appreciate the superior quality of products as a potent competitive advantage to differentiate their products and establish a niche in the marketplace. Moreover, it is recognized that customers' perceptions of quality, benefits, and value comprise the actuality faced by the apparel industry which is operating in a global marketplace against international competition.

From the retail perspective, private label programs have recently attracted a great deal of interest among retailers. Industry-wide price competition increased with the growth of discount retailers offering brand name merchandise at off-price. Private label (store brand) goods are items made exclusively for one retailer identified by that retailer name. In this situation, retailers are much more involved in manufacturing as they specify standards and establish the quality of apparel offered. Both

manufacturers and retailers need to know what information cues consumers utilize in perceptions of product quality. In academic fields, retailing/merchandising curricula are designed to prepare students to enter the textile/apparel industry (Packard, Winters, & Axelrod, 1985). Students in these programs are expected to evaluate the quality of garments without necessarily incorporating experience in garment construction.

There is recognition of the limitations of previous price-perceived quality research and conceptualization and of the need for improved understanding of the quality construct and its determinants. Moreover, the prevalence of apparel assessment in the clothing and textile area creates the crucial need to define and measure quality perception in relation to the other constructs of value and willingness to buy (Norton, 1991; Sieben, 1990). Zeithaml (1988) also emphasized the need for extending and advancing research in quality.

There are two concepts of product quality; objective and subjective. Several researchers (Dodds & Monroe, 1985; Garvin, 1983, 1987; Holbrook & Corfman, 1985; Jacoby & Olson, 1985; Parasuraman, Zeithaml, & Berry, 1985) have distinguished between objective and subjective quality. Objective quality refers to measurable and actual technical superiority or excellence of the product (Monroe & Krishnan, 1985). Subjective quality or perceived quality is a higher level abstraction and a judgment about a product's overall excellence within a consumers's evoked set (Zeithaml, 1988). In recent years, researchers have debated the use of objective measures of quality on methodological grounds (Curry & Faulds, 1986; Dardis, Spivak, & Shih, 1985; Eckman, Damhorst, & Kadolph, 1990; Maynes, 1976; Norton, 1991; Norum & Clark, 1989; Sieben, 1990; Sproles, 1986). However, there is no evidence of a strong relationship between objective quality and price (Curry, 1985; Gerstner, 1985; Oxenfeldt, 1950; Sproles, 1977), and studies of price effects on perceived quality have produced

equivocal results and have been flawed by demand effects (Monroe & Krishnan, 1985).

Researchers in the clothing and textiles field have been concerned with the measurement of objective quality or quality-related properties characterizing the product, partly in an attempt to develop standards and quality grading scales (Carry & Sproles, 1978; Dardis et al., 1985; Knoll & Shiloh, 1976; McCullough & Morris, 1980). Major concern centers on the selection and weighting of attributes to measure objective quality.

It is often assumed that the consumer has perfect knowledge about the properties of clothing and is perfectly knowledgeable in assessing the quality of apparel because the consumer selects and wears apparel. In reality, consumers do not have perfect knowledge about numerous clothing products and information needed in today's complex and diverse marketplace. In 1961, Stigler asserted that traditional economics had ignored the issue of differential information available to manufacturers /retailers and consumers. That is, consumers may not perfectly know the quality of the product and alternatives in the marketplace. Rather, consumers inform themselves about what is available in the marketplace only to the point where the marginal cost of gathering more information equals or exceeds the marginal return from doing so. Thus, manufacturers/retailers may inform consumers about the quality of the product to an extent by using price, advertising, warranties, and other signals.

Available research indicates that consumers generally are not able to assess perfectly a product's quality. In imperfect knowledge situations, consumers tend to make judgments of quality on the basis of surrogate or indirect indicators of quality, particularly price. By integrating the price cue with quality perception, consumers may assign a meaning of some level of quality to the price, i.e., price-quality inference. This meaning may, in turn, influence consumer price perceptions such that a clothing item with higher price is perceived as

higher quality at the same time that greater sacrifice is perceived by paying a higher price.

However, the research on the price-perceived quality proposition is inconclusive and empirical results indicate no consistent relationship between price and quality in apparel. Several variables involving consumers' individual differences have been hypothesized to influence the price-perceived quality relationship (Jacoby & Olson, 1977; Peterson & Wilson, 1985; Zeithaml, 1988). In this study, the effects of individual differences in clothing interest and knowledge on clothing evaluation and behavioral intentions were of primary interest.

Purpose of the Research

Classical economic theory assumes that consumers have perfect and complete knowledge about products and markets, and they make utility-maximizing decisions under their income constraints at given prices. Due to the everyday nature of most apparel, it is assumed that consumers are perfectly competent in the evaluation of apparel products. In real situations, consumers face a vast array of information and products with incomplete knowledge. It was Scitovszky (1945) who pointed out that consumers often use information cues (e.g., price) to evaluate products. Since then, many studies of price effects on perceived quality have reported equivocal results and have been flawed as noted by Monroe and Krishnan (1985).

Building on Cox's (1967) original conceptualization, Olson (1977) suggested that consumers were likely to use different types of information depending on their degree of knowledge or expertise. Rao and Monroe (1988) showed that, as familiarity increased, reliance on extrinsic cues first declined and then increased while reliance on intrinsic cues continuously increased with increased familiarity. Also, the knowledge structures of

expert and novice consumers differently affect the product categorization (Alba & Hutchinson, 1987; Brucks, 1985, 1986). Categorization is a cognitive process by which product meanings at different levels of abstraction are formed into classifications (Rosch, 1978; Sujana, 1985). Evidence from clothing research suggests that clothing interest affects clothing evaluation and purchases.

The purpose of this research was to investigate the moderating effects of clothing knowledge and clothing interest on the utilization of information cues in perceptions of clothing quality, perceptions of benefits, perceptions of value, perceptions of monetary sacrifice, willingness to buy, search intention, and attitude toward presented advertisement.

The research objectives are:

- 1) to investigate the relative effects of intrinsic attributes and of the extrinsic attribute of price on perceptions of apparel quality, perceptions of benefits, perceptions of value, perceptions of monetary sacrifice, willingness to buy, search intention, and attitude toward advertisement.

- 2) to measure the moderating effects of clothing interest and clothing knowledge on utilization of intrinsic attributes and of the extrinsic attribute of price in perceptions of apparel quality, perceptions of benefits, perceptions of value, perceptions of monetary sacrifice, willingness to buy, search intention, and attitude toward advertisement.

- 3) to explore the gender differences in the effects of independent variables on each dependent variable.

- 4) to measure the effects of price, intrinsic attributes, clothing interest, and clothing knowledge on the perceptions of fashionability, relevance, and typicality.

5) to measure the relationships among the theoretical constructs of price, intrinsic attributes, perceptions of quality, perceptions of benefits, perceptions of monetary sacrifice, perceptions of value, willingness to buy, and search intention.

Significance of The Research

This research contributes to both the clothing and textiles and the marketing fields by addressing the issues discussed earlier. The conceptual model integrates the moderating effects of knowledge and clothing interest on utilization of information cues to evaluate clothing products. Furthermore, there are a number of important implications for manufacturers and retailers to help them efficiently and effectively manage information cues for differentially knowledgeable consumers and consumers with differential interest in clothing. The contribution of this research is addressed in terms of its advancement of marketing and clothing knowledge in the conceptual, methodological, and substantive domains.

Conceptual Aspects

This research may contribute to greater understanding of the way imperfect information affects the efficiency of market operation. More understanding of how imperfect information affects the way consumers make judgments and purchase decisions is an important addition to marketing knowledge. Additionally, this research contributes to the clothing and textiles field by providing a conceptual model that goes beyond the original price-perceptions of quality paradigm by synthesizing knowledge

from clothing and textiles, consumer behavior, psychology, and applied economics.

The conceptual model integrates the moderating effects of clothing interest and knowledge on utilization of information cues in evaluating clothing products. Specifically, it conceptualizes how clothing interest and clothing knowledge affect the utilization of information cues for evaluating apparel products. In addition, this research conceptualizes the interrelationships between quality, benefits, monetary sacrifice, value, search intentions, and willingness to buy, and provides conceptual definitions for the theoretical constructs. Finally, for the marketing field, this research contributes to the stream of price-perceived quality research by extending into clothing products and by introducing the construct of clothing interest into the conceptual model and verifying its effects on clothing product evaluations.

Methodological Aspects

In addition to the conceptual contributions, the methodological contributions are also significant. A conceptual model from the marketing area is employed to systematically measure each construct, and measures for constructs new to clothing and textiles research are developed. The constructs are measured using multiple items, and the reliability of the scales is assessed. By employing multiple regression, the proposed effects of the independent variables on the dependent measures are predicted. The conceptual model is tested using Path modeling for assessing causal relationships between the theoretical constructs. In order to enhance the validity of the results, manipulation checks of the independent variables were conducted.

Substantive Aspects

This research is important to the clothing industry as it increases our understanding of how information cues used by manufacturers and retailers affect consumers' subjective evaluations of products. Increasing demand for high quality products and changes in consumer values are being reflected in a greater focus on quality. The clothing field has concentrated on which attributes (information cues) affect the objective and perceived quality, and also which evaluative criteria influence consumers' clothing evaluation and purchases. This study extends the view by adding new constructs to the field and more focus on the consumers' view, which could help manufacturers and retailers.

By maintaining a high quality or implementing a program to increase the quality and the benefits of the product, manufacturers and retailers could compete more effectively. This research should help firms better understand consumer perceptions of benefits which can be affected by intrinsic attributes other than those influencing quality perception. Manufacturers and retailers can gain insight into the relative importance of price and intrinsic cues as information in the development of product and advertising/promotional strategies. Understanding the link between clothing purchase and consumers' value perception could be successfully applied to clothing product positioning for a profitable strategic niche.

Overview of the Presentation

The dissertation is organized into six chapters. The next chapter presents an integrative review of studies that examined clothing evaluation and the effects of price and intrinsic attributes on product evaluations. A number of operational and methodological issues in the

studies are systematically examined and discussed in detail. Secondly, the review of the literature related to product knowledge in information processing is presented. Thirdly, studies on clothing interest are discussed.

Chapter III develops the theoretical framework for the study based on the literature review. The conceptual developments in the price-perceived quality streams of research are synthesized and the conceptual model is developed and explained. The chapter introduces and defines several theoretical constructs pertaining to the conceptual model and highlights conceptual propositions germane to the topic of interest. Research hypotheses are derived based on the conceptual model.

Chapter IV describes the research procedures employed in the dissertation. First, the research design is presented, followed by the development of measures pertaining to the independent and the dependent variables. Then, data collection and the data analysis including the reliability assessment of the measures and the results of preliminary analysis are discussed. Further, with appropriate assumptions, the three approaches for testing the proposed hypotheses are discussed, describing the data analysis procedure for each hypothesis. Finally limitations of the research are presented.

The research results are presented and discussed in Chapter V. Each hypothesis is tested, and the findings are compared to those of related studies.

The final chapter presents the conclusions of this dissertation. The results are discussed with corresponding hypotheses and implications. Perspectives for future research are finally discussed.

CHAPTER II

REVIEW OF LITERATURE

Clothing Evaluation and Price-Perceived Quality Studies

The purpose of the research review was to systematically establish the concepts, variables, or situations, and the theoretical propositions linking these variables (McGrath & Brinberg, 1983; Monroe, 1986). In order to perform an integrative research review, formulation of an explicit methodology is necessary in the goal of accumulating knowledge across research studies (Monroe, 1986; Monroe & Krishnan, 1985).

The first step in an integrative review was to determine the research questions which guided the search process. The research domain here includes studies that have dealt with clothing evaluation and incorporated price and quality aspects into clothing evaluation. The search process led to the identification of 24 studies in the clothing and textiles area, some of them unpublished dissertations. Next, the 24 studies were coded on several dimensions: author, year, independent variables, dependent variables, setting, design, products and selection criteria, stimuli, and subjects. Researchers in the clothing evaluation studies have used different selections of independent and dependent variables as well as different operational definitions for the variables, different types of products for evaluation, and different means of stimuli presentation. This variation does complicate deduction of generalizations from research. The results of a qualitative review of the clothing evaluation studies and several studies in the marketing field are presented and discussed.

Dependent Variables

As shown in Table 1, a number of dependent variables have been used: satisfaction (Conklyn, 1971; Francis & Dickey, 1984); evaluative criteria (Cassill & Drake, 1987; Jenkins & Dickey, 1976; Stemm, 1980); importance of clothing attributes (Baugh & Davis, 1989; Hatch & Roberts, 1985; Rabolt, 1990); and purchase criteria (Eckman, Damhorst, & Kadolph, 1990; Gipson & Francis, 1986).

Unlike studies in marketing research, a number of clothing evaluation studies have used estimation of both price and quality as dependent variables (Behling & Wilch, 1988; Dardis, Spivak, & Shih, 1985; Davis, Kern, & Sternquist, 1986; Heisey, 1990; McCullough & Morris, 1980; Norum & Clark, 1989; Sternquist & Davis, 1986). Dardis et al. (1985) reported laboratory tests on men's shirts and indicated that there were no major differences in quality due to country of origin. Sternquist and Davis (1986) found that country of origin did not have a significant influence on consumers' estimation of price and perceptions of quality.

Apparel quality was measured in some studies through the use of apparel quality ratings (Behling & Wilch, 1988; Davis, 1987; Heisey, 1990; Morganosky & Lazard, 1987), whereas other studies utilized surrogate measures of objective apparel quality (i.e., performance properties and compositional features, certain clothing attributes as quality indicators). Gale and Dardis (1970) tried to determine whether actual or measured clothing quality correlated positively with price by employing laboratory-test data on performance properties.

The concept of quality in apparel research is loose and inconsistent as evidenced in the literature (Gale & Dardis, 1970; Glock & Kunz, 1990; Stamper, Sharp, & Donnell, 1986). Definitions of the quality construct have not always been made clear. Among the many studies reviewed, Norum and Clark (1989) defined the quality construct; it was the extent to which a product exhibited selected characteristics. As pointed out by Norton

TABLE 1

DEPENDENT VARIABLES

<u>Study</u>	<u>Dependent Variables</u>
Gale and Dardis (1970)	Performance properties
Conklyn (1971)	Satisfaction
Jenkins and Dickey (1976)	Evaluative criteria Overall acceptance level
Knoll and Shiloh (1976)	Importance of the end-use properties Expected wear life of each garment type
McCullough and Morris (1980)	Importance of the end-use properties
Stemm (1980)	Attitudes and evaluative criteria
Francis and Dickey (1984)	Satisfaction before and after wearing
Dardis, Spivak, and Shih (1985)	Price and quality differences
Davis (1985)	Perceptions of quality
Hatch and Roberts (1985)	Importance rating of information questioned
Davis, Kern, and Sternquist (1986)	Perceived price and perceived quality
Gipson and Francis (1986)	Purchase criteria
Kelley, Strother, Blouin, and Crouch (1986)	Ratings of aesthetic and performance characteristics

TABLE 1 continued

<u>Study</u>	<u>Dependent Variables</u>
McLean, Roper, and Smothers (1986)	Preference
Sternquist and Davis (1986)	Estimation of price Perceived quality
Cassill and Drake (1987)	Importance in evaluative criteria
Davis (1987)	Quality ratings
Morganosky and Lazarde(1987)	Quality ratings
Behling and Wilch (1988)	Price estimation Willingness to buy
Baugh and Davis (1989)	Perceptions of garment characteristics
Norum and Clark (1989)	Price and quality differences
Eckman, Damhorst, and Kadolph (1990)	Clothing criteria for purchase
Heisey (1990)	Quality rating Estimation of price
Rabolt (1990)	21 Clothing attributes representing possible quality indicators

(1991), many researchers seem to agree that apparel quality has a multidimensional nature, in that it is a composite of a set of characteristics. In many clothing evaluation studies reviewed, apparel quality was described in terms of fabric and garment construction, appearance, or design, but sometimes quality was listed as one of several evaluative criteria (Baugh & Davis, 1989; Cassill & Drake, 1987; Conklyn, 1971; Jenkins & Dickey, 1976). For example, in Conklyn's (1971) study, features least satisfactory to purchasers were quality, fit, length, care, color, and fabric. There is lack of consensus on the definition of the apparel quality construct, what apparel quality encompasses, and what other constructs relate to apparel quality. In sum, several dependent variables were employed to measure consumers' apparel evaluation.

Stimulus Presentation

The presentation of the product stimuli has varied from actual apparel items (Hatch & Roberts, 1985), to garments whose purchase in the past is recalled (McLean, Roper, & Smothers, 1986), to general descriptions of garments or garment terms, such as "apparel" or "children's apparel" (Cassill & Drake, 1987) (Table 2). Both written product identification and actual garments were used in one study (Jenkins & Dickey, 1976). Thirteen of the 24 reviewed studies utilized actual garments as their stimuli, and subjects touched and examined the items thoroughly. Hypothesizing that verbal stimuli would be perceived as more utilitarian, whereas visual stimuli would be perceived as more aesthetic, Hirschman and Solomon (1984) speculated that format of presentation (verbal versus visual) would mediate subjects' perceptions of the stimuli, even in the consistent information conveyed by each format. Differences in stimuli presentation across the studies may have resulted in the observed variance due not only to the manipulation of the independent

TABLE 2

STIMULI PRESENTATION

<u>Study</u>	<u>Stimuli Presentation</u>
Gale and Dardis (1970)	Wear tests, lab tested
Conklyn (1971)	Examined
Jenkins and Dickey (1976)	Written product identification
Knoll and Shiloh (1976)	25 clothing items
McCullough and Morris (1980)	Children's clothing (owned)
Stemm (1980)	Written product identification
Francis and Dickey (1984)	Recalled
Dardis, Spivak and Shih (1985)	Lab-tested
Davis (1985)	Examined
Hatch and Roberts (1985)	Examined
Davis, Kern, and Sternquist (1986)	Examined
Gipson and Francis (1986)	Examined
Kelley, Strother, Blouin, and Allen (1986)	Seen
McLean, Roper, and Smothers (1986)	Purchased
Sternquist and Davis (1986)	Examined
Cassill and Drake (1987)	Written product identification
Davis (1987)	Examined

TABLE 2 continued

<u>Study</u>	<u>Stimuli Presentation</u>
Morganosky and Lazarde (1987)	Recalled
Behling and Wilch (1988)	Examined
Baugh and Davis (1989)	Examined
Norum and Clark (1989)	Examined
Eckman, Damhorst and Kadolph (1990)	Examined
Heisey (1990)	Examined
Rabolt (1990)	General clothing

variables, but also to memory, sensory, and response variations (Monroe & Dodds, 1988). Hence, stimuli presentation should not be an additional source of variation, and needs to be controlled (Monroe & Dodds, 1988). It should be recognized that through systematic control of the different types of stimuli presentation, researchers can isolate such variations.

Products Used and Selection Criteria

Table 3 presents a number of the product selection criteria that were used in the clothing and price-perceived quality studies. Monroe and Dodds (1988) suggested that researchers need to explicitly discuss the product selection criteria utilized to determine the various levels of price and intrinsic attributes.

Clothing items were often selected because they were frequently purchased, available at a wide range of prices, and made of a variety of fibers/fabrics. For instance, Heisey (1990) used eight identical fatigue sweaters, whereas Davis (1987) used white blouses, and Hatch and Roberts (1985) used sweaters for such respective reasons. Those researchers ensured that their subjects were likely to be purchasers of the product and had sufficient experience with the clothing items to be able to evaluate them. Identical clothing items were often used to control design and style effects. For instance, Heisey (1990) used identical sweaters so that no expert evaluation of comparable objective quality needed to be made. Influenced by heavy import penetration in the U.S. market, import status were often cited as a selection criteria in several studies (Davis et al., 1986; Gipson & Francis, 1986; McLean et al., 1986; Morganosky & Lazarde, 1987; Sternquist & Davis, 1986).

Shapiro (1973) and Gardner (1974) said to select products which subjects were potentially interested in the products. Also, products were

TABLE 3

PRODUCT SELECTION CRITERIA

<u>Study</u>	<u>Product Selection Criteria</u>
Gale and Dardis (1970)	New and innovative products-durable press dress shirts
Conklyn (1971)	Not mentioned
Jenkins and Dickey (1976)	Social visibility of the apparel representative of potentially diverse evaluative criteria
Knoll and Shiloh (1976)	Type and intended use
McCullough and Morris (1980)	Children's clothing items which account for large number of unsatisfactory items, are often handed down from child to child, are a category with more standard items than in other category
Stemm (1980)	Outfit purchased for work and for a social occasion
Francis and Dickey (1984)	Not mentioned
Dardis, Spivak, and Shih (1985)	Similar in style and appearance compared to other products Durability and appearance can be measured objectively Exhibited considerable import penetration
Davis (1985)	Exhibiting several brand names and physical quality
Hatch and Roberts (1985)	Frequently purchased Available at low and high price points Available in similar fiber contents in that category Found with a common seal of certification and a warranty

TABLE 3 continued

<u>Study</u>	<u>Product Selection Criteria</u>
Davis, Kern, and Sternquist (1986)	Heavy import penetration in the product chosen
Gipson and Francis (1986)	Heavy import penetration in the product chosen
Kelley, Strother, Blouin, and Crouch (1986)	Not mentioned
McLean, Roper, and Smothers (1986)	Heavy import penetration in the product chosen
Sternquist and Davis (1986)	Heavy import penetration in the product chosen
Cassill and Drake (1987)	Important apparel for employed women
Davis (1987)	White blouse can be purchased by most female consumers of the age category, can be constructed in a variety of fabrics, manufactured under a number of brand names
Morganosky and Lazarde (1987)	Import status
Behling and Wilch (1988)	Basic wardrobe
Baugh and Davis (1989)	Not mentioned
Norum and Clark (1989)	Not mentioned
Eckman, Damhorst, and Kadolph (1990)	Not mentioned
Heisey (1990)	Students, male and female, are likely to have purchased classic style that is sold by a wide range of retailers at a relatively wide range of prices, can be made of various fibers and carry various care procedures

TABLE 3 continued

<u>Study</u>	<u>Product Selection Criteria</u>
Rabolt (1990)	Not mentioned
Szybillo and Jacoby (1974)	Product with many brand differences
Enis and Stafford (1969)	Knowledge
Wheatley and Chiu (1977)	Knowledge
Gardner (1970) (1971)	Frequency of purchase
Andrews and Valenzi (1971)	Used products of previous studies
Render and O'Connor (1976)	Product line specifics
Shapiro (1973)	Low brand importance, difficult to judge, interesting, consequential to the decision maker, nature of the product (durable vs. nondurable)
Gardner (1974)	Potentially interesting to subjects, 2 products would be inconspicuous/physiological and two are conspicuous/ego
Rao and Monroe (1988)	Products exhibiting positive price per quality relationships in the market place, possess an intrinsic attribute such that one level of the attribute exhibited different quality-price associations in the market place than some other attributes and would be differently familiar to the subject group
Wheatley, Chiu, and Goldman (1981)	Not mentioned

selected so as to ensure that subjects were knowledgeable about them (Enis & Stafford, 1969; Rao & Monroe, 1988; Wheatley & Chiu, 1977).

Different categories of clothing products have been used, including sweaters, dresses, blouses, blazers, and dress shirts (Table 4). A majority of the studies used a single category of clothing, whereas some used several items of clothing (i.e., Davis et al, 1986; Hatch & Roberts, 1985; Jenkins & Dickey, 1976). Sweaters were frequently utilized in several studies with some reasons (e.g., easy to evaluate, heavy import penetration, and commonly worn) (Andrews & Valenzi, 1971; Davis, et al., 1986; Gipson & Francis, 1986; Hatch & Roberts, 1985; Heisey, 1990; Shapiro, 1973; Sternquist & Davis, 1986). Hatch and Roberts (1985) used 4 identical sweaters, except for the color, which might have contributed to the sensory variation in the results.

Independent Variables

Several independent variables have been manipulated including store names, brand names, country of origin, compositional features, demographic variables, and familiarity with a product (Table 5). Although price is a major factor in clothing purchases, it was utilized as an independent variable in only three studies (Davis, 1987; Gale & Dardis, 1970; Hatch & Roberts, 1985). Davis (1987) presented three price levels (\$32.00, \$29.00, \$29.00, \$42.00) for four blouses, whereas Hatch and Roberts (1985) manipulated two price levels for socks as low-priced products (\$1.25, \$5.00) and for sweaters as high-priced products (\$15.00, \$60.00). In all the studies, the price levels chosen were the actual price range available in the market. In Davis' (1987) study, the price was found to be the most sought piece of information by subjects, followed by style. Price was evidenced as a more important criterion than either quality or fashionability for purchase decisions. In contrast, Hatch and Roberts

TABLE 4

PRODUCTS USED

<u>Study</u>	<u>Products Used</u>
Gale and Dardis (1970)	Men's durable press shirts, wear tests,
Conklyn (1971)	Dress
Jenkins and Dickey (1976)	Written product identification
Knoll and Shiloh (1976)	25 clothing items
McCullough and Morris (1980)	Children's clothing (owned)
Stemm (1980)	Written product identification
Francis and Dickey (1984)	Dress purchased
Dardis, Spivak and Shih (1985)	8 men's dress shirts
Davis (1985)	Skirts
Hatch and Roberts (1985)	Socks and sweaters
Davis, Kern, and Sternquist (1986)	Identical sweaters, men's shirts
Gipson and Francis (1986)	Sweaters purchased
Kelley et al. (1986)	Written product identification, 4 garment categories
McLean, Roper, and Smothers (1986)	Blouses
Sternquist and Davis (1986)	Identical sweaters
Cassill and Davis (1987)	Written product identification
Davis (1987)	White blouses

TABLE 4 continued

<u>Study</u>	<u>Product Used</u>
Morganosky and Lazarde (1987)	General clothing
Behling and Wilch (1988)	Men's dress slacks
Baugh and Davis (1989)	Women's knit shirts
Norum and Clark (1989)	Blazers
Eckman, Damhorst and Kadolph (1990)	Actual garment purchased
Heisey (1990)	Identical sweaters
Rabolt (1990)	General clothing
Andrews and Valenzi (1971)	Sweaters
Enis and Stafford (1969)	Carpets
Gardner (1970)	Toothpaste, shirts, suits
Gardner (1971)	Toothpaste, shirts, suit
Gardner (1974)	Socks, toothbrush, tape recorder, suit
Szybillo and Jacoby (1972)	Panty hose
Shapiro (1973)	Carpet, sweater, chair
Render and O'Connor (1976)	Shirt, radio, aftershave lotion
Wheatley and Chiu (1977)	Clothing
Wheatley, Chiu, and Goldman (1981)	Carpet
Rao and Monroe (1988)	Women's blazers

TABLE 5

INDEPENDENT VARIABLES

<u>Study</u>	<u>Independent Variables</u>
Gale and Dardis (1970)	Different brand with various price levels ✓
Conklyn (1971)	Demographic variables
Jenkins and Dickey (1976)	Demographic variables
Knoll and Shiloh (1976)	25 Clothing items, children's
McCullough and Morris (1980)	7 Clothing categories Social class ✓
Stemm (1980)	Demographic variables
Francis and Dickey (1984)	Garment care/no care
Dardis, Spivak, and Shih (1985)	Country of origin (domestic vs. imported) Brand name (national vs. private)
Davis (1985)	Physical quality (high vs. low) Brand label (unlabeled, nondesigner, designer)
Hatch and Roberts (1985)	Seal (wear-dated seal, seal of approval, no seal present) Fiber content (100% wool, 100% acrylic) Price level (low vs. high)
Davis, Kern, and Sternquist (1986)	Store type Country of origin Buy American Campaign material
Gipson and Francis (1986)	Age, income, occupation
Kelley, Strother, Blouin, and Crouch (1986)	2 Garment categories (innerwear, outerwear) ✓ 6 age groups (not specified)

TABLE 5 continued

<u>Study</u>	<u>Independent Variables</u>
McLean, Roper, and Smothers (1986)	2 Garment categories (innerwear, outerwear) 6 age groups (not specified) ✓
Sternquist and Davis (1986)	Store type (high prestige vs. low) Country of origin (domestic vs. imported)
Cassill and Drake (1987)	Different occasion (social apparel and employment apparel) ✓ Demographic variables
Davis (1987)	Brand types (4 different) Store types (4 different) Style (4 different pictures) ✓ Price (3 levels) Fabric (blends vs. 100% cotton)
Morganosky and Lazarde (1987)	Store types (department, discount, national chain, off-price) Brand types (name, designer, private) Country of origin (import vs. domestic)
Behling and Wilch (1988)	Brand types (designer, high priced, moderately-priced) Familiarity with the brand (familiar vs. unfamiliar) Demographic variables
Baugh and Davis (1989)	Brand types (designer, private, unlabeled) Store types (high prestige vs. low, unlabeled)

TABLE 5 continued

<u>Study</u>	<u>Independent Variables</u>
Norum and Clark (1989)	Country of origin (import vs. domestic) Brand (national, private) Design (traditional, fashionable) Fiber (100% wool, wool blend) Store type (specialty, department, general merchandiser, discount) Store location (regional mall, community shopping center, central business district)
Eckman, Damhorst, and Kadolph (1990)	Buying stage (interest, trial phase)
Heisey (1990)	Care label (machine wash, hand wash) Country of origin (USA, Hong Kong) Fiber (100% cotton, blend) Store types (specialty store - L.L. Bean, mass merchandiser - Sears)
Rabolt (1990)	Demographic variables Country of origin

(1985) found that the price information was not influential in differentiating quality perceptions. In their study, the effect of price depended on which fiber content was being considered.

Because consumers associate designer labels on apparel with quality as well as with status, researchers have manipulated brand names (Baugh & Davis, 1989; Davis, 1985; Morganosky & Lazarde, 1987). Dardis et al. (1985) examined the effect of brand name proxied by store type. Sternquist and Davis (1986) controlled the design and fiber content of sweaters to examine the influence of store prestige. Store names which were known to the subjects in the marketplace were chosen to have high prestige and low prestige levels (Sternquist & Davis, 1986). The effects of brand name and store name were evident. Behling and Wilch (1988) found that brand names were influential only if the subjects were familiar with the particular brands being tested.

There have been a variety of price manipulations in marketing studies. In manipulating the price cue, three aspects have been considered important (Rao & Monroe, 1989). First, consumers have a certain range of responsiveness to price cues (Monroe & Venkatesan, 1969) and an absolute threshold that is defined as the transition between response and non-response to the price (Monroe, 1973). Price outside the acceptable range is considered objectionable to consumers (Monroe, 1971).

The relationship between price and perceptions of quality and value has not been clear as evidenced by McConnell's (1968) finding of a nonlinear price-perceived quality relationship in contrast to Peterson's (1970) finding of a quadratic relationship. Moreover, Etgar and Malhotra (1981) found both a linear and nonlinear price-perceived quality relationship.

Second, the magnitude of price change has to be great enough for subjects to detect differences. For example, Hatch and Roberts (1985) anticipated that differences in price might influence how price cues were

used to judge quality, using socks and sweaters, but they did not find the price effects.

Third, perceptions of quality may vary depending on whether the products are generally high-priced or low-priced. Gardner (1970, 1971) found stronger perceptions of quality for men's suits followed by shirts, and weakest for toothpaste. In other words, perceptions of quality varied over levels of prices and products in that main effects were strongest for suits and weakest for toothpaste. Also, Hatch and Roberts (1985) reported that the price cue was more important in judging quality of men's suits than of socks and sweaters even though they did not analyze the relative effect of price in men's suits. They indicated that the price/quality relationship could not be generalized to all products in all situations. These findings suggest that the selection of relatively expensive products is likely to generate the effect of price on perceptions of quality. For the manipulation of price, Rao and Monroe (1989) suggest that researchers need to avoid possible price/product confounding and researchers need to broaden price/product combinations.

Intrinsic Attributes

Intrinsic attributes are product properties that can not be changed without changing the physical characteristics of the product itself. Olson and Jacoby's (1972) findings suggested that intrinsic attributes had a stronger impact on consumers' perceptions of product quality than did extrinsic cues.

A number of clothing evaluation studies and price- perceived quality studies manipulated various intrinsic cues, such as fiber content, fabric, and other compositional differences, and other distinguishing product features (Table 6). Table 6 contains only those studies which measured the effect of intrinsic attributes on dependent variables in the clothing and

TABLE 6

INTRINSIC ATTRIBUTES/EFFECT

<u>Study</u>	<u>Intrinsic Attributes</u>	<u>Effect</u>
Davis (1985)	Physical quality (high /low)	Sig.
Hatch and Roberts (1985)	Fiber content (100% wool, 100% acrylic)	Sig.
Davis (1987)	Style (4 pictures of the blouses) Fabric (polyester/cotton vs. 100% cotton)	Sig. Sig.
Heisey (1990)	Fiber content (100% cotton vs. 55% acrylic/ 45% cotton) Care procedure (2 levels)	Sig.
Jacoby, Olson, and Haddock (1971)	Comparison differences (present/absent ingredient in 3-beer sample)	Sig.
Rao (1971)	Consumer test reports (present/absent)	Sig.
Cimbalo and Webdal (1973)	Compositional differences (3 different spreads, Land O' Lakes butter, Fleischman's margarine, Royal Scot margarine)	Sig.
Valenzi and Andrews (1971)	Product differences (3 different spreads, Eversweet butter, Imperial margarine, Nutley margarine)	Sig.
Valenzi and Eldridge (1973)	Product differences (3 compositional differences in beer)	Sig.

TABLE 6 continued

<u>Study</u>	<u>Intrinsic Attributes</u>	<u>Effect</u>
Szybillo and Jacoby (1974)	Product differences (3 different products)	Sig.
Pincus and Waters (1975)	Packaging (present/absent) Product differences (3 different products)	NS Sig.
Wheatley and Chiu (1977)	Color (light/dark)	NS/sig.
Wheatley, Chiu, and Goldman (1981)	Physical quality	Sig.
Rao (1986)	Women's blazer (Virgin wool/Shetland wool /Harris Tweed)	Sig.
Krishnan and Monroe (1987)	Product differences (jogging shoes/ stereo receiver)	Sig.

marketing areas. On the whole, intrinsic cues have been shown to have a significant influence on product evaluations. Most of the intrinsic characteristics in clothing evaluation studies have involved product composition. Table 7 presents more detailed description of the properties of clothing studied in the clothing and textiles area though not specifically measure the effect of intrinsic attributes. Fabric/fiber has been found to be the most sought compositional feature in judging quality of socks, blouses, men's suits, and sweaters (Davis, 1987; Hatch & Roberts, 1985; Heisey, 1990). Davis (1987) found that a 100% cotton blouse was rated higher in quality than similar blouses of other fiber contents, suggesting that fiber content may have been used by consumers as a surrogate indicator of quality and fashion. Style was often used as a criterion within the product composition category. Conklyn (1971) measured negative as well as positive criteria that women used to evaluate dresses they were buying. Features least satisfactory to purchasers were quality, fit, length, care, color, and fabric. Sternquist and Davis (1986) controlled sweater design and fiber content to examine the effect of store prestige. A majority of the studies reviewed reported significant intrinsic cue/perceived quality effects, indicating that intrinsic attributes had significant impacts on consumers' product evaluations.

Szybillo and Jacoby (1974) found a significant effect of hosiery compositional differences on consumers' quality ratings. Wheatley, Chiu, and Goldman (1981) found that compositional differences in carpets significantly influenced consumers' quality perceptions. In terms of different product features, Rao (1986) found that differences in product features (construction, fabric design, fiber type, etc.) among women's blazers significantly affected consumers' perceptions of quality. The impact of the differential product features on consumers' quality perceptions increased as respondents' familiarity with the product increased.

TABLE 7

PROPERTIES/ATTRIBUTES OF APPAREL PRODUCTS MEASURED

<u>Study</u>	<u>Properties/attributes of Apparel Products Measured</u>
Gale and Dardis (1970)	Comfort, appearance, durability, fashion
Conklyn (1971)	Style, fit or comfort, color, fabric, garment length, ease of care, construction quality
Jenkins and Dickey (1976)	Fabric type and quality, quality of construction, ease of care, pleasing to others, fiber content, comfort, suitability, beautiful or attractive, good buy, fashionable, durability
Knoll and Shiloh (1976)	Strength and wear, comfort and aesthetics, dimensional stability, colorfastness
McCullough and Morris (1980)	Durability, colorfastness, appearance, comfort, safety, ease of care
Stemm (1980)	Pleasing to others, fabric type and quality, construction quality, ease of care, fiber content, comfort, suitability to individual, beautiful or attractive, fashionable, good buy, appropriate for work, color, good fit, sexy

TABLE 7 continued

<u>Study</u>	<u>Properties/attributes of Apparel Products Measured</u>
Francis and Dickey (1984)	Expressive criteria - style, appropriateness for wearer, appropriateness for particular occasions, comfort, fabric design, color Instrumental criteria - care requirement, fasteners, size, colorfastness, durability, construction quality, fit, versatility, dimensional stability, wrinkling, fabric content, fabric structure, location of opening
Dardis, Spivak, and Shih (1985)	Appearance, judged on 4 lab tests
Davis (1985)	Construction, fabric, notions, quality of design, fashionability, status, uniqueness, overall quality
Hatch and Roberts (1985)	Multidimensional - Overall performance, comfort, aesthetic appeal Unidimensional - Strength/wear, ease of care, static cling, pilling resistance wrinkle recovery, stain resistance, shape retention/shrinkage, tear resistance, colorfastness, warmness/coolness, feel Composition features - Fabric, construction, appearance, color, weight, style
Davis, Kern, and Sternquist (1986)	Actual garment itself
Gipson and Francis (1986)	Fit, color, coordinates with wardrobe

TABLE 7 continued

<u>Study</u>	<u>Properties/attributes of Apparel Products Measured</u>
Kelley, Strother, Blouin, and Crouch (1986)	Aesthetic characteristics - colors, wrinkle resistance, odor free, trims, soft feeling, fabric design, garment design, no seam wrinkles Performance Characteristics - long wearlife, shrink or stretch control, easy care, comfortable/nonirritating, mildew resistance, flame retardance, water repellency, stain resistance
McLean, Roper, and Smothers (1986)	Construction quality, apparent durability, fabric quality, better fit/sizing, color, unusual detail (trim, styling, etc.), coordination with existing wardrobe
Sternquist and Davis (1986)	Fiber content, styling, care labeling
Cassill and Drake (1987)	Good fit, comfort, suitability to individual, appropriate for occasion, construction quality, durability, fabric type and quality, beautiful or attractive, fashionable, color, good buy, ease of care, fiber content, pleasing to others, prestige
Davis (1987)	Fabric/fit, general construction, manufacturers' neck label, style (actual picture of the blouse)
Morganosky and Lazarde (1987)	Not provided
Behling and Wilch (1988)	Actual clothing products with experimental labels

TABLE 7 continued

<u>Study</u>	<u>Properties/attributes of</u> <u>Apparel Products Measured</u>
Baugh and Davis (1989)	Semantic differential, 16 adjective pairs; high quality construction/high quality fabric, economical/extravagant, practical/impractical, good value for the money, worn by fashion leaders, worn as a status symbol, highly promoted in media, classy/tacky, expensive/inexpensive, fashionable/unfashionable, unique/common, attractive/unattractive, classic styling/trendy styling, high quality design/low quality design
Norum and Clark (1989)	Actual blazers, 100% wool/wool blends, nontraditional/otherwise
Eckman et al. (1990)	Color/pattern, styling, fabric, fit, styling, appearance on the body
Heisey (1990)	Care procedure, fiber content, place purchased, color/pattern, styling, fabric, fit, styling, appearance on the body
Rabolt (1990)	Construction - buttons sewn securely, lining in garment, plaid matching, hems even, seams well stitched Garment - feels comfortable, high price, current style, easy care, designer label, dry clean only Fabric - does not stretch out, pill, shrink, fade, wrinkle Fiber - blend of natural fibers, natural fibers only, blend of natural/synthetic fibers

Clothing attributes have been investigated in the area of consumer satisfaction/dissatisfaction with clothing performance (Conklyn, 1971; Hatch & Roberts, 1985). Clothing properties were often divided into two categories to represent aesthetic and functional aspects (Francis & Dickey, 1984; Kelley, et al., 1986). Through content analysis of in-store interviews, Eckman et al. (1990) examined the relative importance of intrinsic and extrinsic criteria in purchase decisions for women's apparel. Styling, workmanship, appearance, fit, and color/pattern comprised 57% of the responses when buying garments in general. Styling, color/pattern, fit, fabric, appearance, and price, in that order, were the most frequently mentioned criteria for evaluating specific garments. The aesthetic set of intrinsic criteria included directly observable compositional characteristics, that is, style, color and pattern, fabric, and appearance. These visual characteristics fulfill several implicit expectations for consumers, such as fashionability, aesthetic appeal, and self-expression. The visual criterion can be seen as a type of performance criteria related to aesthetic performance.

Besides studies reviewed, several studies reported consumer evaluation of clothing properties. Care and performance of clothing have often been reported as among the most frequent sources of problems with clothing along with problems achieving proper garment fit and concern with style and fit (Wall, Dickey, & Talarzyk, 1978). Durability and construction quality are also frequently reported as sources of consumers' dissatisfaction with clothing purchases (Sproles, Geistfeld, & Badenhop, 1978).

Rogers and Lutz (1990) investigated the quality indicators used by retail buyers to purchase women's sportswear. Garment construction and brand name were identified as the best indicators of overall garment quality, and construction, price, and brand name were the most important cues used in purchase decisions. Buyers who had more advanced study in

textile testing and evaluation ranked fabric characteristics, garment construction, and price as important cues.

The review of the effect of intrinsic cues on consumers' perceptions of product quality indicated that a number of the intrinsic attributes examined significantly affected consumers' perceptions. The intrinsic cues examined have primarily been in the form of compositional differences and product or information involving certain performance-related attributes.

The next section discusses some methodological considerations significant in the literature.

Methodological Domain

In line with Monroe and Dodds' (1988) approach, the methodological domain was examined. Assessment of methods used in a body of research facilitates identification of issues that may influence progress toward theory building. In this section, relevant sets of criteria in the methodological domain are discussed. First, designs used in the studies are reviewed and discussed. Second, issues related to types of measurement, or measurement instruments, data collection settings, and subjects used are delineated to evaluate the methodological domain for the 24 studies reviewed in detail.

Designs Used

As shown in Table 8, the studies in clothing evaluation incorporated survey by questionnaire, and sometimes realistic retail settings for data collection. Among the 24 studies, data were collected at point of purchase in three studies, under the premise that point of purchase interviews

TABLE 8

SETTING/DESIGN

<u>Study</u>	<u>Setting/Design</u>	
Gale and Dardis (1970)		experimental, lab tests
Conklyn (1971)	in-store interview	survey
Jenkins and Dickey (1976)	preschool	survey
Knoll and Shiloh (1976)		survey
McCullough and Morris (1980)		survey
Stemm (1980)		survey
Francis and Dickey (1984)		survey
Dardis, Spivak and Shih (1985)		experimental
Davis (1985)		experimental, between
Hatch and Roberts (1985)		experimental, within, repeated
Davis, Kern, and Sternquist (1986)		experimental, between
Gipson and Francis (1986)	in-store, point of purchase	survey
Kelley, Strother, Blouin, and Crouch (1986)		survey
McLean, Roper, and Smothers (1986)	home	survey
Sternquist and Davis (1986)		experimental, within

TABLE 8 continued

<u>Study</u>	<u>Setting/Design</u>	
Cassill and Drake (1987)	simulated purchase situation	survey
Davis (1987)		experimental
Morganosky and Lazarde (1987)		telephone survey
Behling and Wilch (1988)		experimental within
Baugh and Davis (1989)		experimental between
Norum and Clark (1989)		survey
Eckman, Damhorst, and Kadolph (1990)	in-store interview, point of purchase	survey
Heisey (1990)		experimental, within, incomplete block,
Rabolt (1990)	classroom	survey

provide the accuracy of direct observation and the ability to examine from self-reports why subjects behave as they do (McIntyre & Bender, 1986). Eckman et al. (1990) conducted research through open-ended interviews at point of purchase in the retail setting. Content analysis was used to identify patterns among the responses.

Different from most price-perceived quality studies which have been predominantly laboratory experiments, only nine studies out of 24 in clothing evaluation have been laboratory experiments. Fromkin and Streufert (1976) noted that laboratory experiments provided researchers with an opportunity for greater overall control, greater precision in the measurement of dependent variables, better facilitation of independent variable manipulation, and an increased ability to make causal inferences.

Four studies among the nine experimental studies reviewed used a within-subjects design; on the other hand, the within-subjects design for price manipulations appears to be much more prevalent in the price-perceived quality research in the marketing field. In an integrative review, Monroe and Krishnan (1985) indicated that studies using within-subjects design had larger effect sizes (i.e., effects of price on perceptions of quality) than did studies using between-subjects designs. This could be explained as the result of learning, sensitization, and reduction of individual differences. Because subjects are exposed to just one treatment condition in between-subjects designs, the true intent of the experimenter is not likely to be revealed to the subjects. On the other hand, when the same subjects are exposed to different treatments in within-subjects designs (or repeated measure designs), the experimental procedures and cover stories need to be structured so that subjects are not likely to guess the true intent of the experiment.

Sawyer (1975) suggested using between-subjects designs in order to avoid the influence of learning on the part of the subjects. In a within-subjects design, subjects behave as their own control, reducing individual differences. For examining the cumulative effects of product

experience, Olson (1977) suggested within-subjects designs. Because subjects are exposed to various combinations of independent variables, realistic judgments through comparisons can be possible in within-subjects designs. Consequently, within-subjects designs have advantages over between-subjects designs in terms of increase in power and cost effectiveness as the sample size is reduced (Rosenthal & Rubin, 1980). However, the individual researcher has to make certain trade-offs when deciding the type of design to be used (McGrath, 1982). The ultimate choice of design should be guided by the research question and theoretical considerations as well as statistical requirements of the study.

Measurement and Measures

The studies reviewed predominantly used rating scales, varying from four-point (Hatch & Roberts, 1985), to five-point (e.g., Davis, 1987; Francis & Dickey, 1984; Rabolt, 1990), to seven-point (e.g., Baugh & Davis, 1989; Davis, 1985; Stemm, 1980), and nine-point scales (Jenkins & Dickey, 1976) for measuring dependent variables. Rosenthal (1984) suggests that it is usually a good idea to allow for one or two more points than are absolutely essential. Thus, it would be better to use a seven-point than a five-point rating scale, since people are reluctant to use the extremes.

Most researchers preselected evaluative criteria and presented them to the respondents in quantitative rating scales or lists. It has been suggested that using more than one method of measurement would enhance the reliability of measuring the dependent variables and determine which method gives more reliable results (Krishnan, 1984; Rao, 1986). Studies by Rao (1986) and Krishnan (1984) are examples of ones that utilized more than one method of measurement. The use of multiple indicators to enhance reliability and construct validity is a need suggested by Monroe and Dodds

(1988). However, none of the studies reviewed assessed the reliabilities of the measures. As Churchill (1979) and Krishnan and Monroe (1987) suggested, researchers need to be aware of scale properties and the preferability of multiple methods of measurement, and also need to determine how many rating points to utilize.

Subjects

Unlike research in the marketing area which has predominantly used college student samples (Ferber, 1977), the majority of the reviewed clothing evaluation studies used nonstudent adult samples as seen in Table 9. Almost all studies utilized female subjects, while Behling and Wilch (1988) asked male subjects to evaluate dress slacks. In one study (McLean et al., 1986), both college student and adult samples were used. There has been much debate about the applicability of students as subjects (Calder, Phillips, & Tybout, 1981, 1982, 1983; Lynch, 1982, 1983). Calder et al. (1981, 1982, 1983) contend that, if the purpose of the research is to test theoretical propositions and not to generalize findings to an overall population, then it is acceptable to use a student sample. They assert that any sample is a rigorous test of the theory if proper methodological procedures are employed. The use of a student sample which is homogeneous in some way has the advantage of reducing random error and thus increasing the power of the study. Hence, the choice of the sample would depend on the research objective.

Meta-analyses

To round out the methodological section, the results of meta-analyses which statistically assessed the strength of price and

TABLE 9

SUBJECTS USED

<u>Study</u>	<u>Students</u>	<u>Adults</u>
Gale and Dardis(1970)	not applicable	
Conklyn (1971)	F (330)	
Jenkins and Dickey (1976)		F (181)
Knoll and Shiloh (1976)		Adults (46)
McCullough and Morris (1980)		Parents of nursery school age children (98)
Stemm (1980)		F (285)
Francis and Dickey (1984)	F (210)	
Dardis, Spivak and Shih (1985)	not applicable	
Davis (1985)	F (78)	
Hatch and Roberts (1985)		F (40)
Davis, Kern, and Sternquist (1986)		F (395)
Gipson and Francis (1986)		F (181)

TABLE 9 continued

<u>Study</u>	<u>Students</u>	<u>Adults</u>
Kelley, Strother, Blouin, and Crouch (1986)	F (103)	
McLean, Roper, and Smothers (1986)	F (114)	F (112)
Sternquist and Davis (1986)	F (49)	
Cassill and Drake (1987)		F (842)
Davis (1987)	F (65)	
Morganosky and Lazarde (1987)		M & F (100)
Behling and Wilch (1988)	M (60)	
Baugh and Davis (1989)	F (90)	
Norum and Clark (1989)		not applicable
Eckman, Damhorst, and Kadolph (1990)		F (80)
Heisey (1990)	F (40)	
Rabolt (1990)		F (183)

F = Female, M = Male

perceptions of quality are reported. Monroe and Krishnan (1985), using meta-analytic techniques, conducted a quantitative review of 28 price-perceived quality studies and found a significant relationship between price and perceptions of product quality. Rao and Monroe's (1989) meta-analysis of 41 studies indicated that price significantly influenced consumers' perceptions of quality, sacrifice and value, along with willingness to buy the product. They found the price-perceptions of value relationship to be stronger than the relationship of price to the perceptions of either quality or sacrifice. The authors explained the reasons for this finding as follows.

Consumers may make implicit quality and sacrifice trade-offs in perceiving the value of the product offer, when they see the price information. That is, consumers may perceive a product offering as providing values that are at a more abstract level than functional and psychological/social benefits. Hence, the implicit cognitive trade-offs could explain the stronger price-perceptions of value relationship. Values are abstract consequences influenced by functional and psychological benefits from product use. Another explanation for this could be the variations in the operational definitions of quality, sacrifice, and value. As Zeithaml (1988) suggested, the construct of perceived value could have different meanings for different individuals, and thus, many studies might not measure consumers' perceptions of value as being a quality/sacrifice trade-off.

The results of Rao and Monroe's (1989) meta-analysis indicated that store names were not significantly associated with consumers' perceptions of quality and value nor with their willingness to buy the product. Brand names were significantly associated with consumers' perceptions of quality, but not with perceptions of value and willingness to buy. For methodological aspects, Rao and Monroe (1989) found that studies with within-subjects designs showed larger effects than did studies with between-subjects designs. It was explained that a) subjects in

within-subjects designs were their own controls, thus increasing the power of the study, and b) there could be potential confounding due to learning, sensitization and carry-over effects on the side of the subjects. In their analysis, price-perceptions of quality did not vary significantly over price levels. This might be due to the choice of low priced products for experimental manipulations. However, the magnitude of the price manipulation significantly influenced the effect size. That is, the greater the differences among the price levels manipulated in the experiment, the larger the size of the effect on perceptions of quality. Finally, multiple-cue studies had larger price-perceptions of quality effects due to the significant interaction effects of brand name and store name. The results suggest the need for more research on the relationship between price and perceptions of value as well as willingness to buy.

Olson (1977) suggested that the extent of product knowledge was likely to have a significant influence on the price and quality perception relationship. In other words, consumers lacking knowledge about a product would use price information more than any intrinsic cues to assess quality and expert consumers would respond less to experimental price manipulations. Rao's (1986) finding of the effect of familiarity supported the above notion. Therefore, the next section presents research examining the influence of knowledge on consumers' choice and evaluation processes.

Product Knowledge in Consumer Evaluation and Choice

In approaching the effects of consumer knowledge on perceptions of clothing quality, benefits, monetary sacrifice, value, search intention, and willingness to buy, this section presents research that illustrates how consumer knowledge is incorporated in consumer evaluation and choice processes. Emphasis will be on studies which examined the structure of

knowledge and its effect on subsequent evaluation and behavioral intention.

Consumer Knowledge as Cognitive Structure

Several researchers (Alba & Hutchinson, 1987; Brucks, 1985; Gutman & Reynolds, 1983; Hirschman & Douglas, 1981; Kanwar, Olson, & Sims, 1981; Olson, 1978a, 1978b; Scott, 1969) have suggested knowledge structure as an associative network of relationships between product concepts in memory. They have characterized knowledge structures along a set of dimensions in memory, such as the number of salient attributes defining the domain, the extent of differentiation on these attributes, and the abstractness of the attributes. In this scheme, expertise would result in a more complex network of associations in memory for the product (Mitchell, 1982).

The dimensions people use in thinking about a domain are acquired through experience with the domain. Because experts or more knowledgeable people have had greater experience in a domain, they should be able to describe objects in that domain in terms of more dimensions than novices or less knowledgeable individuals can. Literature on expertise generally supports the proposition that the knowledge structures of more knowledgeable individuals have greater dimensionality (Alba & Hutchinson, 1987; Brucks, 1986; Chi, Glasser, & Farr, 1988). Mitchell and Chi (1985) found that experts had much more knowledge about a domain in terms of many dimensions. Markus, Moreland, and Smith (1985) observed that experts were able to categorize and interpret an object in many different ways. Showers and Cantor (1985) noted that highly knowledgeable individuals were quite flexible in how they processed information within a domain, presumably because of the greater dimensionality of their knowledge structures.

Abstraction may be the most important characteristic of knowledge structures that differentiates experts from novices. Abstraction refers to the level of inclusiveness of the salient concepts or dimensions in a knowledge structure. More abstract concepts are "bigger," "broader," more general, and less representative of tangible "reality". In contrast, less abstract, more concrete concepts are "smaller," more "narrow," more specific, and more directly representative of physical objects in the environment (Hayes-Roth, 1977; Hirschman, 1980).

According to Hayes-Roth's (1977) utilization theory, a knowledge structure begins as a few, weakly associated concepts. With experience, more concepts are acquired and sets of concepts become more closely associated with one another. Thus, they tend to be activated together. As experience grows further, the person forms more abstract representations of these sets of interrelated concepts. As knowledge structures become more abstract, concrete knowledge is organized or grouped into fewer, but more general, abstract concepts. In general, then, we would expect increasing levels of experience or knowledge to produce more abstract knowledge structures.

Many findings in the expert/novice literature suggest that experts have more abstract knowledge than novices. Markus, Moreland, and Smith (1985) suggest that experts tend to group knowledge to form more abstract dimensions. Consequently, more experienced people should integrate new information with previously acquired knowledge more easily than should novices. Research on the categorization processes of experts and novices has demonstrated that "experts" possess knowledge at several interrelated levels of abstraction. Their abstract knowledge allows them to organize seemingly different stimuli by some general principles or features (Mitchell & Dacin, 1986). On the other hand, "novices" tend to categorize objects based on less abstract, more sensory-level features. Other researchers have suggested that, compared to novices, experts use fewer, more inclusive, more abstract concepts (Chi, Glasser, & Rees, 1982) and

have knowledge concepts that subsume more information (Fiske, Kindler, & Larter, 1983). However, knowledge research also suggests that more knowledgeable individuals have substantial concrete knowledge as well as more abstract knowledge (Alba & Hutchinson, 1987). For example, Conover (1982) found that more experienced subjects used more concrete or specific attributes when describing a domain than did less familiar subjects.

The idea that more knowledgeable individuals have more concrete as well as more abstract knowledge is consistent with the purpose of the abstraction process discussed by Rosch (1975). Abstract knowledge structures develop out of the need for cognitive economy. Because experienced consumers have relatively more knowledge dimensions, they have a greater need to form abstract categories to organize this information and increase their processing efficiency. In essence, experts have more abstract knowledge because they have a larger base of concrete, specific knowledge. Thus, the knowledge structures of more experienced individuals are likely to contain more concrete knowledge as well as more abstract knowledge.

Studies on Consumer Knowledge Structure

Most of the recent work in consumer knowledge has focused on the structure or organization of knowledge in memory. There is a growing body of literature demonstrating how knowledge develops with expertise.

Russo and Johnson (1980) developed a scheme to categorize consumer knowledge, which was adopted from the information processing view of problem solving described by Newell and Simon (1972). For familiar products, Russo and Johnson suggested a hierarchically organized taxonomy of product knowledge, with brand-attribute knowledge as the lowest level in the hierarchy; knowledge about comparisons on a single attribute or brand and overall brand or attribute rankings or evaluations as the

intermediate level of knowledge, and knowledge of "best" brand as the highest level of knowledge. They found that brand-attribute knowledge accounted for most of the information consumers have about products.

Besides level of knowledge, Russo and Johnson (1980) also considered whether knowledge was organized by brand or by attribute. They suggested that lower level knowledge was attribute based and that higher level knowledge was brand based. Further, they conceptualized consumers as processing from lower levels of knowledge to knowledge about the best brand. However, in many consumer environments, higher level knowledge (i.e., global evaluations) is easily available, conveyed by ads and through word-of-mouth. Hence, a higher level of knowledge could be available to novice consumers, even if it has not been explicitly developed by the consumers themselves. Thus, the taxonomy makes a general statement about what type of knowledge consumers might have without differentiating between the knowledge of relatively expert and novice consumers.

Park and Lessig (1981) make a distinction between familiarity and perceived familiarity, and point out that the former is examined with respect to the knowledge structure of the individual's long term memory (LTM), while the latter is based on self-reports of product knowledge. Thus, some buyers are knowledgeable about a product in some objective sense, while others think they have knowledge about the product. Park and Lessig proposed the "inverted u" hypothesis in a choice situation. Using three levels of perceived knowledge or subjective knowledge, they suggested that reliance on brand information would be highest for both the low and high knowledge conditions. In their research, the low knowledge condition subjects selected brand name as the only product attribute of significance, given their lack of product knowledge (for microwave ovens). Subjects in the high knowledge condition needed only brand information to generate a complex "schema" that would include information about other product attributes. Moderately knowledgeable subjects who had the basic

degree of knowledge necessary to assess the importance of attributes were found to be the most confident when using product attributes. Thus, there has been some, though minimal, research which has examined the content and structure of product knowledge. In the next section, the effect of product knowledge on searching for and using information is examined.

Studies on Consumer Information Search and Knowledge

The multidimensional nature of the knowledge construct leads to the question of whether differential knowledge on each of the dimensions would result in similar information search patterns. Several studies have shown a negative relationship between amount of product experience and amount of information search (Block, Sherrell, & Ridgway, 1986; Katona & Mueller, 1955; Moore & Lehmann, 1980; Newman & Staelin, 1971, 1972, 1973; Punj & Stewart, 1983). The authors claim that experienced consumers have prior knowledge about the attributes of various alternatives, and consequently do not need to acquire such information from external sources. They also hold that experienced consumers perform more efficient (thus abbreviated) information searches, knowing the most useful attributes for discriminating between brands and quickly determining inferior alternatives. Other researchers have postulated that prior knowledge encourages information search by making it easier to process new information (Johnson & Russo, 1984; Punj & Staelin, 1983). Knowledge of product attributes may allow the individual to formulate more questions, leading to greater search with increased knowledge.

Thus, contradictory results and associated postulates are evident in the literature. The most detailed work on the effects of product knowledge and information search was done by Bettman and Park (1980). Subjects were divided into high, moderate, and low knowledge groups based

on whether they had ever searched for information on, used, or owned a microwave oven. Subjects were given a matrix of data on actual brands of microwave ovens, and their verbal protocols were collected during the choice process using a detailed coding scheme. It was found that consumers with more knowledge tended to process by brand and that consumers with less knowledge used attribute processing to a greater extent. Moderate knowledge consumers did the most processing of the currently available information. Expert subjects relied on information in memory and their prior experiences to make choices. Novice subjects lacked the necessary prior knowledge structures or "schemas" to make sense of the data, and also did little processing.

Using a similar paradigm, Johnson and Russo (1984) presented two "plausible but conflicting" hypotheses that describe the relationship between learning and information acquisition. As shown in Figure 1, the first hypothesis posits an exponential relationship, as existing knowledge facilitates the learning of new information. The second hypothesis suggests an "inverted u" effect. Here, highly knowledgeable as well as unknowledgeable buyers search less than moderately knowledgeable buyers, but for different reasons. Highly knowledgeable buyers search less because their knowledge level allows them to ignore irrelevant information, while unknowledgeable buyers search less as they do not know what information is relevant.

Johnson and Russo (1984) reconcile these seemingly contradictory hypotheses by incorporating "task" as a moderating variable. They point out that there is a difference between a choice task and a judgment task. In the judgment situation each attribute is evaluated for every alternative, while in the choice situation some alternatives are quickly eliminated on the basis of one or two inferior attributes. Expert consumers may use different strategies for each of these tasks. The superior encoding ability of expert consumers, arising from a complex and well developed knowledge structure, allows greater external search in a

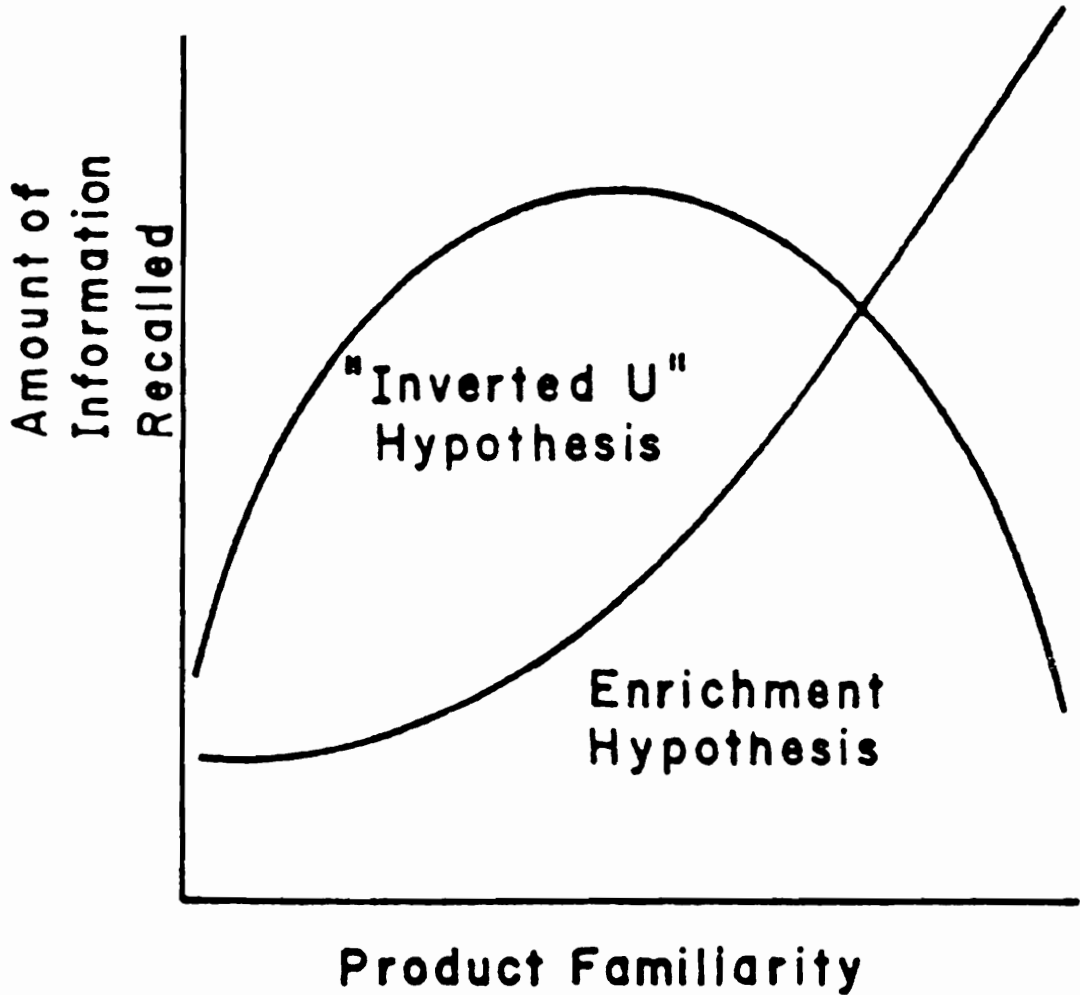


FIGURE 1: ALTERNATIVE THEORETICAL RELATIONSHIPS BETWEEN PRODUCT FAMILIARITY AND LEARNING. Adopted from E.J. Johnson, & J. E. Russo (1984). Product familiarity and learning new information. *Journal of Consumer Research*, 11(1), 542-550.

judgment task (Brucks, 1985). In other words, extremely knowledgeable consumers are cognizant of information that is important and how it is to be procured. Therefore, when judging or comparing, they need and are able to find more information than novice consumers. Better information selection skills, however, lead to less search in a choice situation, as knowledgeable consumers are able to concentrate on searching and evaluating information that is important.

Johnson and Russo (1984) found that, for judgment instructions, recall increased as a function of familiarity, but for choice instructions, recall exhibited the "inverted u" function found by Bettman and Park (1980). Based on this, Johnson and Russo argued that knowledgeable consumers use selective search strategies for choice, but, when asked to evaluate all brands, are able to recall more of the information they process. Thus, consumers who are extremely knowledgeable know which attributes are of importance and will select specific items of information that would allow them to make choice decisions. As a consequence, consumers at the high end of the knowledge continuum may use different search strategies depending on the task at hand. Conversely, consumers at the low end of the knowledge continuum lack the knowledge structure that would allow the freedom to use different information depending on the task at hand. Similarly, moderately knowledgeable buyers do not possess a knowledge structure that is well developed enough to allow the use of different information depending on the task at hand.

In one of the few studies that addressed the effects of product knowledge on the cognitive processes mediating communications, Edell and Mitchell (1978) manipulated the amount of product class information given to subjects (high learning condition versus low learning condition) and the amount of information in the advertisement (an informational versus a puffery ad). Subjects verbalized their thoughts as they read the advertisement. Using Wright's (1973, 1980) cognitive response coding scheme, they found that subjects in the high learning condition generated

significantly more total arguments and counter-arguments than did subjects in the low learning condition. Edell and Mitchell (1978) suggested that receivers' elaboration is based in part on relevant knowledge structures. The specific content of these structures is presumed to determine the number, type, and content of cognitive responses to advertisements. This finding is consistent with Johnson and Russo's (1981) finding for the judgment task. Expert consumers have well developed knowledge structures upon which to draw, and, therefore, they are able to recall more of the information they process (Johnson & Russo, 1981) and can generate more thoughts in response to a communication (Edell & Mitchell, 1978).

These studies taken together indicate that expertise has a significant effect on processing. Expert consumers compared to novices produce more total responses to communication. They are also able to recall more product related information. However, in tasks in which they can use their prior knowledge and experiences in making decisions, expert consumers do not necessarily process more information than do relative novices. Thus, it appears that the amount of processing that knowledgeable consumers engage in may depend upon the extent to which the task allows them to rely on their prior evaluations or choices.

Expert and novice consumers also appear to differ in the type of processing they engage in. In making choices, expert consumers process by brand whereas relative novices in the product class tend to process by attribute. In responding to communication, expert consumers evidenced more self-generated thoughts, whereas novices produced more thoughts directly related to the message. Thus, it appears that the level of consumer knowledge affects both the amount and the type of processing.

Measures of Knowledge

In measuring the effects of knowledge on evaluation and choice, researchers have used a variety of methods to measure knowledge. Some studies have employed product ownership and usage experience with a product under the assumption that greater experience translates into more learning and knowledge (Bettman & Park, 1980; Jacoby, Troutman, Kuss, & Mazursky, 1986; Newman & Staelin, 1972). However, researchers agree that experience represents an imprecise indicator of knowledge (Brucks, 1985; Cole, Gaeth, & Singh, 1986; Selnes & Gronhaug, 1986). Because of differential product involvement, consumers with similar amounts of usage experience may have learned different amounts about a product domain. In fact, some consumers who neither own nor use a product may actively seek information about it, and accumulate large amounts of knowledge about it.

Moreover, there is considerable evidence that a person's self-assessed knowledge is often an inaccurate representation of actual knowledge (Fox & Dinur, 1988). Apparently, subjective knowledge measures are affected by one's self-confidence such that people who are self-confident may overestimate their level of knowledge (Park & Lessig, 1981). Measures of objective knowledge are the ones that assess what the consumer actually has stored in memory (Brucks, 1985; Celsi & Olson, 1988; Kanwar, Grund, & Olson, 1990; Rao & Monroe, 1988; Selnes & Gronhaug, 1986). This is measured by performance on conventional tests of knowledge such as objective multiple choice tests. Since this research focuses on what consumers actually know, the use of objective measures of knowledge seems appropriate.

Studies on Clothing Interest

Since Lapitsky (1961) contended in 1961, the subject of clothing interest has been one of the most important topics in the clothing and textiles area. Early studies indicated that women in general had higher interest on clothes than men had. Girls, ranging in age from 12 to 18 years, had especially high degree of clothing interest among adolescents (Silverman, 1945). Rosencranz (1949) found that women with higher clothing interest could be females classified as those under twenty-five, city residents, housewives or students, those with access to higher incomes, and those with extensive social involvement. Baumgartner (1963) found that the amount of money college freshmen spent for clothes was correlated with the expressed importance of clothing. Female students spent more on clothing than male students. Members of sororities and fraternities spent more than students not associated with such memberships. Kaiser and Chandler (1981) also found that older women were more likely than older men to search for fashion information from mass media sources (e.g., television, magazines, and newspapers). Some of the older men are found to have strong disinterest in clothing in general.

The Construct and Its Measurement

Interest in clothing may be expressed in terms of the amount of time, energy, money, and personal commitment an individual exerts to the selection and use of dress (Creekmore, 1963, 1971; Gurel & Gurel, 1979; Kaiser, 1985; Ryan, 1966; Schrank & Gilmore, 1973; Sproles, 1979; Sproles & King, 1973). Empirical evidence from clothing research suggests that clothing interest affects consumers' evaluations and behaviors. An individual who has high clothing interest is likely to engage in activities related to clothing products, such as clothing shopping,

fashion magazine reading, and managing clothing to maintain it in the best condition. After a series of studies, Sproles and King (1973) concluded that approximately 10% of the US population had the highest level of fashion interest and the constant awareness of fashion change. About 30% of the people exhibited a substantial interest in keeping themselves informed about new fashions; the rest of people had either little interest or no interest.

Using various implications and ideas from past research, Gurel (1974) presented an all encompassing definition of clothing interest.

Clothing interest refers to the attitude and belief about clothing, the knowledge of and attention paid to clothing, the concern and curiosity a person has about his own clothing and that of others. This interest may be manifested to clothing himself- the amount of time, energy, and money he is willing to spend on clothing; the degree to which he uses clothing in an experimental manner; and his awareness of fashion and what is new (p. 12).

Over the years, several attempts have been made to develop an instrument capturing the importance of clothing or clothing interest (Creekmore, 1963; Katz & Lazarsfeld, 1955; Rosencranz, 1949; Schrank & Gilmore, 1974; Sharpe, 1963). Those instruments measuring the importance ascribed to clothing showed similar responses. Scales employed to measure the clothing interest include assessment by asking the extent to which consumers keep informed on current fashion trends (Sproles, 1979). The importance of clothing questionnaire developed by Creekmore and her associates, were used frequently in parts and in its entirety. Fetterman

(1968) and Gurel (1974) tested the questionnaire for reliability and validity. Borsari (1978) tried to revise a clothing interest instrument and test it for reliability and validity. Based on Creekmore's (1968) "importance of clothing" questionnaire, Borsari tested the validity of the questionnaire and factor analyzed it to shorten the length into 57 items. After having examined, Borsari renamed the instrument as dimensions of clothing interest and still suggested further refinement of the questionnaire with regard to age and sex bias.

Components in Clothing Interest

Utilized Creekmore's measure for clothing interest, Gurel and Gurel (1979) factor analyzed it to identify components to be included in an interest in clothing. Concern with personal appearance was the leading and significant component contributing to clothing interest. Characteristics associated with the concern was exemplified as spending money, time, and effort on enhancing one's appearance. In addition, individuals concerned with appearance were expected to engage in activities such as shopping, magazine reading, and browsing.

A second component identified to contribute to clothing interest was experimentation with appearance. Individuals who experiment with appearance are expected to enjoy trying new ideas such as trying on clothes for fun, browsing and shopping for entertainment, and continually searching for a new look. Contrastingly, individuals concerned with their appearance may not necessarily be willing to risk a change in established look for the sake of satisfying the desire to experiment. The individuals may experiment with accessories to coordinate a signature look.

Heightened awareness of clothing was the third dimension associated with clothing interest. This component involves aesthetic sensitivity to analyze the clothing product itself. As Kaiser (1985) noted, individuals

with heightened awareness of clothing could be people working in the fashion industry; they view clothing products as salable products to general public instead of own interest.

An enhancement of personal security was the fourth component in clothing interest. Goffman's (1959) notion of impression management through the use of clothing can be applicable when one uses clothes to improve and enhance one's morale and security.

Enhancement of individuality was the last component in clothing interest. Individuals who are sensitive to uniqueness and distinctiveness may willing to spend more money, time, and effort for getting such clothes. In addition, individuals scoring high in this dimension may enjoy wearing unique clothes thereby getting attention.

Values as Related to Clothing Interest

Values are generally defined as abstract beliefs centrally located within one's belief system (Lessig, 1976). According to Rokeach (1968), values are thought to exist as members of hierarchical groups of beliefs about preferable end states of existence or preferable modes of behavior. Rokeach contended that a value functions as a standard or criterion for guiding behavior and for developing and maintaining attitudes towards relevant objects and situations. Thus, examining one's value reveals an overall picture of the central cognitive structure of the individual as well as a means of linking central beliefs to attitudes (Rokeach, 1968).

Researchers in the clothing and textile area, have tried to correlate clothing interest and value held by individuals. Much of the research relating clothing interest to value employed the Allport-Vernon-Lindzey (AVL) (1951) test derived from Spranger's (1928) six types of values: theoretical, aesthetic, economic, social, political, and religious. Creekmore (1963) and Sharma (1980) both found some correlations

between clothing interest and the six basic values. Economic value was defined as the desire for comfort in clothing and for the conservation of time, energy, and money in relation to clothing usage or selection (Lapitsky, 1961, p. 4). In Creekmore's study, economic values were related to the management of clothing, that is, the purchase and maintenance of clothing in a rational way.

In a study examining the relationships between clothing purchases and values, Altpeter (1963) ascertained that women with high economic value purchased traditional styles more often than those with lower economic clothing value. According to Anspach (1961), individuals who emphasized wear and comfort favored classic or truly artistic designs.

Aesthetic value was defined as the desire for appreciation of or concern with beauty in clothing (Lapitsky, 1961). Aesthetic values were found to be positively correlated with a concern for one's appearance in Creekmore's study. Sharma also found that individuals guided by a desire for enhancing their appearance had high aesthetic value. In Slocum's (1975) study, aesthetic value was the most important clothing value. Lapitsky's finding suggested that the aesthetic and economic values were considered to be mostly related to clothing interest. Similarly, the economic and aesthetic clothing values were the most significant values found in Altpeter's (1963) study.

Summary of Review of Literature

For this research the review of related literature was divided largely into three sections. Clothing studies that have dealt with clothing evaluation and incorporated price and quality aspects into clothing evaluation and several studies in the marketing field were searched and qualitatively reviewed. Because the selection of clothing

requires knowledge, studies examining the structure of knowledge and the effect of knowledge on evaluation and choice processes were reviewed. Based on empirical research prevalent in clothing and textiles field, the last section reviewed studies which dealt the clothing interest and incorporated the clothing interest in evaluation and behavior. Studies examined values related to clothing interest were also reviewed. As indicated throughout the review of literature, price, intrinsic attributes, clothing interest, and clothing knowledge seem to affect consumers' product evaluation and behavioral intentions. Especially, the effects of intrinsic attributes appear to be significant in almost all of clothing research and marketing studies. As suggested by Sproles (1979), clothing selection requires a degree of aesthetic skill in coordinating colors and fabrics. Assessing quality in fabrics and garments also requires knowledge. The decision-making process becomes more complex when fashion content enters into the choice. Knowledge of clothing is accumulated from the past experience from shopping, consumption activities, and observing displays and others. Fashion information is also acquired from fashion magazines, fashion editorials, advertisements in newspapers, and exposure to new styles through television and cinema. Clothing knowledge may guide one's expectations about clothing quality and benefits.

Reviews on studies examined clothing interest suggest that clothing interest is closely related to the aesthetic and economic values which guide the evaluation and behavior of the individuals. Therefore, it is expected that clothing interest and knowledge moderate price-perceived quality relationships in evaluating clothing products.

CHAPTER III

STATEMENT OF PROBLEM

This chapter presents theoretical propositions underlying this research based on the conceptual review in the Review of Literature. Specific objectives and research hypotheses guiding the investigation are then presented.

Conceptualization

Conceptualization is an ongoing examination process involving definitions of the essential natures of concepts along with reasoned grounding of concepts' relationships in the knowledge system (Brown, 1981; Nagasawa, Kaiser, & Hutton, 1989; Norton, 1991). The proposed conceptual model in this research shows how information cues, such as intrinsic attributes and actual price, affect consumers' product evaluations and behavioral intentions. Constructs like perception of quality, perception of benefits, perception of monetary sacrifice, perception of value, willingness to buy, and search intentions have broad application to the clothing and textiles area and are central to the purpose of this study. Theoretical developments in price-perceived quality research provide a conceptual framework. In addition, cognitive and affective processing models provide insights about the roles of consumer knowledge and interest on consumer evaluation and decision making. After combining those streams of research, it is proposed that the degree of clothing interest and knowledge moderates both the extrinsic cue-perceived quality and intrinsic cue-perceived quality relationships.

Price-Perceived Quality Inferences

Classical economic theory construes price as a constraint or as an index of monetary sacrifice. Since Scitovsky's (1945) conceptual arguments, early empirical research seemed to support Scitovsky, indicating that the price is often used as a cue to infer the quality of a product (Gabor & Granger, 1964, 1966; Leavitt, 1954; Tull, Boring, & Gonsior, 1964). Early studies utilizing price as the only cue and subsequent studies using multi-cues, provide collective evidence that the role of price is more than just an index of monetary sacrifice.

Monroe and Krishnan (1985), using Monroe's (1971, 1973) conceptualization of perceived value, provided a framework for studying the relationship between price and perceived quality. They incorporated the roles of price as an index of perceived quality and as an index of monetary sacrifice (Figure 2). As shown in the figure, actual price is used both as an indicator of the sacrifice needed to purchase the product, as well as a signal of quality. Perception of value is the resulting cognitive tradeoff of combining the monetary sacrifice and the perceptions of quality. This conceptualization is consistent with the notions of an acceptable price range. Outside this range of prices, the perceptions of monetary sacrifice would be higher than the perceptions of quality and the price would not be considered as acceptable. A higher price represents an increase in what must be sacrificed to purchase the product and leads to a lower value perception and reduced willingness to buy. At the same time, a higher price results in an increase in perceived quality and a higher value perception leading to a greater willingness to purchase.

Several researchers (Dodds & Monroe, 1985, 1989; Krishnan & Monroe, 1985; Rao & Monroe, 1988, 1989; Zeithaml, 1988) have contributed to conceptual developments and modifications in price-perceived quality research by providing an understanding of the effects of intrinsic and

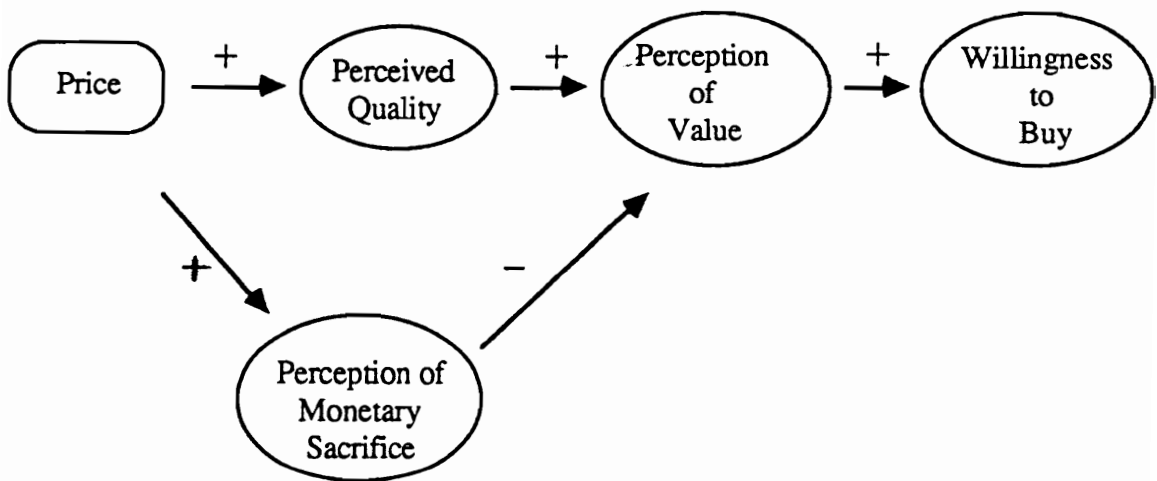


FIGURE 2: MONROE AND KRISHNAN (1985) MODEL

extrinsic attributes on consumers' product evaluations. Zeithaml (1988) provided an extended model which incorporated the means-end chain representing the attribute-consequence-value linkage. The underlying idea is that consumers organize information at various levels of abstraction ranging from perceptual attributes (preference attributes) and consequences to complex personal values (Cohen, 1979; Gutman, 1982; Gutman & Reynolds, 1979, 1983; Myers & Shocker, 1981; Olson & Reynolds, 1983; Reynolds & Perkins, 1987; Young & Feigin, 1975). In Zeithaml's (1988) model, perceived quality is at a higher level of abstraction than is a specific attribute of a product.

Perceived benefits are some combination of physical attributes, service attributes, and relative utility consumers place on the total product offering. As Figure 3 illustrates, firms try to deliver product attributes/ characteristics to be matched with the benefits wanted by the consumers. Since consumers have different behavioral characteristics that affect and determine the benefits they want, a firm wants to find out consumers' knowledge of and interest in their products. Consumers knowledgeable about certain product attributes (which are perceived to deliver benefits to them) may use these cues to evaluate the relative benefits of the product. It is expected that consumers would perceive value to be higher when a clothing item has the attributes they value. It is also expected that perceptions of value are in turn directly related to consumers' preferences or choice.

The proposed conceptual model (Figure 4) illustrates the roles of price and intrinsic attributes in consumers' perceptions of product quality, perceptions of monetary sacrifice, perceptions of value, willingness to buy, and search intention. The model suggests that the price is used to make inferences about product quality and as an index of the perceived sacrifice. The figure differentiates perceptions of quality from perceptions of benefits, reflecting Zeithaml's (1988) suggestion about separation between the two constructs. As illustrated in the model,

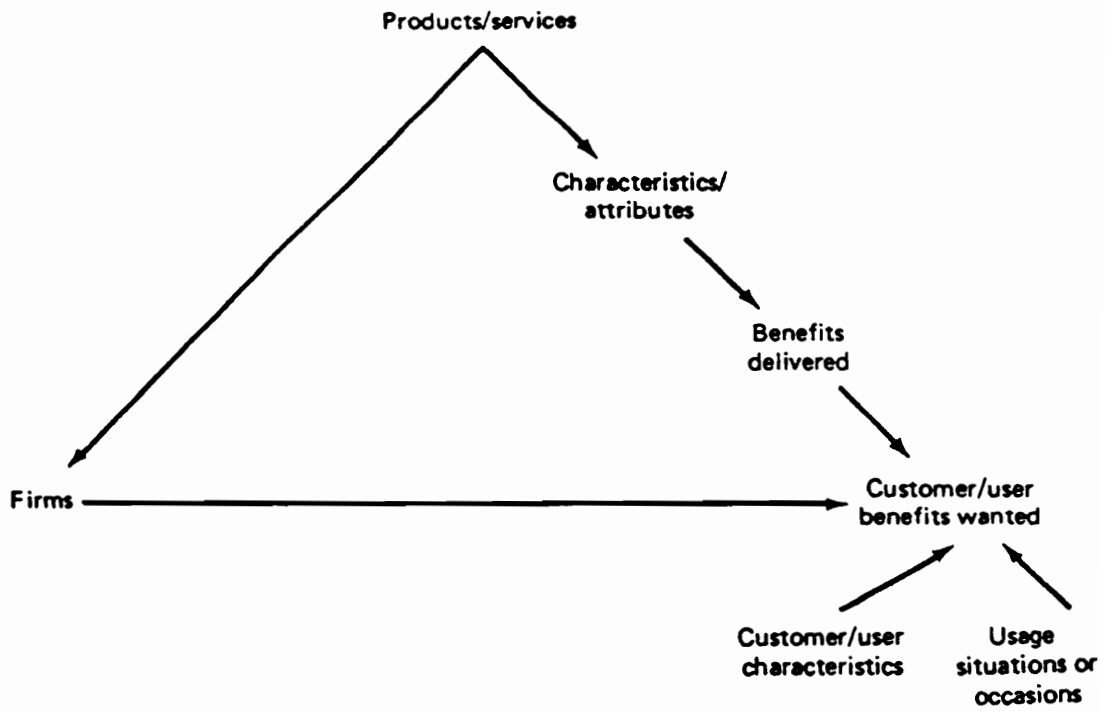


FIGURE 3: CONCEPTUAL FRAMEWORK FOR BENEFIT ANALYSIS.
Adopted from K. B. Monroe (1990). Pricing: Making profitable decisions. p. 91.

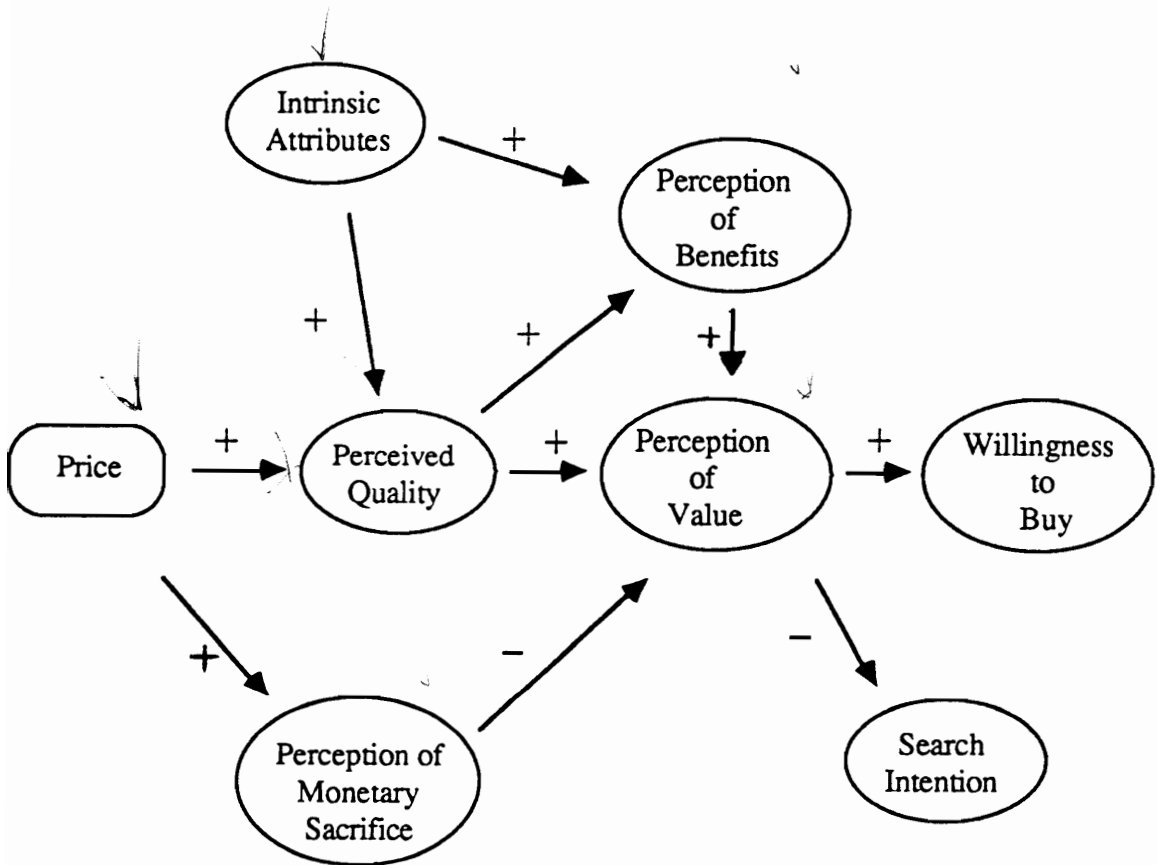


FIGURE 4: PROPOSED CONCEPTUAL MODEL

the relationship of intrinsic attributes to perceptions of benefits is complex. That is, intrinsic attributes desired by consumers affect perceived quality and perceptions of benefits, and perceptions of quality in turn affect perceptions of benefits. Resulting perceptions of benefits and perceptions of quality affect perceptions of value. Perceptions of benefits are influenced by two types of nonprice information: extrinsic and intrinsic (Grewal, 1989; Zeithaml, 1988). Based on the dichotomy of intrinsic and extrinsic cues, intrinsic information involves the physical composition of a product. Extrinsic information is external to or outside the product. As Zeithaml (1988) noted, this type of information is related to the product but is not a part of the physical product itself. The actual price of a product is perceived as an index of monetary sacrifice and the perception of sacrifice negatively influences perceptions of value. Perception of value represents a tradeoff between consumers' perceptions of benefits and quality and their perceived monetary sacrifice. It is expected that perceptions of value would be positive when perceptions of quality and benefits increase more than perceptions of monetary sacrifice. The proposed model posits a positive relationship between price and perceived quality, and between price and perceptions of monetary sacrifice. Willingness to buy is positively related to perceptions of value. Assuming a positive relationship between perceived value and willingness to buy, an enhancement in perceived value leads to an increase in willingness to buy. The model also posits a negative relationship between perceptions of value and intention to search. That is, as consumers' perception of value increases, their intention to search for additional information including price decreases.

Construct Definitions and Relationships

This section provides detailed definitions of the constructs in Figure 4 and some relationships among constructs.

Perceived Quality

Perceived quality is defined as the consumer's judgment about the relative superiority or excellence of a product (Monroe & Krishnan, 1985; Zeithaml, 1988). Perceived quality is different from objective or actual quality (Dodds & Monroe, 1985; Garvin, 1983, 1987; Holbrook & Corfman, 1985; Jacoby & Olson, 1985; Parasuraman, Zeithaml, & Berry, 1986; Zeithaml, 1988). Objective quality refers to measurable superiority on physical standards or specifications. Home economists traditionally have measured the objective quality of textile products for the purpose of developing standards and specifications to help consumers (Hays & Frankenberg, 1941, 1942). Consumers have expectations about the objective quality of the product based on their past experiences. Differentially knowledgeable consumers have different degrees of expectations. Perceived quality may be equated with meeting consumer expectations. From the consumer's perspective, Maynes (1976), an economist, defined product quality as "...the extent to which the specimen provides the service characteristics that the individual consumer desires." This perspective is similar to the user-based approach of Garvin (1983, 1987). Operationalization of perceived quality in past research has varied.

In the present research, perceived quality is defined as the subjective evaluation of relative excellence of a garment by a consumer, based on expectations and past experiences in the consumer's knowledge structure. This definition is similar to that proposed by Rao and Monroe (1988), but it also takes into account the expectations and consumption

experiences affecting perceptions of quality. It may be interesting to find the quality expectations of consumers and determine generally what attributes consumers use in assessing garment quality. Some individuals are particularly attentive to features in clothing that are related to cost, that is, quality, brands, and material. Designer labels and recognizably expensive materials like cashmere can be distinguished by certain individuals. It is argued that a consumer's assessment of garment quality is based on both objective, innate characteristics of a garment, and individual characteristics of the consumer such as degree of knowledge, interests, and values. Both intrinsic and extrinsic characteristics influence a consumer's perception of product quality. It is argued that consumers with different degrees of knowledge differ in their interpretation of the impact of these characteristics on garment's technical performance. For example, will consumers trade durability for fashionable design, accepting lesser quality due to a personal value placed on fashion ?

Information Cues

A product consists of an array of attributes, such as price, brand name, and compositional characteristics. Attributes that signal quality have been dichotomized into intrinsic and extrinsic cues (Olson, 1977; Olson & Jacoby, 1972). Intrinsic attributes are physical attributes of the product (e.g., color, styling, fabric, construction of a garment). Intrinsic attributes cannot be changed without altering the product properties and are evaluated as the product is consumed or used (Olson, 1977; Olson & Jacoby, 1972). When intrinsic attributes change, the quality of a product is affected. On the other hand, technical performance embraces all those physical attributes and performance characteristics that are relevant to use functions. Clothing products have been designed

for both function and aesthetic appeal. As consumers do not always know the relative technical performance of a product, certain intrinsic attributes may be regarded as a necessary condition for quality (e.g., wool as a fiber content may be considered necessary for high quality in a suit). But not every consumer seeks the highest performance in each attribute. Garment quality may be evaluated due to aesthetic appeal at the expense of technical performance. As Gregory (1949) and Chamberlin (1965) noted, a distinctive or exclusive fashion may have monopolistic effect as a brand or a trade mark by distinguishing a particular product in the minds of consumers and creating loyalty to a particular manufacturer or a retailer; fashion may create a specialty which is free from comparative judgment of price, quality, or durability (Chamberlin, 1965; Gregory, 1949). Individuals with higher levels of clothing interest may search for either fashion or quality. It is argued that important intrinsic attributes for apparel may be styling and color. Quality of materials and construction (or workmanship) may be overlooked by manufacturers, retailers, and consumers in favor of styling and effective fashion promotion.

Consumers can not be assumed to have perfect knowledge about properties of fibers, fabrics, finishes, and garment construction processes to form perceptions of quality. Indeed, studies indicate consumers' limitation in information processing (Jacoby, Speller, & Kohn, 1974; Malhotra, 1982; Summers, 1974; Wilkie, 1974). Jacoby et al. (1974) concluded that certainty increased for individuals as the amount of information for a brand increased. In addition to intrinsic cues, extrinsic cues have been shown to be important in the perceptions of price and quality (Behling & Wilch, 1988; Davis, 1987; Jacoby, Olson, & Haddock, 1973; Sternquist & Davis, 1986). Extrinsic cues are attributes that are not a part of the physical characteristics of the product, and are exemplified by price, brand name, and store name (Olson & Jacoby, 1972). Changes in these attributes (cues) will not affect the physical appearance

of the product. Marketers disseminate through advertising the information for consumers to identify their products as higher quality through signals or extrinsic cues. ✓

Olson (1977) suggests that consumers are likely to use different cues depending on their degree of product knowledge or expertise. Literature also indicates that consumers routinely use inference formation strategies and cues when confronted with incomplete information (Ford & Smith, 1987; Kahneman & Tversky, 1979; Klein & Oglethorpe, 1987; Klein & Yadav, 1989; Levin & Gaeth, 1988). Further, Olson (1977) suggests that products may be evaluated based on knowledge about them or surrogate indicators for evaluative dimensions. Thus, a specific garment may be evaluated based on styling (intrinsic attribute) or on brand name (extrinsic attribute). Rao and Monroe (1988) observed that both novices and experts tended to use extrinsic cues to assess product quality, whereas those at intermediate knowledge levels relied more heavily upon intrinsic cues. In line with Rao and Monroe's (1988) ideas, it is argued that the degree of knowledge the consumer has about a product moderates the cue utilization process. The more knowledgeable the consumer is about a product, the greater will be his/her knowledge of intrinsic attributes and benefits. As a consequence, the expert consumer's reliance on extrinsic attributes like price to evaluate products would decline. In other words, expert consumers' assessments of product quality likely will be based more on intrinsic attributes (e.g., construction, fit, design). However, if expert consumers know there are price and quality relationships in the marketplace, they tend to use price in assessing the quality of apparel products.

Perceptions of Benefit

Although price is important, consumers' perceptions of benefits play an important role in decision making. Lancaster (1971) proposed that the utility of a product is a function of benefit characteristics which satisfy particular needs/desires. A product with the maximum combination of benefits, called the efficiency frontier, will be chosen by consumers. Holbrook and Hirschman (1982) have suggested that products differ in their usage characteristics, in their use functions, and in user benefits to be gained from consumption (i.e., objective or tangible as opposed to subjective or symbolic). Two manifestations of experiential consumption are symbolic consumption (Hirschman, 1980, 1986) and aesthetic consumption (Havlena & Holbrook, 1986). Products may be evaluated, purchased, and consumed based on their symbolic content. On the other hand, consumers may perceive and appreciate a product for itself, without regard to the utilitarian functions of benefits it may provide the consumer (Holbrook, 1986). Differences in usage experiences might underlie the types of reasons on which buying decisions are based and might differ among products with contrasting reasons for purchase. Through abstraction, consumers evaluate a garment by the extent to which it strengthens a sense of social belonging and standing with others and is consistent with the consumer's desired self-image and sense of personal integrity. A garment may not be evaluated just for its value in terms of, say, comfort, durability, and ease of care, but also as a signal of the consumer's appearance, status, values, and self-image. The abstract attributes arise whenever consumers consider social expectation and the desire for status. That is, preferences and social reasons might dominate in the choice of apparel. Perceptions of benefits are some combination of physical features, service attributes, and relative utility consumers place on the total product offering. Perceptions of benefits are then defined as the degree to which the product is perceived to perform a desired function,

satisfy needs or desires, and/or provide pleasure (Lancaster, 1971; Yadav, 1990). Product attributes/ characteristics should be matched with the benefits wanted by the consumers. Since consumers have different behavioral characteristics that affect and determine the benefits they want, individual characteristics of clothing interest and knowledge need to be found. Consumers knowledgeable about certain product attributes (which are perceived to deliver benefits to them) may use these cues to evaluate the relative benefits of the product and compare different configurations of individual product attributes (extrinsic and intrinsic). Attributes are implicitly weighted as they affect the overall evaluations of a product's configuration of benefits. It is expected that consumers would perceive value to be higher when a clothing item has the attributes they perceived benefits. It is also expected that perceptions of value are in turn directly related to consumers' preferences or choice.

Perceptions of Sacrifice

Consumers implicitly rank alternative products on the basis of sacrifices likely to be involved. They categorize brands into price categories and expect brands falling within the same price range to offer roughly the same value but not necessarily the same set of benefits. From the consumer's perspective, price represents sacrifice or cost to obtain a product (Monroe & Krishnan, 1985; Zeithaml, 1988). Jacoby and Olson (1977) and Monroe (1990) differentiated objective price (the actual price of a product) from perceived price (the price as encoded by the consumer). Thus, price judgments are comparative in nature. That is, a price is judged as acceptable or not in reference to another price, whether that price is in the consumer's memory or externally available in an advertisement or is the price of another product or brand (Monroe, 1990). However, monetary price is not the only sacrifice perceived by consumers.

As Zeithaml (1988) suggested, time, search effort, and psychic costs are also perceived as sacrifice by the consumers. Notions of nonmonetary costs are supported by research in economics, home economics, and marketing (Down, 1961; Gronau, 1973; Mabry, 1970; Zeithaml & Berry, 1987).

Perception of sacrifice may be viewed as the cost of the monetary loss and nonmonetary loss (time and effort) associated with the purchase of the garment. This view has been acknowledged by modern economists like Becker (1965). Consumers incur money and sacrifice other resources (time, effort, energy as opportunity costs) to purchase products and service. To price-conscious consumers, the monetary cost is pivotal and leads to searching for the best bargains. To these consumers, reducing the monetary sacrifice can increase the perceptions of value. To consumers less prone to the cost, saving time and effort are perceived more value at the expense of higher cost. Recent research reports that saving time has become a foremost concern to consumers in supermarket shopping and cooking (Food Marketing Institute, 1985, 1986; Morris, 1985; Zeithaml, 1988). In this research, emphasis will be measuring the effects of independent variables on perceptions of monetary sacrifice.

Perceptions of Value

Perceptions of value are formed as a result of tradeoff between perceived quality and benefits ("get" component) and sacrifice (price consumers have to pay and time and effort costs). The higher the price of the product, the greater consumers' monetary sacrifice, but at the same time, the higher the perceived quality. A higher price can be what makes a highly visible luxury clothing item attractive by suggesting exclusivity, high status, and social belonging, but of low value in terms of the price to be paid. In evaluating alternative products or brands, consumers evaluate differential effects (costs, benefits and quality)

associated with each option. If consumers have to spend much time and effort to find or purchase a product or service, they perceive more sacrifice. The implicit tradeoff between the utility of the sacrifice and the utility of the product results in product value perceptions. Therefore, perceived value is conceptualized as the consumers' comparative assessment of the utility of a product on perceptions of what is received (quality and benefits) and what is given (sacrifice). This definition is consistent with the value concept proposed in the means-end chain model.

When comparing two different qualities of the same product type (e.g., skirts), the focus is on determining which garment has more of the desired features and will provide utility. It is proposed that certain clothing attributes affect the perceptions of value by giving such comparative benefits as attractive appearance, status symbol, and social belonging. Clothing researchers (Altpeter, 1963; Creekmore, 1963; Lapitsky, 1961; Morganosky, 1984, 1987; Slocum, 1975) have found the aesthetic and economic clothing values to be the most important components in the consumer's value structure in relation to clothing. In the same vein, in order to determine perceptions of value, we need to know how consumers weight costs and benefits and reconcile opposed reasons for different choices.

Willingness to Buy

Consumers' willingness to buy a product is influenced by perceptions of value (Monroe & Krishnan, 1985; Szybillo & Jacoby, 1974; Zeithaml, 1988). Szybillo and Jacoby (1974) suggested this relationship when hypothesizing that value for the money would have a stronger relationship to perceived likelihood of purchase than would perceptions of quality. Furthermore, it is suggested that perceptions of value are positively related to perceptions of price for prices below the consumers' lower

price limit to a price within their acceptable price range. But as price increases beyond this acceptable range, there is a negative relationship between perceptions of price and perceptions of value (Dodds & Monroe, 1989). Willingness to buy is viewed as a behavioral intention, a precursor to actual purchase (Krishnan, 1984; Krishnan & Monroe, 1987; Gardner, 1971, 1974). Dodds and Monroe (1985) suggested that willingness to buy was a behavioral disposition indicating the likelihood that the consumer would purchase the product. Consumption is likely to be influenced by income and willingness to buy as Katona (1975) argued. Willingness to buy is defined as the likelihood that a consumer intends to purchase the garment. However, buying intentions are always conditional in terms of time, place, and situations. Hence, to know consumers' intentions, we should focus on confirming the existence of the intention state and assumptions lying behind it.

It is proposed that there is a positive relationship between consumers' value perception and willingness to buy the product, that is, ceteris paribus, as consumers' perceptions of value increase, their willingness to buy increases (Monroe & Krishnan, 1985; Rao, 1986).

Search Intention

According to Stigler (1961), due to increasing proliferation of brands and the increasing complexity of products, consumers can not be aware of all prices and product alternatives in the marketplace and can be confused with this uncertainty. By searching or obtaining additional information from manufacturers and retailers, consumers try to reduce this uncertainty. The process of obtaining the additional information is termed "search" (Stigler, 1961). We can expect the greater the uncertainty and the more important the decision, the greater search for information (Jacoby, Chestnut, & Fisher, 1978). Research findings in cognitive

processing suggest differential search intention depending on knowledge of consumers and the tasks at hand (judgment or choice). For the judgment task, expert consumers, with a complex and well developed knowledge structure, do greater external search. In other words, knowledgeable consumers are cognizant of information that is important to finding more information than novices. On the other hand, for the choice situation, knowledgeable consumers search less with better information selection skills. Consumers' intention to search for information is defined as the extent to which consumers intend to search for additional information.

Stigler (1961) conceptualized that consumers' search for additional information was contingent on the tradeoff of the costs of the search relative to the benefits of the search. Benefits of search may include finding the products with the most likable intrinsic attributes, the lowest price, the minimum time and efforts, thus increasing the savings (Stigler, 1961; Urbany, 1986). Enhancing savings is similar to enhancing value (Chapman, 1987; Monroe & Chapman, 1987; Thaler, 1985; Urbany, Bearden, & Weilbaker, 1988). Comparison shopping is done to find out prices and what is available (Katona & Mueller, 1954). Thus, it is proposed that as consumers' perceptions of value increase, their intention to search for additional information decreases.

Perceptions of Attributes

As indicated previously, the perceptions of intrinsic attributes are important in consumers' evaluations and behavioral intentions. Three perceptions of attributes are proposed in this research and they are relevance, typicality, and fashionability which are expected to be related to clothing evaluation. Perception of relevance is the extent to which consumers feel or perceive the attributes in the advertisements to be relevant, important, and central to their goals. That is, attributes

perceived to be useful or relevant will help the consumer to interpret the product (Hirschman, 1980, 1984, 1986; Hirschman & Solomon, 1984; Rosch, 1973, 1975; Rosch & Mervis, 1975). Because consumers vary in the degree to which they associate a particular attribute with a clothing product, individual factors of clothing interest and knowledge are expected to affect their perceptions of the relevance of attributes (Horridge & Richards, 1984; Sproles & Kendall, 1986).

Consumers appear to regard some intrinsic attributes and brands as more typical than others. Research by Barsalou (1985) suggests that the perceived typicality of a category member may be influenced by the extent to which it has ideal attributes, i.e., attributes useful for achieving the goal served by the category. As category members become more typical, they gain increasing priority in cognitive processing. Recent studies have found that more typical members tend to be recalled sooner than less typical members (Loken & Ward, 1987; Nedungadi & Hutchinson, 1985; Ward & Loken, 1988).

Consumer preferences also may vary in relation to the fashionability of the clothing product, i.e., some consumers are fashion conscious individuals and some are fashion followers (King & Sproles, 1973). Fashion leaders have been found to have high clothing interest. Fashionability connotes a social stamp of approval and may be less likely to differ among perceivers than liking as evidenced in Gibbins' (1969) finding that fashionability as dominant factor in adolescents' judgment of clothes. Fashionability is one of the evaluative components distinguishing our perceptions of clothing products (DeLong & Larntz, 1980). Preference for clothing styles is closely linked with a perceiver's idea of beauty and of what is current (Whisney, Winakor, & Wolins, 1979). Individuals who read fashion magazines would most likely to differentiate mass and high fashion as evidenced by Painter and Pinegar's (1971) study. Many consumers sacrifice other desirable intrinsic attributes for the right fashion. It is expected that the intrinsic attributes, price, clothing interest and

knowledge affect the perceptions of attributes (relevance, typicality, fashionability).

Derivation of Theoretical Propositions

Behaviorists point out that consumers never have 'the perfect information' assumed by traditional economic theory to make purchase decisions that minimize their expenditure for a given utility. As a consequence, consumers often use easily accessed extrinsic attributes like price and brand name, rather than intrinsic product attributes (physical composition of the product, e.g., fabric, color) to assess product quality. This situation may occur when consumers (1) have little or no experience with the product, (2) have insufficient time or interest to evaluate the intrinsic attributes, and (3) cannot readily evaluate the intrinsic attributes (e.g., at point of purchase). Consumers depend on intrinsic attributes more than extrinsic attributes (1) at point of consumption, (2) in pre-purchase situations when intrinsic attributes are search attributes, and (3) when the intrinsic attributes have high predictive value (Zeithaml, 1988).

Researchers in the clothing and textiles area have indicated that consumers find intrinsic attributes to be more important than extrinsic cues in judging clothing quality (Davis, 1985, 1987; Eckman et al., 1990; Hatch & Roberts, 1985; Heisey, 1990; Rabolt, 1990). However, researchers have done limited examination of the relative contribution of a wide array of criteria for apparel evaluation and purchase decisions and the fit of multiple criteria into an integrated cognitive process of product evaluation.

Zeithaml (1988) suggested that intrinsic attributes have differing impacts on consumers' perceptions of quality and value, and she has

reported results of exploratory interviews suggesting that intrinsic attributes might influence consumers' perceptions of benefits provided by consuming a product. Krishnan and Monroe (1987) also have suggested that there is a need for understanding of the effects of extrinsic and intrinsic information cues on consumers' product evaluation and purchase intention.

When consumers do not have the knowledge of intrinsic clothing attributes to evaluate, they may use other cues not directly related to technical performance for evaluative purposes. One extrinsic information cue, price, has been the focus of considerable research. Since Scitovszky (1945) first noted that buyers may use price to impute the quality of the product, many studies have reported mixed results on the relative effects of information cues on the price-perceived quality relationship. Single cue studies examined the influence of price in isolation upon quality judgments (Lambert, 1970, 1972; Leavitt, 1954; McConnell, 1968; Peterson, 1970; Tull, Boring, & Gonsior, 1964). Leavitt (1954), Tull et al. (1964), Gabor and Granger (1966), and McConnell (1968) found that consumers indeed believe that high prices are indicators of better quality. On the other hand, Oxenfeldt (1950), Morris and Bronson (1969), Sproles (1977), Riesz (1978, 1979), and Geistfeld (1982) concluded that quality/price relations are product-specific and weak in general. Findings from multi-cue studies (Enis & Stafford, 1969; Gardner, 1970, 1971; Jacoby, Olson, & Haddock, 1973; Valenzi & Andrews, 1971) have been somewhat inconsistent. However, through integrative review Monroe and Krishnan (1985) and Rao and Monroe (1989) indicate that a positive price-quality relationship exists.

Means-end chains representing attributes-consequences-value suggest that consumers give personal meaning to intrinsic attributes and those attributes serve as the basis for differentiating products (Gutman & Reynolds, 1983). Clothing products have been designed for both technical functions in use and aesthetic appeal. As consumers cannot accurately predict the relative technical performance of a product, certain product

attributes may be regarded as conveying high performance. Through abstraction, the consumer evaluates a garment by the extent to which it strengthens a sense of social belonging and is consistent with the consumer's desired self-image. These abstract attributes arise whenever consumers consider social expectation and the desire for status. That is, preferences and social reasons, which are the abstract attributes might dominate in the choice of apparel. It is argued that an important intrinsic attribute for apparel may be styling.

Differentially knowledgeable consumers are expected to behave differently when searching for pre-purchase information primarily because they have different amounts of information already stored in memory. Also, knowledge structures of expert and novice consumers differently affect the product categorization processes.

The degree of clothing interest is the extent to which an individual is favorably predisposed toward clothing. The greater the interest the individual has in clothing, the more attention he or she will give to clothes and the more he or she is involved with things related to that interest. Empirical evidence from clothing research suggests that clothing interest affects consumers' evaluations and behaviors. An individual who has high clothing interest is likely to engage in activities related to clothing products, such as shopping, fashion magazine reading, and managing clothing to maintain it in the best condition. Many researchers found that clothing interest is one of the characteristics of fashion innovators (Baumgarten, 1975; Grundering, 1967; Katz & Lazarsfeld, 1955; King & Sproles, 1973; Pasnak & Ayers, 1969; Rosencranz, 1949; Schrank & Gilmore, 1973; Summers, 1970).

Grundering (1967) reported that interest in clothing was a significant aspect of early fashion adopters. Schrank and Gilmore (1973) found a positive, significant relationship between their measures of fashion opinion leadership and clothing interest. Several early researchers found clothing interest to be extremely important to

adolescents and related to their social acceptance and shopping behavior (Crane, 1956; Evans, 1964; Horn, 1960; Morris, 1958; Ryan, 1966; Silverman, 1945; Vener & Hoffer, 1959). The significant relationships between clothing interest and clothing choice have been empirically supported by much research. Researchers agree that clothing interest, as a motivational factor, plays an important role in clothing information processing and is likely to be manifested through clothing purchases.

It is argued that consumers with different degrees of knowledge differ in their interpretation of the impact of garment characteristics on garment evaluation. Physical attributes serve as the basis for the perceptual distinctions between products, but preferential judgments develop from within the consumer. Expert consumers' understanding of the product category will be more complex and abstract compared to novice consumers' understanding. With experience, this knowledge becomes organized by the function or meaning of products rather than by their surface features (Perkins & Reynolds, 1990). The change in cognitive structure due to increased product knowledge suggests that novices attend to the concrete attributes of a product as compared to expert consumers who are more concerned with the benefits that can be derived from the product and the meaning of the product to them. Though experts know more about product attributes than do novices, they have moved beyond the perceptual level of analysis to a deeper level of meaning.

Expert consumers who are knowledgeable about intrinsic attributes of clothing items are likely to use that knowledge in clothing evaluation if there is a reason to believe that intrinsic attributes affect clothing performance. If consumers know that there is a positive price-quality relationship in the product market, they will probably use price as a quality indicator. Further, if consumers know there is a weak relationship in the product market, they will be more likely to use intrinsic product cues to assess product quality. Thus, the strength of the use of price or other extrinsic product cues, such as brand or store

name, as indicators of product quality depends on the relative perceived differences between different cues and on the degree to which consumers know about the product and actual price-quality relationships (Monroe, 1990). Therefore, knowledge of clothing will affect the degree to which consumers use extrinsic cues, such as price, as an index of clothing quality. Certain intrinsic attributes provide unique benefits to individual consumers and these benefits may influence consumers' sensitivity to the prices of clothing products.

Existing research suggests that females relative to males, often engage in more detailed elaboration of specific message content (Krugman, 1966). Accordingly, females sometimes are found to exhibit greater sensitivity to the particulars of relevant information when forming judgments than are males (Holbrook, 1986; Meyers-Levy, 1988, 1989; Meyers-Levy & Sternthal, 1991; Winakor, Canton, & Wolins, 1980). Also, most females have more experience in managing problems related to clothing in general, thereby becoming more knowledgeable about the intrinsic attributes of clothing items, and they have higher clothing interest levels. Therefore, gender differences are expected in the effects of intrinsic attributes, price, clothing interest, and knowledge on the dependent variables.

In addition, consumers' attitudes toward advertisements and their perceptions of attributes (relevance, typicality, and fashionability) may be influenced by the attributes in the advertisements and individual characteristics of the consumers.

Research Purpose and Objectives

In light of the research review and conceptual development up to this point, the purpose and the objectives of research would be developed.

The purpose of this dissertation is to investigate the moderating effects of clothing interest and clothing knowledge on consumers' utilization of information cues for evaluation and behavioral intentions.

The research objectives were:

1) to investigate the relative effects of intrinsic attributes and of the extrinsic attribute of price on perceptions of apparel quality, perceptions of benefits, perceptions of monetary sacrifice, perceptions of value, willingness to buy, search intention, and attitude toward advertisement.

2) to measure the moderating effects of clothing interest and clothing knowledge on utilization of intrinsic attributes and of the extrinsic attribute of price in perceptions of apparel quality, perceptions of benefits, perceptions of monetary sacrifice, perceptions of value, willingness to buy, search intention, and attitude toward advertisement.

3) to explore the gender differences in the effects of independent variables on each dependent variable.

4) to measure the effects of price, intrinsic attributes, clothing interest, and clothing knowledge on the perceptions fashionability, relevance, and typicality.

5) to measure the relationships among the theoretical constructs of price, intrinsic attributes, perceptions of quality, perceptions of benefits, perceptions of monetary sacrifice, perceptions of value, willingness to buy, and search intention.

Research Hypotheses

Based on the conceptualization presented above, the following hypotheses were the focus of the empirical investigation in this research. Seven initial hypotheses are related to overall effects of the proposed four independent variables on seven dependent variables.

H1: Price, intrinsic attributes, clothing interest, and knowledge considered together would explain a significant amount of variation in:

- H1a: perceptions of quality;
- H1b: perceptions of monetary sacrifice;
- H1c: perceptions of benefits;
- H1d: perceptions of value;
- H1e: willingness to buy;
- H1f: search intention;
- H1g: attitude toward advertisement.

The following hypotheses pertain to the effect of each independent variable on the dependent measures in the conceptual model. In each of these hypotheses, the condition of ceteris paribus (all other independent variables being constant) is assumed.

H2 : Price would aid in predicting:

- H2a: perceptions of quality;
- H2b: perceptions of monetary sacrifice;
- H2c: perceptions of benefits;
- H2d: perceptions of value;
- H2e: willingness to buy;
- H2f: search intention;
- H2g: attitude toward advertisement.

H3 : Intrinsic attributes would aid in predicting:

- H3a: perceptions of quality;
- H3b: perceptions of monetary sacrifice;
- H3c: perceptions of benefits;
- H3d: perceptions of value;
- H3e: willingness to buy;
- H3f: search intention;
- H3g: attitude toward advertisement.

H4 : Knowledge would aid in predicting:

- H4a: perceptions of quality;
- H4b: perceptions of monetary sacrifice;
- H4c: perceptions of benefits;
- H4d: perceptions of value;
- H4e: willingness to buy;
- H4f: search intention;
- H4g: attitude toward advertisement.

H5 : Clothing interest would aid in predicting:

- H5a: perceptions of quality;
- H5b: perceptions of monetary sacrifice;
- H5c: perceptions of benefits;
- H5d: perceptions of value;
- H5e: willingness to buy;
- H5f: search intention;
- H5g: attitude toward advertisement.

In addition to the hypotheses stated above, the following hypotheses also were tested in the empirical investigation.

H6 : There would be significant differences between male and female subjects in the effects of independent variables on:

- H6a: perceptions of quality;
- H6b: perceptions of monetary sacrifice;
- H6c: perceptions of benefits;
- H6d: perceptions of value;
- H6e: willingness to buy;
- H6f: search intention;
- H6g: attitude toward advertisement.

The following exploratory hypotheses were tested.

H7: Price, intrinsic attributes, clothing interest, and knowledge considered together would explain a significant amount of variation in

- H7a: perceptions of relevance;
- H7b: perceptions of typicality;
- H7c: perceptions of fashionability.

In each of the following hypotheses, the condition of ceteris paribus (all other independent variables being constant) is assumed.

H8 : Price would aid in predicting:

- H8a: perceptions of relevance;
- H8b: perceptions of typicality.
- H8c: perceptions of fashionability;

H9 : Intrinsic attributes would aid in predicting:

- H9a: perceptions of relevance;
- H9b: perceptions of typicality;

H9c: perceptions of fashionability.

H10 : Knowledge would aid in predicting:

H10a: perceptions of relevance;

H10b: perceptions of typicality;

H10c: perceptions of fashionability.

H11 : Clothing interest would aid in predicting:

H11a: perceptions of relevance;

H11b: perceptions of typicality;

H11c: perceptions of fashionability.

H12 : There would be significant differences between male and female subjects in the effects of independent variables on:

H12a: perceptions of relevance;

H12b: perceptions of typicality;

H12c: perceptions of fashionability.

Based on the conceptual model and earlier propositions, causal relationships were hypothesized. It was hypothesized that:

H13a: Perceptions of benefits would be caused by perceptions of quality in a significant, positive way;

H13b: Perceptions of value would be caused by perceptions of benefits in a significant, positive way;

H13c: Perceptions of value would be caused by perceptions of quality in a significant, positive way;

H13d: Perceptions of value would be caused by perceptions of monetary sacrifice in a significant, negative way;

H13e: Willingness to buy would be caused by perceptions of value in a significant, positive way;

H13f: Search intention would be caused by perceptions of value in a significant, negative way;

H13g: Search intention would be caused by perceptions of monetary sacrifice in a significant, negative way.

CHAPTER IV

PROCEDURE

This chapter describes the research design and methodology used to convert theoretical propositions into testable hypotheses and actual testing procedures. Subjects were presented with a product description and a line drawing inclusive of the independent variable manipulations and then asked to respond to various questions using seven-point rating scales. Six different combinations of treatments (3 price levels and 2 levels of intrinsic attributes) were randomly assigned to the subjects. Seven theoretical constructs (perceptions of quality, perceptions of benefits, perceptions of value, perceptions of monetary sacrifice, willingness to buy, search intention, and attitude toward advertisement) served as major dependent variables. Three different perceptions of attributes (those of relevance, typicality, and fashionability) were included as control variables and analyzed as dependent variables. Each was measured by three, seven-point semantic differential scales. The major dependent variables were measured using multiple items.

The chapter is organized into five sections. The first section discusses design, variables, and related issues. The second section provides the development of measures, describing the prescriptions used to conduct the selection of the level of independent variables, product choice, development of product description, the clothing interest and knowledge scales, dependent variables, the pilot tests and the results of the pilot tests. The measurement properties of the scale and the levels of price and intrinsic attribute manipulations are also presented. The final questionnaire for the final experiment is described with pilot testing procedures. The third section presents the data collection procedure including sample and administration. Statistical testing

procedures for analyzing the data are presented in the fourth section. They include the reliability of measures and the preliminary analysis, research hypotheses testing, and relevant assumptions. The last section outlines the limitations associated with the research.

Research Design

McGrath (1982) defines the research process as a series of interlocking choices in which we try to maximize several conflicting needs simultaneously. He states that it is always desirable to maximize the following areas when conducting research:

1. the generalizability with respect to population,
2. precision in control and measurement of variables related to the behavior(s) of interest, and
3. realism of the context within which behaviors are observed.

However, he also points out that a researcher cannot maximize all three areas at the same time. Rather, research becomes a tradeoff among the three considerations. Depending on the research objective, researchers need to choose to optimize one or two of the conditions above at the expense of the other(s).

In line with McGrath's (1982) suggestions, it was considered important that this research focus on precision and control in measurement of variables. Furthermore, since a tradeoff must be made, internal validity takes precedence over external validity in this study.

Consistent results from research can be generalized by integrating numerous studies examining the same relationships over a number of products, treatments, settings, and subjects. Rosenthal (1984) suggested that at least 15 studies are required to assert that significant relationships exist among variables. Through accumulation and quantitative

integration of overall results, certain relationships studied in the research stream can be generalized.

To assess the proposed model, an experiment was proposed. Fromkin and Streufert (1976) contend that laboratory settings provide such advantages as a wider range of manipulative controls (i.e., allows the researcher a wider range of manipulation for the independent variables) and statistical controls, the facilitation of random assignment of subjects, an enhancement of measurement precision, as well as enabling the researcher to make causal inferences. In the actual procedure, a survey setting with two experimentally manipulated independent variables, price and intrinsic attributes, was employed. The other two independent variables, clothing knowledge and clothing interest, were measured through the structured questionnaires. The experimental conditions were randomly assigned to the subjects to maximize control.

A 3x2x2x2 between-subjects design was employed, with three levels of price, two different intrinsic attributes, two levels of knowledge, and two levels of clothing interest. Price and intrinsic attributes in the design were manipulated. The three levels of price by two levels of intrinsic attributes between-subjects design was completely nested within the two levels of clothing interest by two levels of clothing knowledge between-subjects design. A between-subjects design was proposed to avoid the possible confounding from the subjects because of learning the true intent of the researcher. There were six different combinations of treatment (three levels of price by two different intrinsic attributes) in each clothing interest and knowledge condition (two levels of clothing interest and knowledge). Each subject was randomly assigned to one treatment combination in each knowledge level.

Development of Measures

The first stage of development of measures determined the independent variables to be used. Then, appropriate products to be used as stimuli were selected. Next, descriptions of the selected products are developed followed by manipulations of the independent variables and development of scales for the other variables. Following that, the levels of price were determined and manipulated for the final questionnaire. Validations of the descriptions of the products and the levels of price were made by conducting Analyses of Variance. The clothing knowledge scale was developed and verified for reliability and the clothing interest scale was described. Seven theoretical constructs (perceptions of quality, perceptions of benefits, perceptions of value, perceptions of monetary sacrifice, willingness to buy, search intention, and attitude toward advertisement) were developed. Three different perceptions of attributes (those of relevance, typicality, and fashionability) were included as control variables and analyzed as dependent variables. Finally, other variables, including a manipulation check scale, shopping activities and demographic variables, final questionnaire, pilot test and the result of pilot test are explained.

Based on several meetings and reviews by faculty members in the Clothing and Textiles Department at Virginia Polytechnic Institute and State University, items adopted for this research were changed in terms of wording relevant to the product.

Independent Variables

In this study, the subjects were presented with a written description and a line drawing of dress slacks inclusive of independent variable manipulations and descriptive adjectives. The description of the

dress slacks presented to each subject was similar to an actual description of the dress slacks in a catalog. Four independent variables were used in this research. Two of them, the levels of price and intrinsic attributes, were experimentally manipulated.

The three price levels were determined by a pilot test to be at the lower, middle, and upper parts of the students' acceptable price range for dress slacks. The intrinsic attributes were manipulated over two levels: one garment was described as a blend of 82% wool/18% polyester and described and illustrated with a fashionable style; the other was 100% wool gabardine with traditional style. The selection of wool percentage and the style features to be described in the experimental stimuli were based on several in-depth interviews with faculty members in the Clothing and Textiles Department at Virginia Polytechnic Institute and State University, prior research, and textbooks. The specific intrinsic attributes manipulated were product-specific and are discussed in detail in the section of the product description development.

Operationalization of the two knowledge conditions was accomplished by asking several questions related to the clothing and textiles area. There were correct and incorrect answers among four choices for each of several questions. After administering and scoring of the test, subjects were divided into high and low knowledge conditions based on their scores. Operationalization of two clothing interest conditions involved administering a clothing interest scale to the subjects. Based on their scores on this scale, subjects were divided into high and low clothing interest conditions.

Further details of the procedure for the selection of levels of independent variables are provided in the sections on product description development, price level determination, and clothing knowledge scale.

Product Selection

For this research, dress slacks were chosen in part because they are relatively simple to evaluate in terms of construction complexity. For clothing products, it is acknowledged that variations in aesthetics, fashion features, performance, quality, and costs are related to fabrics and other materials, structure of garment components, and methods of assembly. Dress slacks are basic garments; usually only subtle changes are incorporated in styling and fabrication. Fiber content is perceived as a major factor in quality, cost, and performance of dress slacks and other types of clothing as evidenced in clothing publications (Forsythe & Thomas, 1989; Glock & Kunz, 1990; Norum & Clark, 1989; Rogers & Lutz, 1990).

In order for subjects to be classified readily as experts or novices, there had to be substantial variation in the knowledge about the product. At the same time, the product had to be sufficiently familiar to the subjects that even novices could comprehend and process the message content. Dress slacks are so commonly worn by the general population that it was assumed every subject had worn and owned dress slacks. Since subjects were both male and female students, the product description and line drawing needed to be unisex, thereby allowing both sexes of students to identify the dress slacks as theirs.

Development of Product Description

To develop proper descriptions for two different dress slacks, faculty members in the Clothing and Textiles Department at Virginia Polytechnic Institute and State University were interviewed several times. Also, studies reviewed earlier provided numerous intrinsic attributes which were found to be significant in evaluation of clothing. The fiber

content wool or wool blend has been found to be a significant intrinsic attribute in evaluating dress slacks and often seen in advertisements of dress slacks in mail order catalogs. Therefore, wool was used as the primary fiber content in the dress slacks. Textbooks and mail order catalogs were reviewed to determine typical percentages of wool content in dress slacks and to find typical styles and descriptions of them. Faculty members in the Clothing and Textiles Department were interviewed several times to select proper descriptions of intrinsic attributes for each style. One of the faculty members has taught numerous clothing construction and evaluation classes.

The descriptions and drawings were of the two different styles; one of a traditional style with 100% wool content, the other of fashionable style with wool blend. These detailed descriptions as well as the line drawings are presented in Appendix. It was expected that students would have different perceptions from the two different combinations of intrinsic attributes in the descriptions.

In the first stage of pilot testing, the fiber content for the fashionable style was described as an 85% wool/15% polyester blend. Features typically associated with fashionable styles were selected such as box pleats, wide tab waistband, and straight leg with a cuff. Descriptive words like "distinctive" and "exclusive" were incorporated to induce corresponding perceptions of style. For the traditional style, the fiber content was described as 100% worsted wool which is often associated with high quality. The fabric was described as gabardine which is regarded as durable due to the twill weave and thus associated with high quality. Features commonly associated with traditional styling were incorporated. They are darts, slanted pockets, belt loops, and slightly tapered legs. Words like "finely tailored" and "impeccable fit" were incorporated to reinforce subjects' perception of quality. A major concern was to investigate the differential effects of intrinsic attributes on dependent variables. It was not a concern to find the mixed effects of fiber content

and style on various dependent variables (say, 100% wool with fashionable design, 82% wool/18% polyester with traditional style). Therefore, no attempt was made to measure the mixed effect. This topic can be investigated in a future study.

At the second stage of pilot testing, the fiber content for the fashionable design was changed to 82% wool/18% polyester from 85% wool/15% polyester blend. By increasing the percentage of polyester content, it is expected that subjects may cognitively tradeoff the preference for wool in favor of fashionable style by choosing the dress slacks with fashionable style. Subjects at the first pilot test expressed their concern about the styling of back pockets which can be focal point of their fashion statement (whether traditional or fashionable). Some subjects commented that the styling of back pockets is a main factor for choosing among many alternatives. After accounting for all comments at the first pilot test, descriptions of back pocket styles were added to the original descriptions to give more realistic feeling and to slightly differentiate: two back welt pockets with button tabs for the traditional style, and two back welt pockets, one with a flap and one with a plain welt pocket, for the fashionable style. To find whether subjects perceived two descriptions for traditional and fashionable styling differently, Analysis of Variance was employed. Table 10 presents the means and the F values of the dependent measures for each level of the intrinsic attribute conditions in the second stage of pilot testing. The F values ($p = .05$) were significant on perceptions of quality, perceptions of benefits, monetary sacrifice, perceptions of value, willingness to buy, and search intention. The results indicate clear separation between each of the total combinations of intrinsic attributes (100% worsted wool and a blend of 82% wool and 18% polyester, two different styles of traditional and fashionable). As a result of the Analysis of Variance test, it was decided to use these two stimuli in the final questionnaire.

TABLE 10

MEANS AND F-VALUES OF DEPENDENT VARIABLES
FOR TWO INTRINSIC ATTRIBUTE CONDITIONS IN ANOVA

	<u>100% Wool</u>	<u>82% Wool</u>	<u>F-Value</u>
Perceived Quality	5.51	5.30	7.33*
Perceived Value	4.68	4.38	4.92*
Perceived Benefit	4.42	3.92	18.03*
Monetary Sacrifice	5.62	5.97	6.25*
Willingness to Buy	3.64	3.12	14.26*
Search Intention	5.97	5.62	6.21*

* significant F at p = .05 level.

Stimulus Presentation

The form of stimulus presentation is a potential source of variation in research. Presenting an actual product may result in subjects using a variety of senses to evaluate the product. In this study, the subjects were presented a written description and a line drawing to avoid the above problem, thereby enhancing the internal validity of the study. The descriptions of the dress slacks were gathered from various textbooks, catalogs, and faculty members in the Clothing and Textiles Department. Certain descriptive adjectives gathered from actual catalogs were used to induce some feelings from the subjects. In order to make the description as real as possible, the description of the dress slacks presented to each subject was similar to an actual description of dress slacks in a catalog.

Determination of Price Levels

The price selection criteria were similar to those used by Krishnan (1984), Dodds and Monroe (1985), Rao (1986), and Grewal (1989). Three price levels for the survey were chosen from within subjects' acceptable range because consumers have lower and upper price limits and a range of acceptable prices for the purchase. Furthermore, prices outside subjects' acceptable price range are objectionable. Subjects' acceptable price range for the dress slacks was determined in the first pilot test. The scale for determining the acceptable price range was adopted from Monroe (1990) and is presented in Figure 5. To determine subjects' acceptable price range, subjects in the first pilot test were shown a product description and a line drawing. Then, subjects' acceptable price range for the dress slacks was determined by two methods. In the first method, subjects circled all prices that they considered acceptable to pay. For the second method, subjects wrote the lowest price, the most acceptable price, and the

-
1. Please circle all the prices that you would consider acceptable to pay for this garment.

\$30, \$35, \$40, \$45, \$50, \$55, \$60, \$65, \$70, \$75,
\$80, \$85, \$90, \$95, \$100, \$105, \$110, \$115, \$120,
\$125, \$130, \$135.

2. Which one of the prices that you circled above would be the most acceptable price for you to pay?

price: \$_____

3. What is the highest price you would be willing to pay?

price: \$_____

Please give a reason or reasons why prices higher than this would be unacceptable to you.

4. What is the lowest price you would be willing to pay?

price: \$_____

Please give a reason or reasons why prices lower than this would be unacceptable to you.

FIGURE 5: ACCEPTABLE PRICE RANGE SCALE

highest price they considered acceptable to pay based on the stimulus (an advertisement format). Subjects were also requested to give reasons why prices lower and higher than the price they chose would be unacceptable to them. Based on the responses in the two methods mentioned above, the averages of the indicated prices were calculated in each level (low, middle, high) and selected as the three levels of the prices. Finally, it was necessary that the three prices be equidistant on a price continuum for ease of subsequent statistical analyses that might require equal differences for the levels of independent variables. The differences between the high and the middle and between the low and the middle prices were \$20.00. The low price was \$32.99, the middle price \$52.99, and the high price \$72.99. To determine the adequacy of the price manipulations, the effects of the price manipulations on the various dependent measures were examined by employing Analysis of Variance in the second pilot test. Table 11 presents means and the F values indicating significant effects of price manipulation on perceptions of quality, perceptions of benefits, monetary sacrifice, and search intention at $p = .05$. These results indicated that the price stimuli successfully created the intended manipulations.

Clothing (and Textile) Knowledge Scale

Three semantic differential scales measured perceived or subjective knowledge about clothing, while thirteen multiple choice questions measured objective knowledge. Items for measuring subjective knowledge were adopted from Brucks (1985), Chapman (1987), and Grewal (1989) and though somewhat changed in wording. The scale included questions about subjects' perceived knowledge, shopping experience, and self-confidence in recommending clothing to others (Figure 6). The objective clothing knowledge scale was developed based on a number of sources: exams in

TABLE 11

MEANS AND F-VALUES OF DEPENDENT VARIABLES
FOR THREE PRICE CONDITIONS IN ANOVA

	<u>\$72.99</u>	<u>\$52.99</u>	<u>\$32.99</u>	<u>F-VALUE</u>
Perceived Quality	5.52	5.55	5.18	10.09*
Perceived Value	4.48	4.52	4.60	0.27
Perceived Benefit	4.35	4.26	3.96	4.02*
Monetary Sacrifice	5.35	4.57	3.58	107.44*
Willingness to Buy	3.32	3.37	3.50	0.56
Search Intention	6.02	5.98	5.39	8.53*

* significant F at $p = .05$ level.

Please circle the number which best indicates how you feel about your knowledge of clothing products in general.

How knowledgeable are you about clothing?

Not at all	1	2	3	4	5	6	7	Extremely
Knowledgeable								Knowledgeable

What is your experience in shopping for clothing?

Never have	1	2	3	4	5	6	7	Shop very
shopped before								often

How confident do you feel recommending clothing to your friends?

Not at all	1	2	3	4	5	7	Extremely
confident							confident

FIGURE 6: SUBJECTIVE KNOWLEDGE SCALE

clothing and textiles courses, several textbooks (Gioello & Berke, 1979; Glock & Kunz, 1990; Horn & Gurel, 1981; Kaiser, 1985; Stamper, Sharp, & Donnell, 1986), numerous published articles (Brucks, 1985; DeLong, 1978; DeLong & Larntz, 1980; Eckman, Damhorst, & Kadolph, 1990; Fair, Hamilton, & Norum, 1990), and unpublished dissertations (Hawthorne, 1967). The knowledge scale should discriminate among consumers' knowledge levels (Brucks, 1986). Based on reviews of several sources assessing knowledge content, the domain of the construct was specified to encompass knowledge about garment construction and textiles which students would be expected to obtain in formal education in the area of clothing and textiles. Items judged too difficult or too easy were discarded, based on review by faculty member in the Clothing and Textiles Department.

For both pilot tests, subjects in the high knowledge condition were considered to be students in the Clothing and Textiles Department who had completed some coursework in clothing construction, design, and textiles. Subjects considered to be in the low knowledge condition were students in the Marketing Department. Responses were analyzed and compared to determine the relative difficulty of each question through examining the numbers of correct and incorrect answers for student in the two knowledge conditions. Based on frequencies for each question, questions which did not differentiate high knowledge from low knowledge were eliminated as nondiscriminating because the items had to be mutually exclusive. The result of eliminating some questions and revising others yielded 13 items for the final questionnaire. Figure 7 presents the scale used in the final data collection with the correct answer underlined for each question.

Clothing Interest Scale

Subjects' clothing interest was measured by a clothing interest scale adopted for this research from Schrank and Gilmore (1973). The scale

Each line below contains three terms which are related. One term does not belong in the same line. Indicate which is the odd term by circling the correct number on the questionnaire.

- (1) Cotton (2) Wool (3) Silk (4) Rayon
- (1) Dacron (2) Lycra (3) Fortrel (4) Trevira
- (1) Gathering (2) Shirring (3) Balancing (4) Smocking
- (1) Blind Stitch (2) Pinking (3) Trueing (4) Overlock
- (1) Plaid (2) Striped (3) Printed (4) Spinned
- (1) Salvage (2) Staple (3) Filament (4) Combed
- (1) Course (2) Bias (3) Warp (4) Filling
- (1) Clasp (2) Gauge (3) Snap (4) Hook & Bar
- (1) Spiral (2) Twill (3) Plain (3) Satin
- (1) Facing (2) Binding (3) Hem (4) Flocking
- (1) Box (2) Knife (3) Patch (4) Inverted
- (1) Voile (2) Gabardine (3) Brocade (4) Denim
- (1) Sloper (2) Block (3) Ruler (4) Basic pattern
-

FIGURE 7: OBJECTIVE KNOWLEDGE SCALE

has a total of 20 items each with five-points. Schrank and Gilmore developed the clothing interest inventory from statements in Sharpe's (1963) Clothing Interest and Importance Scale (in Creekmore, 1971, 23-24). Schrank and Gilmore assessed face validity and they pretested and subjected the scale to item analysis, resulting in a reliability of .92. The scale included statements concerning individuals' willingness to spend time, effort, and money in their use and care of clothing. Subjects responded on the scale as to how true the statement is. Because the word "coeds" is now rarely used among college students, for this research the word "coeds" was changed to "students" based on a review by a faculty in the Clothing and Textiles Department. After the second pilot test, the reliability of the scale was assessed and was .94.

Dependent Variables

Seven theoretical constructs (perceptions of quality, perceptions of benefits, perceptions of value, perceptions of monetary sacrifice, willingness to buy, search intention, and attitude toward advertisement) were variables of interest. Except for perceptions of value and search intention, each of these constructs was operationalized using multiple items because such constructs can rarely be captured by one item on a scale (Churchill, 1979; Monroe & Krishnan, 1984). The items pertaining to each of the seven constructs are shown in the section of dependent variable operationalization.

A total of sixteen items was developed to measure the constructs of interest, each item using a seven-point scale. These were perceived quality, perception of value, willingness to buy, perception of monetary sacrifice, perception of benefits, and search intention. Origins of the indicators are revealed and these indicators are defined and operationalized in this section.

Items measuring perception of quality, perception of value, perception of monetary sacrifice, and willingness to buy were adopted from previous studies, though changed somewhat in wording (Chapman, 1987; Dodds & Monroe, 1985; Ford & Smith, 1987; Grewal, 1989; Krishnan, 1984; Rao, 1986). Items measuring perceptions of benefits were a combination of items adopted from previous research (Grewal, 1989) and items developed for this research based on previous research (Kelley, Strother, Blouin, & Allen, 1986; Kelley, Strother, Blouin, & Crouch, 1986; Morganosky, 1987). An item for measuring search intention was developed based on previous research (Block, Sherrell, & Ridgway, 1986; Brucks, 1985; Grewal, 1989; Jacoby, Troutman, Kuss, & Mazursky, 1986). Items measuring attitudes toward advertisement were developed based on previous research (Edell & Burke, 1987; Lutz, 1985; Mitchell, 1986; Olney, Holbrook, & Batra, 1991; Sujana & Dekleva, 1987). Careful scale development would help avoid some of the limitations of earlier studies (Monroe & Dodds, 1988; Zeithaml, 1988). Therefore, each multiple-item scale used was pilot-tested to ascertain reliability. Subjects were instructed to circle the number on the scale that best reflected their true feeling. For each item, a 7-point rating scale was used with appropriate semantic anchors. In the actual analysis, the mean scores of these items was employed.

Perceived Quality

Perceived quality was defined as consumers' subjective judgment of excellence of the dress slacks and it was measured using the following three items.

1. The likelihood that these slacks would be durable is:
2. The workmanship (construction quality) of these slacks is likely to be:

For two items, a 7-point rating scale was used with appropriate semantic anchors as followings.

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high nor low	slightly high	moderately high	very high

3. These slacks are likely to be:

very poor quality	1	2	3	4	5	6	7	very high quality
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Perception of Benefits

Perception of benefits was defined as the degree to which the dress slacks are perceived to perform desired function, satisfy needs, and/or provide pleasures. Perception of benefits was measured using the following five items.

1. To what degree do you think you would find it beneficial to own these dress slacks?
2. To what degree would these slacks be appropriate for your specific use occasions:
3. I would expect the aesthetic appeal of these slacks to be:

For the above three items, a 7-point rating scale was used with appropriate semantic anchors.

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high nor low	slightly high	moderately high	very high

4. In terms of becomingness, how attractive would you expect these slacks to be on you?

1	2	3	4	5	6	7
very unattractive	moderately	slightly	neither unattractive nor attractive	slightly	moderately	very attractive

5. How beneficial do you feel wearing of these slacks would be to you?

1	2	3	4	5	6	7
very unbeneficial	moderately	slightly	neither beneficial nor unbeneficial	slightly	moderately	very beneficial

Perception of Monetary Sacrifice

Perception of monetary sacrifice was defined as the perception of monetary loss associated with the amount of money required to purchase the dress slacks. The construct was measured using the following three items.

1. The monetary sacrifice that I would probably be making if I purchased the described dress slacks at this price:

2. In relation to your budget, the amount of money that probably would be required to acquire the dress slacks:

For above two item, a 7-point rating scale was used with appropriate semantic anchors.

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high nor low	slightly high	moderately high	very high

3. The price for this garment is:

1	2	3	4	5	6	7
much less than expected	somewhat less than expected	slightly less than expected	about as expected	slightly more than expected	somewhat more than expected	much more than expected

Perception of Value

Perception of value was defined as the perception of overall value of the utility of the dress slacks based on comparative assessment of quality, benefit, and monetary sacrifice of the dress slacks. Subjects' perception of value was measured based on the following item.

Overall, I think that purchasing the described slacks would provide:

1	2	3	4	5	6	7
very poor value	moderately poor value	slightly poor value	neither poor nor good value	slightly good value	moderately good value	very good value

Willingness to Buy

Willingness to buy was defined as the likelihood that a consumer intends to purchase the dress slacks. The construct was measured by the following item:

If you had the money, how willing would you be to purchase the slacks described?

Not willing at all	1	2	3	4	5	6	7	Very willing
				indifferent				

Search Intention

Search intention was defined as the likelihood that a consumer intends to search and shop around for more information. Subjects' intention to search was measured by the following item:

Before deciding whether to purchase the described slacks, I would shop around more:

1	2	3	4	5	6	7
strongly disagree						strongly agree

Attitude Toward Advertisement

Attitude toward advertisement was defined as consumers' overall evaluation of the dress slacks in the advertisement. The construct was measured using three semantic differential items asking the overall evaluation of the dress slacks in the advertisement. For these three items, a 7-point semantic differential scale was used with appropriate semantic anchors.

1. Unfavorable	1	2	3	4	5	6	7	Favorable
2. Bad	1	2	3	4	5	6	7	Good
3. Negative	1	2	3	4	5	6	7	Positive

Perception of Attributes

Three different perceptions of attributes (relevance, typicality, and fashionability) were included as control variables and measured. Each was measured by three, seven-point semantic differential scales. The scale

measuring perception of relevance was developed based on previous research (Block & Richins, 1983; Grewal, 1989; Wilton & Myers, 1986; Zaichkowsky, 1985). Items measuring typicality were adopted from Loken and Ward (1986, 1987) and items measuring perceptions of fashionability were developed for this research based on previous research (Baugh & Davis, 1989; Hirschman, 1984; Hirschman & Solomon, 1984; Kehret-Ward & Yalch, 1984; Maheswaran & Sternthal, 1990; Workman, 1988). The three scales for perceptions of attributes are shown in Figure 8.

Other Variables

Other variables were included and measured to facilitate answering certain questions. They were manipulation check scale, questions regarding shopping activities and demographic variables.

Manipulation Check Scale

Manipulation check scale was included to ensure that the manipulation checks were effective as intended. Price and intrinsic attributes were manipulated in this research. Therefore, the informativeness, understandability, and believability of the descriptions in the stimuli were measured. Three seven-point semantic differential scales were developed and the reliability of the items for a manipulation check was assessed (Cronbach's Alpha = .83).

1. Perceptions of Relevance

Irrelevant	1	2	3	4	5	6	7	Very relevant
Features I would not consider	1	2	3	4	5	6	7	Features would definitely consider
Not at all important	1	2	3	4	5	6	7	Very important

2. Perceptions of Typicality

Very atypical	1	2	3	4	5	6	7	Very typical
Very unrepresentative	1	2	3	4	5	6	7	Very representative

3. Perceptions of Fashionability

Unfashionable	1	2	3	4	5	6	7	Fashionable
Common	1	2	3	4	5	6	7	Unique
Not prestigious	1	2	3	4	5	6	7	Prestigious

FIGURE 8: OPERATIONALIZATION OF PERCEPTIONS OF ATTRIBUTES (RELEVANCE, TYPICALITY, FASHIONABILITY)

Shopping Activities and Demographic Variables

Questions about activities related to shopping solicited from respondents were based on past research. Variables found to be related to clothing evaluation in the literature reviewed were subjects' prior ownership of dress slacks, the kind of stores they usually shop, and the method of payment (credit, cash, both credit and cash).

Demographic variables included sex, age, major, class standing of subjects and subjects' participation in similar research.

Final Instrument

The final instrument used to collect the data was developed through pilot testing. The questionnaire was divided into five sections (Table 12). A cover page gave general instructions for each section of the questionnaire. The first section of the questionnaire contained the written description and the line drawing of dress slacks inclusive of independent variable manipulations. The price and the product description on intrinsic attributes differed between subjects. The dependent variables of interest were measured through 16 items using seven-point rating scales. Reliability of all measures was assessed by examining the Cronbach's alpha and the inter-item correlations for each construct. Reliability of all constructs was satisfactory and the mean inter-item correlations were quite reasonable.

The second section contained 14 semantic differential scales pertaining to the perceptions of relevance, fashionability, typicality, attitude toward advertisement, and manipulation check.

TABLE 12

SECTIONS OF THE FINAL INSTRUMENT

SECTION	VARIABLES	NO. OF QUESTIONS
Part I	Perceived Quality Perceived Benefits Perceived Value Monetary Sacrifice Willingness to Buy Search Intention	16
Part II	Perceptions of Attribute Attitude	14
Part III	Knowledge Subjective Objective	16
Part IV	Clothing Interest	20
Part V	Shopping Activities Demographics	12
	Total	78

Section three contained three semantic differential scales measuring subjective knowledge and 13 multiple choice items assessing objective knowledge of clothing.

The next section of the questionnaire contained 20 items, each with a five-point scale, measuring subjects' clothing interest. The final section of the questionnaire requested activities related to shopping and demographic information about subjects. The last two questions were designed to screen subjects based on previous exposure to similar research and for research purpose guessing.

Pilot Test

This section reports the results of the two pilot tests used to develop the experimental stimuli and the questionnaire for the final experiment. In describing the pilot test, emphasis will be placed on demonstrating the primary insights that were obtained in each pilot test, and how these insights were incorporated in the development of the final questionnaire. The complete questionnaire administered in the pilot tests are presented in Appendix A.

Procedural Details

In the first stage of pilot testing, 18 students in the Clothing and Textiles Department and 18 in the Marketing Department participated. Each subject was asked to read a description accompanied by a line drawing of a pair of dress slacks and to give their assessment of the dress slacks. The questionnaires were randomly assigned to the subjects. The questionnaires differed only in the written description and the line drawing. The fiber content for the fashionable style was described as a

blend of 85% wool/15% polyester. Features typically associated with fashionable and traditional styles were incorporated with descriptive to induce corresponding perceptions of style.

To determine subjects' acceptable price range, subjects in the first pilot test were shown a product description and a line drawing. Then, subjects' acceptable price range for the dress slacks was determined and the averages of the indicated prices were calculated in each level (low, middle, high) and selected as the three levels of the prices. The three prices were equidistant on a price continuum for ease of subsequent statistical analyses that might require equal differences for the levels of independent variables. They are a low price of \$32.99, a middle price of \$52.99, and a high price of \$72.99.

In the second stage of pilot testing, 54 students in the Clothing and Textiles Department and 54 in the Marketing Department participated. Subjects were randomly assigned to the treatments of six different combinations of price and intrinsic attributes. The same procedure was followed as in the first pilot test except that the questionnaires differed in price levels and the intrinsic attribute levels. The descriptions for the two different styles were the same as in the first stage except for the description of back pockets. The fiber content for the fashionable design was changed to 82% wool/18% polyester from 85% wool/15% polyester blend. After the first pilot test, the descriptions for back pockets were added in both dress slacks. To find whether subjects perceived two descriptions for traditional and fashionable styling differently, Analysis of Variance was employed. The significant F values on several dependent variables indicated clear separation between each of the total combinations of intrinsic attributes (100% worsted wool and a blend of 82% wool/18% polyester, two different styles of traditional and fashionable dress slacks). As a result of the Analysis of Variance test, it was decided to use these two stimuli in the final questionnaire.

To determine the adequacy of the price manipulations, the effects of the price manipulations on the various dependent measures were examined through ANOVA in the second pilot test. These results indicated that the price stimuli successfully created the intended manipulations on major dependent variables.

With regard to the objective knowledge scale, responses from first pilot test were assessed to determine the relative difficulty of each question through examining the number of correct answers and incorrect answers for the two knowledge conditions. The result of eliminating and revising the questions yielded 13 items for the final questionnaire.

Data Collection

The Sample

Calder, Phillips, and Tybout (1981, 1982, 1983) suggest that, if the purpose of the research is to test theoretical propositions and not to generalize findings into a specific situation, then it is acceptable to use student subjects. Other researchers have also debated the widespread use of students as subjects in experiments (Lynch, 1982, 1983; McGrath & Brinberg, 1983). Calder et al. assert that any sample is a rigorous test of theory if proper methodological procedures are employed. The reasoning behind their assertion is that a homogeneous sample reduces random error due to irrelevant differences, thereby increasing power and providing a stronger test of the theory. Therefore, the subjects in the present research were a convenience sample of students enrolled in Clothing and Textiles Departments from three universities and students enrolled in the Communication Studies and Marketing Departments in one university. It was thought that students within the same department would be homogeneous in

knowledge level, i.e., high in Clothing and Textiles Departments and low in the Communication Studies and Marketing Departments. The classes were selected for their accessibility and assumed homogeneity.

The sample size needed for the proposed design was determined by the desired precision, power, confidence level, and effect size. The actual sample size was 417 subjects, though a sample of 384 subjects was determined to be required for this study, as there were 24 cells and 16 subjects per cell. The cell size was calculated based on a power of .80 and an effect size of .35 for a .05 alpha level as reported by Rao and Monroe (1989). Conceptually, an effect size is the standardized magnitude of the effect of the independent variable upon the dependent variable (Cohen, 1977). The power level, .80, is generally considered a reasonable goal (Cohen, 1977).

Administration

The data were collected during the 1991 spring and summer semesters, at four universities. During regular class periods, junior and senior students from three universities (Radford University, University of West Virginia, University of North Carolina in Greensboro) participated in the study for the Clothing and Textiles area, while students in the Communications and Marketing Departments at Virginia Polytechnic Institute and State University participated in the study. Since respondents in the pilot tests indicated fatigue using opscan sheets for answering the questions, subjects in the final data collection answered directly on the questionnaire. The time required to complete the questionnaire was 15-20 minutes.

An equal number of questionnaires corresponding to each treatment condition were distributed at each data collection session. There were 3 levels of price and 2 levels of intrinsic attributes (a total of 6

cells) in each knowledge condition. It was thought that subjects highly knowledgeable about clothing and textiles would be in the Clothing and Textiles area and subjects less knowledgeable would be in other areas, such as Communications Study and Marketing. Therefore, within each knowledge condition, questionnaires with six different combinations of price and intrinsic attributes were distributed. After completion of the questionnaire, students were thanked for their participation. At each stage of data collection, the completed questionnaires were examined to determine if the subjects had correctly and completely answered the questionnaires. The purpose of this screening was to have the opportunity to replace discarded subjects in a cell with additional subjects in the next data collection session. If a questionnaire was unusable, it was discarded and a clean one was used for the next data collection session, to ensure an equal sample size for every cell.

Since the objective knowledge scale was the basis for segmentation of the respondents, its completeness was particularly important. Twenty-one questionnaires were eliminated due to large numbers of unanswered questions, especially in the objective knowledge scale. Seventeen questionnaires were eliminated from further analysis due to defective coding. This process resulted in 417 usable responses for the subsequent analyses.

Reliability of Measures

It was necessary to have valid and reliable measures to assess the dependent variables (Cronbach, 1971; Nunnally, 1978). As indicated previously, most of the indicators had been used in past price-perceived quality studies. For this research, the items were reviewed by two faculty members in the Clothing and Textiles Department. Several changes in wording were made in accordance with the recommendations of the reviewers.

The completed questionnaire is shown in Appendix B. Response frequencies and item correlations within each scale were examined as a measure of the reliability. Homogeneity of content, internal consistency, and external consistency are the three criteria for creating a unidimensional set of indicators (Danes & Mann, 1984). Homogeneity of content refers to the face validity of the measure and internal and external consistency. One way of assessing whether multiple indicators are measuring the same construct is with computer program called PACKAGE (Hunter and Cohen, 1969). This program of examining the measurement model was used to reveal the reliability of the indicators for each of the constructs by calculating the Cronbach' alpha for each construct. As a measure of internal consistency, the inter-item correlations of all questions in each scale were analyzed. Items measuring the same construct were expected to be positively correlated with each other. Partial correlation matrices for each scale were also used.

After final data collection, the reliability of the scales on the questionnaire was assessed. The reliability of the scales for consumers' perceptions of quality, perceptions of benefits, perceptions of monetary sacrifice, perceptions of value, search intention, willingness to buy, and attitude toward advertisements were assessed and shown to have overall reliability greater than or equal to .74. The Cronbach's alpha are presented in Table 13. As shown in Table 13, the Cronbach's alpha values of all measures are above .74, showing acceptable overall reliability of the indicators used for the constructs (Nunnally, 1978). The mean and the standard deviations for each of the constructs were calculated and the means were used in final data analysis (Table 13). The reliability of objective knowledge scale was .64 (Kuder Richardson -20) indicating a need to verify the scale further.

TABLE 13

RELIABILITY OF THE SCALES

<u>Scale</u>	<u>Items</u>	<u>Cronbach's Alpha</u>	<u>Mean</u>	<u>S.D.</u>	<u>Questionnaire</u>
Perceived Benefits	(5)	.90	20.92	6.17	(1,5,7,12,16)
Monetary Sacrifice	(3)	.86	13.37	3.69	(2,6,11)
Willingness to Buy	(3)	.86	10.20	4.27	(3,9,13)
Perceived Quality	(3)	.74	16.23	2.38	(4,10,15)
Relevance	(3)	.86	14.43	3.62	(17,18,19)
Fashionability	(3)	.82	12.06	3.48	(20,21,22)
Typicality	(2)	.76	9.37	2.25	(23,24)
Attitude toward Ad	(3)	.95	13.03	4.04	(25,26,27)
Subjective Knowledge	(3)	.85	16.68	3.31	(31,32,33)
Clothing Interest	(20)	.93	64.96	16.32	(47-66)

Data Analysis

The data were analyzed by multiple regression to test the significance of the proposed relationships. In order to compare two knowledge and interest conditions, ANOVAs and Duncan's Multiple Range Tests were performed through the SAS General Linear Models procedure which allows for the use of unbalanced designs (Perreault & Darden, 1975). Correlational analyses and Chi-Square tests were utilized to assess relationships among some discrete variables and are reported in the Appendix C and D. ANCOVA (analysis of covariance) and multiple regression were used in testing manipulation checks. The Path analytic procedure was used to assess the strength of the relationships among constructs that are linked together in a causal structure (e.g., price, intrinsic attributes, perceptions of quality, perceptions of benefits, perceptions of value, perceptions of monetary sacrifice, willingness to buy, and search intention). The descriptive statistics were based on response frequencies which are presented in the Appendix D. The data analysis plan on the final data set proceeded in the order outlined below.

- (1) The manipulation checks were verified.
- (2) Collinearity Diagnostics were performed for the subsequent multiple regression.
- (3) In multiple regression, overall F tests and individualized t tests were performed.
- (4) In multiple regression, interactions of independent variables were analyzed and interpreted.
- (5) Maximum R-square improvement technique was used to select significant interactions to be included in the model in addition to main effects.

(6) In multiple regression, gender differences were tested using a dummy variable of sex

(7) Analyses of variance and Duncan's Multiple Range Tests were performed on the manipulated levels of knowledge and clothing interest.

(8) The proposed causal model was assessed through path analytic procedures.

Preliminary Analysis

Preliminary analysis was done in two ways. First, manipulation checks were verified to examine the effectiveness of manipulation of two major independent variables. Collinearity diagnostics were used to assess correlations between independent variables and to employ ways to correct multicollinearity for subsequent data analysis.

Manipulation Check

To examine the effectiveness of the manipulation, analyses were conducted following suggestions by Perdue and Summers (1986). Two analyses were employed for the manipulation check. Analysis of Covariance (ANCOVA) was performed using price level, intrinsic attribute level, knowledge level, clothing interest level, and sex as independent variables and the manipulation check scale as the dependent variable. Analysis of Covariance is used primarily as a procedure for the statistical control of extraneous variables. ANCOVA involves a multiple regression model in which the variables of interest are all treated as nominal variables, whereas the variables being controlled (the covariates) may be measured on any scale. In this way, the effects of the primary independent variables are better

investigated by partitioning out the error variance caused by the treatment effects (Pedhazur, 1982). The results of ANCOVA (Table 1 in Appendix E) indicated no significant F values for any independent variable ($p = .05$) and suggested successful manipulation of price and the intrinsic attributes. A regression analysis was performed on the model for predicting the manipulation check variable by treating price, intrinsic attributes, knowledge, clothing interest, and sex as a dummy variable as independent variables. The result indicates no significant t value for any independent variable ($p = .05$) (Table 2 in Appendix E). Overall, the results of the manipulation checks indicated that the manipulation of the major independent variables was effective and that there were no apparent experimental arrangement biases.

Collinearity Diagnostics

Numerical problems of regression analyses can lead to inaccurate estimates of regression coefficients, variance, and p values. These problems are caused by collinearity which concerns the relationships of the independent variables (predictors) to one another. Multicollinearity is said to be present in a multiple regression problem when the predictor variables are correlated among themselves. The multicollinear condition within a data set reduces the efficiency of the estimates for the regression parameters. This is because the amount of information about the effect of each predictor variable on the criterion variable declines as the correlation among the predictor variables increases. Therefore, the meaning of the partial regression coefficient can be very little when multicollinearity is present.

In order to diagnose whether there was a collinearity problem in the multiple regression, the variance inflation factor (VIF) was employed. The

variance inflation factor is often used to measure collinearity in a multiple regression analysis.

$$\text{VIF}_j = 1 / (1 - R_j^2) \quad j = 1, 2, \dots, k$$

VIF becomes large which indicates that the estimated variance of the regression coefficients is inflated (Table 4 in Appendix E). The estimates of the variances for the regression coefficients ($S_{\hat{\beta}_j}^2$) are proportional to the VIFs, namely

$$S_{\hat{\beta}_j}^2 = C_j^* (\text{VIF}_j) \quad j = 1, 2, \dots, k$$

Individual t-tests for coefficients are highly dependent on multicollinearity. If data are highly multicollinear, there will be a tendency to commit Type II errors; that is, many of the predictor variables will be judged as not being related to the criterion variable when in fact they are (Churchill, 1987). Standard errors of the estimates of the least-squares coefficients, $S_{\hat{\beta}_j}$, increase as the correlation among the predictor variables increases. Thus, the t value would increase, with the conclusion of no relationship between the criterion variable and the predictor variable of interest.

This impasse may be avoided by scaling the data appropriately. One important case of scaling is centering, which can increase numerical accuracy by decreasing collinearity in many situations (Kleinbaum, Kupper, & Muller, 1988). A set of scores, $\{X_{ij}\}$, is centered by subtracting the mean, \bar{X}_j of the scores from each individual score, giving

$$X_{ij}^* = X_{ij} - \bar{X}_j$$

in which mean, $\bar{X}_j = \sum_{i=1}^n X_{ij} / n$

The standardized score (z score) corresponding to a set of scores, X_{ij} is

$$z_{ij} = X_{ij} - \bar{X}_j / S_j$$

in which S_j^2 (variance) = $\sum_{i=1}^n (X_{ij} - \bar{X}_j)^2 / (n-1)$

Centered and standardized scores have mean 0 since

$$\sum_{i=1}^n X_{ij}^* = \sum_{i=1}^n z_{ij} = 0$$

Also note that $\sum_{i=1}^n z_{ij}^2 / (n-1) = 1$, so that the set $\{z_{ij}\}$ of standardized scores has a variance equal to 1.

Based on the results of multiple regressions with the standardized and the unstandardized independent variables, the values of variance inflation factors were compared and were larger when unstandardized variables were used (Table 3 and 4 in Appendix E). This result suggests the estimates of the regression coefficients with unstandardized data are indeterminate. Therefore, centering and standardizing were done on all of the independent variables in subsequent multiple regression.

In all multiple regressions with the standardized independent variables in this research, β (standardized regression coefficient) is interpreted as indicating the expected change in the dependent variable, expressed in standard scores, associated with a one standard deviation change in an independent variable, while holding the remaining variables constant (Pedhazur, 1982). Unlike the b's (regression coefficients), β 's are scale-free indices and therefore can be compared across different variables. However, β 's are used to compare the effects of different variables within a single population.

Research Hypothesis Testing: Three Approaches

Having presented the general results of the preliminary analyses, the next step was to analyze the data with respect to each of the hypothesized relationships. In the conceptual model presented earlier, it was argued that the overall perceptions of quality, perceptions of benefits, perceptions of monetary sacrifice, perceptions of value, willingness to buy, search intention, and attitude toward advertisements were influenced by price, intrinsic attributes, clothing knowledge and interest collectively and individually. In the conceptual model, antecedents of these constructs were also identified and several relationships were posited among the constructs of perceptions of quality, perceptions of value, perceptions of benefits, willingness to buy, and search intention. Also, it was proposed that perceptions of attributes in terms of relevance, typicality, and fashionability would be influenced by price, intrinsic attributes, clothing knowledge and interest. Since Clothing and Textile majors were mostly women and were expected to be more knowledgeable about the product than most men, differences between male and female subjects were anticipated.

In order to test these propositions, three different approaches were adopted. The first approach focused on the insights that could be obtained from multiple regression. For regression analysis, any mixture of measurement scales (nominal, ordinal, or interval) is allowable for the independent variables. An ANOVA table was accompanied to provide an overall summary of a multiple regression analysis, reflecting the contribution that all independent variables considered collectively make the prediction for each dependent variable. In the second approach, analysis of variances and multiple comparisons of different cells in the experimental design were performed with manipulated levels of clothing knowledge and clothing interest. In ANOVA, all the independent variables are treated as nominal. In an analysis of variance, significant

interactions between independent variables were not found on the full models. Therefore, the main effects model of the ANOVA is presented. Additionally, the path causal modeling approach was followed to test the relational hypotheses among proposed constructs. For presentation of the results, the null hypotheses were stated. Three or more tables present the statistical results used to test each hypothesis on each dependent variable.

Assumptions

There are several assumptions for the statistical analyses utilized. There are five assumptions for multiple regression analysis (Kleinbaum, Kupper, & Miller, 1988) utilized in this research.

- 1) Existence - for each specific combination of values of the independent variables X_1, X_2, \dots, X_K , Y is a (univariate) random variable with a certain probability distribution having a finite mean and variance.
- 2) Independence - the Y observations are statistically independent of one another.
- 3) Linearity - the mean value of Y for each specific combination of X_1, X_2, \dots, X_K is a linear function of X_1, X_2, \dots, X_K ; that is,

$$\mu_{Y|X_1, X_2, \dots, X_K} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_K X_K$$

or

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_K X_K + E$$

where E is the error component reflecting the difference between an individual's observed response Y and the true average response

$$\mu_{Y|X_1, X_2, \dots, X_K}$$

4) Homoscedasticity - the variance of Y is the same for any fixed combination of X_1, X_2, \dots, X_K ; that is,

$$\sigma^2_{Y|X_1, X_2, \dots, X_K} = \text{Var}(Y/X_1, X_2, \dots, X_K) \equiv \sigma^2$$

This assumption may seem very restrictive. However, mild departures will not have too adverse effect on the results in general.

5) Normality - for any fixed combination of X_1, X_2, \dots, X_K , the variable Y is normally distributed. In other words,

$$Y \sim N(\mu_{Y|X_1, X_2, \dots, X_K}, \sigma^2)$$

This assumption is not necessary for the least-squares fitting of the regression model but is required, in general, for inference making.

Regarding the distribution of the random error component E , the assumptions for multiple linear regression analysis dictate that E has a normal distribution with mean 0 and variance σ^2 . It is important to remember that Y is an observable random variable, while X_1, X_2, \dots, X_K are fixed (nonrandom) known quantities. The constants $\beta_0, \beta_1, \dots, \beta_K$ are known population parameters, and E is a random variable that is unobservable.

There are four assumptions for Analysis of Variance.

1. The observations are independent.
2. Random samples are selected from each of K populations.
3. A value of a specified dependent variable is recorded for each experimental unit sampled.
4. The dependent variable is normally distributed in each population.

Regression Analysis

Overall test

For the overall tests which assessed the hypothesis that price, intrinsic attributes, clothing knowledge, and clothing interest considered together do explain a significant amount of the variation in dependent variables, the F statistics is calculated;

$$F = \frac{\text{MS regression}}{\text{MS residual}} = \frac{(SSY - SSE)/K}{SSE/(n - k - 1)}$$

Where $SSY = \sum_{i=1}^n (Y_i - Y)^2$ (Total sums of square)

$SSE = \sum_{i=1}^n (Y_i - \hat{Y}_i)^2$ (Error sums of square)

R^2 in the ANOVA table provides a quantitative measure of how well the fitted model containing the variables price, intrinsic attributes, knowledge, and clothing interest predicts the dependent variables. In other words, R^2 is an estimate of the proportionate reduction in the unconditional variance of dependent variable Y due to conditioning on independent variables X_1, X_2, \dots, X_k . The computational formula is

$$R^2 = \frac{SSY - SSE}{SSY}$$

The quantity of R^2 lies between 0 and 1, since R itself varies between -1 and +1. The R^2 , coefficient of multiple determination for each dependent variable, indicates that percentage of variance in each dependent variable which can be explained by the combination of independent variables.

The general hypothesis tested by regression analysis was that price, intrinsic attributes, clothing knowledge, and clothing interest considered together would explain a significant amount of the variation in each dependent variables. Alternatively, the null hypothesis was that there is no significant overall regression using all 4 independent variables in the regression model for each dependent variable. Alternatively, the null hypothesis was that there is no significant overall regression using all four independent variables.

$$H_0 : \beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$$

Where

- β_1 = regression coefficient of price
- β_2 = regression coefficient of intrinsic attributes
- β_3 = regression coefficient of clothing knowledge
- β_4 = regression coefficient of clothing interest

If the computed value of the F statistic exceeds the critical value of the F distribution at $\alpha = .05$, then, the null hypothesis is rejected and it is concluded that the F value is sufficient to support the proposition that, taken together, the price, intrinsic attributes, knowledge and clothing interest significantly help to predict each dependent variable.

Individual tests

Given that the overall function is significant, the slope coefficients were tested individually for their statistical significance in the regression model for each dependent variable. To test the individual slope coefficients for their statistical significance, t-tests

were performed. This test is equivalent to the multiple partial F test for the variable added last. The formula is

$$T = \hat{\beta}^* / S_{\hat{\beta}^*}$$

Where $\hat{\beta}^*$ is the corresponding estimated coefficient and $S_{\hat{\beta}^*}$ is the estimate of the standard error of $\hat{\beta}^*$

A significant t value is determined at $\alpha = .05$. The significant t values of independent variables indicate significant relative contributions of individual independent variables to a dependent variable.

Hypotheses

Hypotheses from 2a through 2j state the effects of price on ten dependent variables.

The hypotheses were:

- 1a. price would positively contribute in predicting perceptions of quality after controlling for the contributions of other independent variables.
- 1b. price would significantly contribute in predicting perceptions of benefits after controlling for the contributions of other independent variables.
- 1c. price would positively contribute in predicting perceptions of monetary sacrifice after controlling for the contributions of other independent variables.

1d. price would significantly contribute in predicting perceptions of value after controlling for the contributions of other independent variables.

1e. price would positively contribute in predicting willingness to buy after controlling for the contributions of other independent variables.

1f. price would significantly contribute in predicting search intention after controlling for the contributions of other independent variables.

1g. price would positively contribute in predicting attitude toward advertisements after controlling for the contributions of other independent variables.

1h. price would significantly contribute in predicting perceptions of relevance after controlling for the contributions of other independent variables.

1i. price would positively contribute in predicting perceptions of typicality after controlling for the contributions of other independent variables.

1j. price would significantly contribute in predicting perceptions of fashionability after controlling for the contributions of other independent variables.

Hypotheses from 3a through 3j state the effects of intrinsic attributes on ten dependent variables.

The hypotheses were:

3a. intrinsic attributes would positively contribute in predicting perceptions of quality after controlling for the contributions of other independent variables.

3b. intrinsic attributes would significantly contribute in predicting perceptions of benefits after controlling for the contributions of other independent variables.

3c. intrinsic attributes would positively contribute in predicting perceptions of monetary sacrifice after controlling for the contributions of other independent variables.

3d. intrinsic attributes would significantly contribute in predicting perceptions of value after controlling for the contributions of other independent variables.

3e. intrinsic attributes would positively contribute in predicting willingness to buy after controlling for the contributions of other independent variables.

3f. intrinsic attributes would significantly contribute in predicting search intention after controlling for the contributions of other independent variables.

3g. intrinsic attributes would positively contribute in predicting attitude toward advertisements after controlling for the contributions of other independent variables.

3h. intrinsic attributes would significantly contribute in predicting perceptions of relevance after controlling for the contributions of other independent variables.

3i. intrinsic attributes would positively contribute in predicting perceptions of typicality after controlling for the contributions of other independent variables.

3j. intrinsic attributes would significantly contribute in predicting perceptions of fashionability after controlling for the contributions of other independent variables.

Hypotheses from 4a through 4j state the effects of clothing knowledge on ten dependent variables.

The hypotheses were:

4a. clothing knowledge would positively contribute in predicting perceptions of quality after controlling for the contributions of other independent variables.

4b. clothing knowledge would significantly contribute in predicting perceptions of benefits after controlling for the contributions of other independent variables.

4c. clothing knowledge would positively contribute in predicting perceptions of monetary sacrifice after controlling for the contributions of other independent variables.

4d. clothing knowledge would significantly contribute in predicting perceptions of value after controlling for the contributions of other independent variables.

4e. clothing knowledge would positively contribute in predicting willingness to buy after controlling for the contributions of other independent variables.

4f. clothing knowledge would significantly contribute in predicting search intention after controlling for the contributions of other independent variables.

4g. clothing knowledge would positively contribute in predicting attitude toward advertisements after controlling for the contributions of other independent variables.

4h. clothing knowledge would significantly contribute in predicting perceptions of relevance after controlling for the contributions of other independent variables.

4i. clothing knowledge would positively contribute in predicting perceptions of typicality after controlling for the contributions of other independent variables.

4j. clothing knowledge would significantly contribute in predicting perceptions of fashionability after controlling for the contributions of other independent variables.

Hypotheses from 5a through 5j state the effects of clothing interest on ten dependent variables.

The hypotheses were:

5a. clothing interest would positively contribute in predicting perceptions of quality after controlling for the contributions of other independent variables.

5b. clothing interest would significantly contribute in predicting perceptions of benefits after controlling for the contributions of other independent variables.

5c. clothing interest would positively contribute in predicting perceptions of monetary sacrifice after controlling for the contributions of other independent variables.

5d. clothing interest would significantly contribute in predicting perceptions of value after controlling for the contributions of other independent variables.

5e. clothing interest would positively contribute in predicting willingness to buy after controlling for the contributions of other independent variables.

5f. clothing interest would significantly contribute in predicting search intention after controlling for the contributions of other independent variables.

5g. clothing interest would positively contribute in predicting attitude toward advertisements after controlling for the contributions of other independent variables.

5h. clothing interest would significantly contribute in predicting perceptions of relevance after controlling for the contributions of other independent variables.

5i. clothing interest would positively contribute in predicting perceptions of typicality after controlling for the contributions of other independent variables.

5j. clothing interest would significantly contribute in predicting perceptions of fashionability after controlling for the contributions of other independent variables.

The null hypothesis utilized to test the effects of independent variables was that the addition of any specific independent variable, holding all others in the model constant, does not significantly contribute to the prediction of each dependent variable.

Equivalently,

$$H_0: \beta^* = 0$$

in the model $Y = \beta_0 + \beta_1 PR + \beta_2 IA + \beta_3 KN + \beta_4 IN + \beta^* X^* + E$

Where

- β_0 = intercept
- β_1 = regression coefficient of price
- β_2 = regression coefficient of intrinsic attributes
- β_3 = regression coefficient of clothing knowledge
- β_4 = regression coefficient of clothing interest
- β^* = regression coefficient of X^*

Significant t values ($\alpha = .05$) of the independent variables lead to a rejection of the null hypothesis and the t value is considered to be sufficient to support the proposition that, each independent variable, price, intrinsic attributes, clothing interest, and clothing knowledge, significantly helps predict each dependent variable. The estimated value of the parameter (regression coefficient) indicates that the amount each independent variable contributed in predicting each dependent variable.

Interaction test

No hypotheses were posited about interaction effects of independent variables on perceptions of quality. Interaction is the condition where the relationship of interest is different at different values of the extraneous variables. According to Kleinbaum, Kupper, and Miller (1988), the assessment of the interaction focuses on describing the relationship of interest at different values of the extraneous variables. To evaluate interactions for all regression models, steps suggested by Kleinbaum, Kupper, and Muller (1988) were performed. First, to test globally for the presence of any kind of interaction, the full model was considered. The model included all proposed basic predictors and two-way interactions among predictors. After fitting the full model, a multiple regression with a chunk of interactions was performed to find the presence of any kind of interaction. The next step was to specify the selection criteria. The sample squared multiple correlation is the first criterion, though 1) it tends to overestimate the corresponding population value, 2) adding variables invariably increases R^2 , and 3) R^2 is always largest for the full model. Another reasonable criterion for selecting the best model is the F statistic for comparing models. After following these prescriptions, a multiple regression model containing two-way interaction terms and all main effects were analyzed. Furthermore, to verify and select significant interactions to be included in the models, Maximum R-square improvement technique was used. A significant t value is determined at $p = .05$.

Test for gender difference

To assess all possible effects and interactions involving sex variable, four multiple regression analyses were performed to assess sex differences; 1) the main effect model containing a sex dummy variable, 2)

a model containing all two-way interaction terms without sex, 3) a model containing two-way interaction terms with sex, and 4) a model containing two-way interaction terms without sex. The dummy, or indicator, variable is any variable in a regression equation that takes on a finite number of values so that different categories of a nominal variable can be identified (Pedhazur, 1982). The sex dummy variable for the regression analyses was coded as suggested by Kleinbaum, Kupper, and Muller (1988).

For female, if sex = female then sexdummy = 1 ;

For male, if sex = male then sexdummy = 0 ;

Therefore, the variable sex dummy indexes the levels of the nominal variable "sex," indicating group membership.

The null hypothesis that the two regression lines are parallel is equivalent to

$$H_0: \beta_{IM} = \beta_{IF}$$

The test statistic for evaluating parallelism is then given by

$$T = \frac{\hat{\beta}_{IM} - \hat{\beta}_{IF}}{S_{\hat{\beta}_{IM} - \hat{\beta}_{IF}}}$$

Where $\hat{\beta}_{IM}$ = least-squares estimate of the slope β_{IM} using n_M observations (on males).

$\hat{\beta}_{IF}$ = least-squares estimate of the slope β_{IF} using n_F observations (on females).

$S_{\hat{\beta}_{IM} - \hat{\beta}_{IF}}$ = estimate of the standard deviation of the estimated difference between slopes $(\hat{\beta}_{IM} - \hat{\beta}_{IF})$.

The standard deviation involves pooling and summing the estimated variances of the slopes of the fitted regression lines. It is equal to the square root of the following variance;

$$\text{Where } S_{\hat{\beta}_{iM} - \hat{\beta}_{iF}}^2 = S_{P,Y|X}^2 \left[\frac{1}{(n_M - 1)} S_{X_M}^2 + \frac{1}{(n_F - 1)} S_{X_F}^2 \right]$$

$$S_{P,Y|X}^2 = (n_M - 2) S_{Y|X_M}^2 + (n_F - 2) S_{Y|X_F}^2 / n_M + n_F - 4$$

The variance is a pooled estimate of σ_2 based on combining residual mean-square errors for males and females and where

$S_{Y|X_M}^2$ = residual mean-square error for the male data

$S_{Y|X_F}^2$ = residual mean-square error for the female data

$S_{X_M}^2$ = variance of the X's for the male data

$S_{X_F}^2$ = variance of the X's for the female data

The crucial regions for the different hypothesis and significance level α is:

$$|T| > t_{n_m + n_f - 4, 1 - \alpha/2}$$

A nonsignificant t value on the sex dummy variable indicates no slope differences between males and females.

The possible single multiple regression model would be

$$Y = \beta_0 + \beta_D D + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_{1D} X_1 D + \beta_{2D} X_2 D + \beta_{3D} X_3 D + \beta_{4D} X_4 D + E$$

If male, then $D = 0$

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + E$$

If female, then $D = 0$

$$Y = (\beta_0 + \beta_D) + (\beta_1 + \beta_1\beta_{1D}) X_1 + (\beta_2 + \beta_{2D}) X_2 + (\beta_3 + \beta_{3D}) X_3 + (\beta_4 + \beta_{4D}) X_4 + E$$

This test allows to compare the regression coefficients of the separate models for both sexes within a model and allows to compare the regression coefficients of the separate models for both sexes and allows for different slopes. Based on tables for each dependent variable, separate regression equations for both male and female subjects were written. As illustrated in the above formula, for males, a sex dummy variable equals 0, therefore, every variable with a sex dummy equals 0, and values in the table were taken directly to make the regression lines for each dependent variable. For females, a sex dummy equals 1, therefore, every variable with a sex dummy is accounted and regression coefficients for the lines of females are calculated to reflect the coefficients for females. That is, the regression coefficients of independent variables for males and the regression coefficients of independent variables with a sex dummy are added together to get the regression coefficients of each independent variable for females. To calculate intercepts of regression lines for females, again, the coefficients of the intercepts and the coefficient of a sex dummy variable are added together.

Analysis of Variance

To test hypotheses of the price effect, intrinsic attribute effect, knowledge effect, and clothing interest effect on each dependent variable, the 3x2x2x2 between subjects design was analyzed using SAS's General

Linear Model program. The ANOVA test statistics are F statistics and are actually ratios of estimates of variance. The main analysis problem is to determine whether the population means are all equal. If the null hypothesis is rejected when an ANOVA F test for simultaneously comparing several population means is found to be statistically significant, the next problem is to find out which specific differences there are among the population means. Therefore, Duncan's Multiple Comparison tests were employed. For the knowledge scale with 13 items, mid-point 7 was considered appropriate for identifying low and high conditions. For the clothing interest scale with twenty 5-point items, mid-point 19 was considered proper for high and low level. Therefore, the levels of clothing knowledge and clothing interest were defined and coded as follows.

If knowledge ≥ 0 and knowledge ≤ 7 then knowledge = low

If knowledge > 7 then knowledge = high

If interest > 19 and interest ≤ 50 then interest = high

If interest > 50 then interest = low.

In the analysis, the interest score was reversed to reflect the low score to be low clothing interest, high score to be high clothing interest for easy of interpretation.

Three levels of price (\$32.99, \$52.99, \$72.99), two different intrinsic attributes (82% wool/18% polyester blend with fashionable style, 100% worsted wool with traditional style), two conditions of knowledge (high, low), and two levels of clothing interest (high, low) were examined to assess their effects on several dependent variables. It should be noted before further discussion of the results that interactions among independent variables are extremely important. If there are interaction effects among independent variables, it is more difficult to interpret the

effect of a single independent variable. However, as the results of ANOVAs with the full models indicate, there were no statistically significant interactions found in the Analysis of Variance. Therefore, main effect models are presented along with the results of Duncan's Multiple Range Tests. For all tests, α level of 0.05 or lower was utilized.

Hypotheses for ANOVA

Because the way of stating hypotheses for ANOVA test is different from that of multiple regression, though the purpose is the same, hypotheses for ANOVA were stated as follows.

H2: As price increases:

- H2a: perceptions of quality would increase.
- H2b: perceptions of benefits would be affected.
- H2c: perceptions of monetary sacrifice would increase.
- H2d: perceptions of value would decrease.
- H2e: willingness to buy decrease would.
- H2f: search intention would increase.
- H2g: attitude toward advertisements would be affected.
- H2h: perceptions of relevance would be affected.
- H2i: perceptions of typicality would be affected.
- H2j: perceptions of fashionability would be affected.

H3: intrinsic attributes:

- H3a: would affect perceptions of quality.
- H3b: would affect perceptions of benefits.
- H3c: would affect perceptions of monetary sacrifice.
- H3d: would affect perceptions of value.
- H3e: would affect willingness to buy.

- H3f: would affect search intention.
- H3g: would affect attitude toward advertisements.
- H3h: would affect perceptions of relevance.
- H3i: would affect perceptions of typicality.
- H3j: would affect perceptions of fashionability.

H4: clothing knowledge:

- H4a: would affect perceptions of quality.
- H4b: would affect perceptions of benefits.
- H4c: would affect perceptions of monetary sacrifice.
- H4d: would affect perceptions of value.
- H4e: would affect willingness to buy.
- H4f: would affect search intention.
- H4g: would affect attitude toward advertisements.
- H4h: would affect perceptions of relevance.
- H4i: would affect perceptions of typicality.
- H4j: would affect perceptions of fashionability.

H5: clothing interest:

- H5a: would affect perceptions of quality.
- H5b: would affect perceptions of benefits.
- H5c: would affect perceptions of monetary sacrifice.
- H5d: would affect perceptions of value.
- H5e: would affect willingness to buy.
- H5f: affect search intention.
- H5g: affect attitude toward advertisements.
- H5h: affect perceptions of relevance.
- H5i: affect perceptions of typicality.
- H5j: affect perceptions of fashionability.

Causal Analysis of the Proposed Model

Insights from causation

In the conceptual development presented in Chapter III, it was argued that perceptions of benefits are influenced by two, 1) subjects' perceptions of quality and 2) intrinsic attributes of the dress slacks. Furthermore, it was proposed that perceptions of value are affected by perceptions of benefits, perceptions of quality, and perceptions of monetary sacrifice. In addition, it was posited that willingness to buy has a positive causal relationship with perceptions of value and that search intention has negative causal relations with perceptions of value and perceptions of monetary sacrifice. In the conceptualization, antecedents and moderators of these constructs were identified and the relationships among them were hypothesized. These hypothesized relationships were translated into hypotheses 1 through 13. Causal modeling provides an excellent methodological vehicle to examine these relationships. According to Wolfle (1981), setting up a regression problem in a causal framework demands of the researcher a degree of explicitness useful in a social-scientific reporting. One school of thought regarding causal inference has produced a analytic procedure commonly referred to as path analysis (Blalock, 1971). In the sections that follow, a brief description of this analytic technique will be presented first. Subsequently, results based on the proposed causal model will be reported to test the hypothesized relationships.

Path Analysis

Path analysis is a useful regression-based method for studying the direct and indirect effects of variables on other variables. Essentially, this method attempts to assess causality indirectly by eliminating competing causal explanations and finally arriving at an acceptable causal model (Bagozzi, 1980). In this procedure, literature relevant to the research question must be considered in order to postulate causal models. In addition, various estimated correlation "path" coefficient must be compared by means of data analysis. The most difficult part of path analysis is the construction of the model (Pedhazur, 1982). Constructing the model; selecting the variables, both the dependent variables of interest, and their most important determinants; arranging the variables in their logical causal order; all of these require a firm grasp of researcher's subject matter as emphasized by Wolfle (1987). The focus of this chapter being methodological, no attempt will be made to review the conceptual underpinnings of causal modeling. Rather, the emphasis will be on providing a brief description of the analytic technique.

In path diagram, one-way arrows point from the causal variable toward the variable caused by it. In the causal models, a distinction is made between exogenous and endogenous variable. Exogenous variables cause other variables and their variability is due to factors outside the causal model. Consequently, the determination of an exogenous variable is not under consideration in the model. Endogenous variables are explained by exogenous variables or by other endogenous variables. In addition, path models also include residual variables which measure the influence of all other causes of the dependent variable not explained by the dependent variables.

A path coefficient indicates the direct effect of a variable hypothesized as a cause of a variable taken as an effect. For each independent variable in the equation there is a path coefficient

indicating the amount of expected change in the dependent variable as a result of a unit change in the dependent variable. Exogenous variables are assumed to be dependent on variables not included in the model, and represented by a residual term only.

Testing Hypothesized Relationships Through Path Modeling

Details of how the model was specified are presented. The first step was to construct each model according to the hypothesized relationships among variables.

Model 1: $PQ = PR, IA$
Model 2: $PB = PR IA PQ$
Model 3: $PV = PB PQ MS$
Model 4: $WB = PV$
Model 5: $SI = PV$
Model 6: $MS = PR$

where

- PR = price
- IA = intrinsic attributes
- PQ = perceptions of quality
- PB = perceptions of benefits
- PV = perceptions of value
- MS = monetary sacrifice
- WB = willingness to buy
- SI = search intention

The next step was to subject each of the models to the path analysis for comparison of various estimated correlation "path" coefficients by means of data analysis.

Limitations

It is important to be cognizant of the limitations as they relate to the weakness of the research. The importance of the study results can then be properly interpreted in light of these weaknesses. Hence, it is acknowledged that the conceptualization is a simplification of the real world in that it ignores a number of other factors associated with consumers' product evaluations and behaviors. For example, the situation or context in which evaluations take place has been found to interact with consumers' evaluation (Fiske, 1981; Damhorst, 1984-85; Forsythe, 1988; Workman, 1984-1985; Kaiser, 1983-1984). Notions of perceived risk (Dowling, 1986; Jacoby & Kaplan, 1972), Framing (Tversky & Kahneman, 1981), involvement (Celsi & Olson, 1988), and aesthetic appreciation (Hirschman, 1986; Hirschman & Solomon, 1984; Holbrook, 1986; Holbrook & Hirschman, 1982) can be argued to affect consumers' evaluation and behavioral intentions. In this section, detailed examination of the limitations for the design and methodological procedures are presented.

A survey setting was used with experimentally manipulated price and intrinsic attributes. A common drawback of survey research is a lack of control over subjects' reactivity, such as good subject role and evaluation comprehension. Subjects attempt to be good subjects when they try to figure out the research object and give the researcher what they feel are the intended responses. In order to avoid this artifact, subjects were asked at the end of the questionnaire what they thought the experiment was about and what the researcher was attempting to discover. Before coding, 12 responses were eliminated that showed knowledge of the research objective or recent participation in a similar study. The respondents also may be unwilling to provide certain facts, either because of the effort required or the sensitivity of the topic. As the data were collected in classrooms it was more difficult to make the task as realistic as a field setting. Furthermore, each subject saw only one

drawing and one description of dress slacks, whereas in the marketplace evaluations may be based on comparisons of many dress slacks. Because of that, the use of the between-subjects design used in the analysis of variance limits generalizability of the study results.

The primary theoretical constructs were operationalized using multiple items to enhance the construct validity of this research. Construct validity was ascertained primarily by examining the reliability of the constructs. However, construct validity could not be fully assessed, as only a single method of measurement was used. Further, as the lower reliability of the objective knowledge scale indicated, it could not be concluded that the scale accurately measured subjects' objective knowledge. Therefore, the validation of the scale needed to be done and the use of a reliable measure could contribute to finding an effect of the clothing knowledge.

Internal validity of the research was enhanced through the use of multiple conditions and the random assignment of subjects to the various cells. However, threats to internal validity are often manifested in the confounding effects of variables that are inadequately manipulated. For instance, it was necessary to examine differences in slopes between male and female subjects within a regression equation, as male students might exhibit price-perceived quality effects different from female subjects. In fact, most students majoring in Clothing and Textiles were females, while male students mostly majored in Communications and Marketing areas. Subjects who are highly knowledgeable about the product would tend to evaluate the product differently. Therefore, to control and measure the effect of knowledge, subjects presumed to be differentially knowledgeable were requested to participate in the research.

To enhance internal validity of the research, manipulation checks were performed based on suggestions by Perdue and Summers(1986). Perdue and Summers recommend that, to minimize the contamination of the dependent measures, it is preferable to conduct manipulation checks outside of the

main experiment. If manipulation checks do have to be made during the main experiment, measurement of dependent variables should always precede the manipulation checks. It was necessary to include the manipulation checks in the main experiment, a weakness in this research. However, results of the manipulation checks reported in this chapter, indicated evidence that manipulation worked as intended. For all multiple regressions, centering and standardization of the independent variables were done to prevent multicollinearity problems. The standardized regression coefficient, β , is associated with one standard deviation change in an independent variable, while holding the remaining variables constant (Pedhazur, 1982). However, the magnitude of a β reflects not only the presumed effect of the variable with which it is associated but also the variances and the covariances of the variables included in the model, as well as the variance of the variables not included in the model and subsumed under the error term (Pedhazur, 1982). For the reasons, β is sample-specific and therefore can not be used for the purpose of generalizations across settings and populations.

A convenience sample of students was used due to constraints of time and money. It could be better to obtain a truly random sample of the general population, as the nature of the sample (convenience) bears on inferences drawn from the sample to the population on a logical, not a statistical basis (Hinkle, Wiersma, & Jurs, 1988). Criticism directed at the use of student samples (Ferber, 1977) was acknowledged due to limited generalizability of the results to other populations (Lynch, 1982).

Also, students come into a data collection situation with different backgrounds and experiences. These various backgrounds and experiences could bias results if not subject to control. If subjects were grouped in cells at different income levels, price may be perceived differently because of the income difference. Therefore, differences in price-perceived quality might be due to income levels and not the independent

variable manipulations. Random assignment of treatments to subjects helped alleviate this problem.

The method of measurement was categorical rating scales. Category ratings suffer from certain limitations, such as information loss due to limited number of categories and bias response due to fixed categories (Lodge, 1981). This study used seven-point scales to measure the constructs of interest, whereas the utilization of wider scales (e.g., 100 point scales) might provide greater and more flexible response variation. It is acknowledged that the use of a particular setting, product, and sample reduces the generalizability of the research results to other settings, products, and populations.

CHAPTER V

ANALYSES AND RESULTS

Overview

This chapter presents the statistical analyses and results pertaining to the study. Regarding hypothesis testing, three sets of analyses are described. The first set was based on the results of multiple regression; the second set, on analysis of variance with Duncan's test; and the third set, the path causal modeling approach. The results are presented and interpreted in relation to each hypothesis.

The data were collected during the 1991 spring and summer semesters, at four universities. During a regular class period, junior and senior Clothing and Textiles students from three universities (Radford University, University of West Virginia, University of North Carolina at Greensboro) participated in the study, while students in the Communications and Marketing departments at Virginia Polytechnic Institute and State University participated in the study. An equal number of questionnaires corresponding to each treatment condition were distributed at each data collection session. A total of 417 usable responses were subjected to analyses.

Sample Characteristics

To examine the characteristics of the sample, crosstabulation and Chi-Square test were used (Tables in Appendix D). Subjects were divided into two groups based on their clothing interest and knowledge scores, majors, and sexes. Regardless of sex and knowledge, most subjects

responded the ownership of the dress slacks (Table D-1 and D-2). Table D-3 in Appendix D presents the crosstabulation of the subjects based on their clothing interest and knowledge scores. As shown in the Table, most of the subjects had high interest in clothing with more knowledge about clothing in general (183 in high interest with more knowledge vs. 22 in low interest and more knowledgeable). A statistically significant Chi-Square value of 84.17 ($p = .0001$) implied that the two groups differed in their characteristics.

The crosstabulation of knowledge by major indicates subjects with Clothing and Textiles major are more knowledgeable about clothing than subjects majoring other areas. A Chi-Square test once again resulted in a statistically significant value of 205.69 ($p = .0001$) indicating differences in clothing knowledge between Clothing and Textiles majors and other areas.

The crosstabulations of sex by clothing interest, knowledge, and major show differences in the number of subjects in each cell. Three Chi-Square tests yielded statistically significant test values (139.56, 80.26, 139.59 respectively) indicating that females had higher interest in clothing, more knowledgeable about clothing, and were majoring Clothing and Textiles.

Results of Multiple Regression

Perceived Quality

Overall test

The computed value of the F statistic of 8.066 exceeds the critical value of the F distribution at $\alpha = .0001$ (Table 14). Therefore, the null hypothesis was rejected and the F value was sufficient to support the proposition that, taken together, price, intrinsic attributes, clothing interest and knowledge, significantly help to predict perception of quality. The R^2 , coefficient of multiple determination for perception of quality, equals 0.073 and indicates that 7.3% of the variance in perception of quality is explained by the combination of price, intrinsic attributes, knowledge, and clothing interest.

Individual tests

Research indicates that consumers generally are not able to assess a product quality perfectly. In such imperfect situations, consumers tend to make judgments about products on the basis of price. By integrating price information with quality perception, consumers may assign a meaning of high quality to the high price. To examine the direct effect of price on the perception of quality, multiple regression analysis was conducted with three levels of manipulated price. Evidence from clothing research suggests that intrinsic attributes are more often used than extrinsic attributes for clothing evaluation. A test of relative contribution of each independent variable to perception of quality yielded significant t values ($\alpha = .05$) for price, intrinsic attributes, and clothing knowledge, and a rejection of the null hypothesis (Table 14).

The largest estimated value of the price parameter (0.149) among the estimates of independent variables indicated that price made the largest contribution, followed by the intrinsic attributes (0.106) and knowledge (0.092). The relationships between the perception of quality and price, intrinsic attributes, and clothing knowledge were positive. Therefore, the higher the level of price, intrinsic attributes, and clothing knowledge,

TABLE 14

MAIN EFFECTS ON PERCEPTIONS OF QUALITY

Analysis of Variance					
Source	DF	Sum. of Squares	Mean Square	F Value	Prob>F
Model	4	19.19328	4.79832	8.066	0.0001
Error	413	245.69029	0.59489		
C Total	417	264.88357			
Root MSE	0.77129	R-square	0.0725		
Dep Mean	5.40989	Adj R-sq	0.0635		
C.V.	14.25708				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	5.410014	0.03772549	143.405	0.0001
PR	1	0.148775	0.03784433	3.931	0.0001
IA	1	0.105938	0.03796104	2.791	0.0055
KN	1	0.091993	0.04374012	2.103	0.0361
IN	1	0.039574	0.04365662	0.906	0.3652

the higher the perception of quality. As indicated, the hypothesized effect of price on perceived quality was strongly supported in multiple regression. The largest estimated value of price among the estimates of independent variables indicates that price was the largest and most positive contribution to predict consumers' perception of quality.

Interaction test

Table 15 presents a significant interaction between intrinsic attributes and clothing interest in a regression model for predicting perception of quality in a positive direction (t value is 2.14 at $\alpha = .05$). There can be 4 matrix combinations of intrinsic attribute levels and clothing interest levels for making a positive interaction (i.e., (-1, 1) and (1, -1) at lower level of one of the independent variables, (1, 1) and (-1, -1) at higher level of one of the independent variable). Therefore, when the level of one independent variable is high, the other independent variable moves in the same direction with the dependent variable. Admittedly, the percentage of variance in total perception of quality associated with this interaction is low (9.5%) indicating less contribution of the interaction on perceived quality.

Figure 9 illustrates that a situation where the relationship between perception of quality and intrinsic attributes depends on the level of clothing interest. In other words, perception of quality as a function of intrinsic attributes cannot be considered independently of clothing interest level. The change in the mean value of perception of quality for a unit in intrinsic attributes clearly depends on the level of clothing interest. Perception of quality appears to increase with increasing clothing interest as the intrinsic attributes change from low (82% wool/18% polyester with fashionable styles) to high (100% worsted wool with traditional style). In low intrinsic attribute level, subjects with

TABLE 15

INTERACTION EFFECTS ON PERCEPTIONS OF QUALITY

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	10	22.96265	2.29627	3.863	0.0001
Error	407	241.92092	0.59440		
C Total	417	264.88357			
Root MSE	0.77097	R-square	0.0867		
Dep Mean	5.40989	Adj R-sq	0.0642		
C.V.	14.25119				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	5.420886	0.04563357	118.792	0.0001
PR	1	0.153781	0.03797000	4.050	0.0001
IA	1	0.103680	0.03802951	2.726	0.0067
KN	1	0.093729	0.04498601	2.084	0.0378
IN	1	0.043474	0.04628424	0.939	0.3481
PR_IA	1	0.034014	0.03807274	0.893	0.3722
PR_KN	1	-0.003021	0.04452247	-0.068	0.9459
PR_IN	1	-0.030864	0.04434935	-0.696	0.4869
IA_KN	1	-0.045800	0.04459575	-1.027	0.3050
IA_IN	1	0.094730	0.04426891	2.140	0.0330
KN_IN	1	-0.011573	0.04982793	-0.232	0.8164

IN_LEVEL	IA_LEVEL	N	PQ_MEAN	PQ_S.D.
Low	Low	104	5.30769	0.78097
Low	High	122	5.42623	0.79975
High	Low	92	5.28623	0.79924
High	High	101	5.60396	0.77705

Plot of PQ_MEAN*IA_LEVEL. Symbol is value of IN_LEVEL.

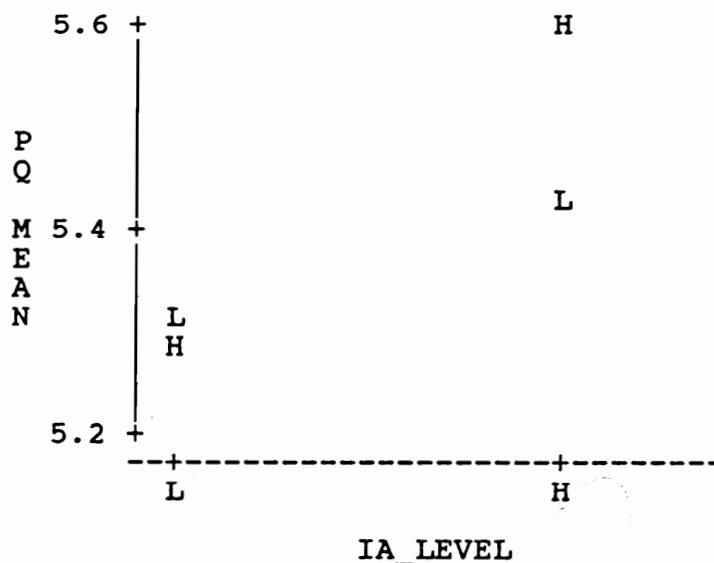


FIGURE 9: INTRINSIC ATTRIBUTES BY CLOTHING INTEREST INTERACTION IN THE REGRESSION MODEL FOR PERCEPTION OF QUALITY

less clothing interest perceived a little higher quality than did subjects having high clothing interest. However, as the level of intrinsic attributes goes up (100% worsted wool with traditional style), subjects having less clothing interest perceive a lot less quality than subjects having high clothing interest. Subjects having high clothing interest seem to perceive quality from the intrinsic attributes in the traditionally styled dress slacks.

Test for gender difference

Table 16 presents a nonsignificant t value on a sex dummy variable indicating no slope differences between males and females. Thus, it is concluded that there is not sufficient evidence to reject the null hypothesis of parallelism (i.e., the lines for males and females have the same slope). Based on Table 16, separate regression equations for both male and female subjects were written:

For males, sex dummy = 0

$$\hat{Y}_M = 5.494 + 0.208PR - 0.032IA + 0.104KN + 0.118IN$$

For females, sex dummy = 1

$$\hat{Y}_F = 5.419 + 0.114PR - 0.152IA + 0.103KN - 0.012IN$$

In fact, the significant t value of price in males indicates male subjects perceive the quality of the dress slacks higher based on the higher price. On the other hand, the significant t value of intrinsic attributes in females indicates female subjects perceive the quality of the dress slacks higher based on the higher intrinsic attributes (100% worsted wool with

TABLE 16

GENDER DIFFERENCE IN PERCEPTIONS OF QUALITY

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	9	24.13430	2.68159	4.545	0.0001
Error	408	240.74928	0.59007		
C Total	417	264.88357			
Root MSE		0.76816	R-square	0.0911	
Dep Mean		5.40989	Adj R-sq	0.0711	
C.V.		14.19921			

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	5.494299	0.13162792	41.741	0.0001
SEXDUMMY	1	-0.075073	0.14094449	-0.533	0.5946
PR	1	0.207611	0.07706308	2.694	0.0074
IA	1	-0.031668	0.07258998	-0.436	0.6629
KN	1	0.103510	0.10271334	1.008	0.3142
IN	1	0.118188	0.07855991	1.504	0.1332
PR_SEX	1	-0.093616	0.08882795	-1.054	0.2926
IA_SEX	1	0.184409	0.08528976	2.162	0.0312
KN_SEX	1	-0.000734	0.11466124	-0.006	0.9949
IN_SEX	1	-0.129747	0.10557251	-1.229	0.2198

traditionally styled dress slacks). The results seem to coincide with the research in knowledge structure. Female subjects could have more expertise in evaluating clothing products than had male subjects, thereby look at the intrinsic attributes in the dress slacks. On the other hand, male subjects are less familiar with clothing products in general, thereby look at the price in the dress slacks.

Perception of Monetary Sacrifice

Overall test

In Table 17, the computed value of the F statistic of 58.924 exceeds the critical value of the F distribution at $\alpha = .0001$. Therefore, the null hypothesis was rejected and the F value was sufficient to support the proposition that, taken together, the price, intrinsic attributes, clothing knowledge and clothing interest, significantly contribute in predicting perception of monetary sacrifice. The R^2 , coefficient of multiple determination for perception of monetary sacrifice, equals 0.3633 and indicates that 36.33% of the variance in perception of monetary sacrifice is explained by the combination of price, intrinsic attributes, clothing knowledge, and clothing interest.

Individual test

Given the overall model is significant, the slope coefficients of independent variables were tested individually for their statistical significance in the model for predicting perception of monetary sacrifice.

TABLE 17

MAIN EFFECTS ON PERCEPTIONS OF MONETARY SACRIFICE

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	4	230.40860	57.60215	58.924	0.0001
Error	413	403.73175	0.97756		
C Total	417	634.14035			
Root MSE		0.98872	R-square	0.3633	
Dep Mean		4.45614	Adj R-sq	0.3572	
C.V.		22.18771			
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.453692	0.04836012	92.094	0.0001
PR	1	0.711070	0.04851246	14.657	0.0001
IA	1	-0.130999	0.04866207	-2.692	0.0074
KN	1	0.077881	0.05607024	1.389	0.1656
IN	1	-0.157800	0.05596320	-2.820	0.0050

A test of relative contribution of each independent variable to perception of monetary sacrifice yielded significant t values ($\alpha = .05$) for price, clothing interest, and intrinsic attributes, and a rejection of the null hypothesis (Table 17).

The largest estimated value of the price parameter (0.711) among the estimates of independent variables indicated that price made the largest contribution, followed by clothing interest (0.158) and intrinsic attributes (0.131). The relationship between the perception of monetary sacrifice and price was positive, as expected, and consistent with the results of previous research. However, clothing interest and intrinsic attributes had negative relationships with the perception of monetary sacrifice indicating the higher the levels of clothing interest and intrinsic attributes (100% wool with traditionally styled dress slacks), the lower the perceptions of monetary sacrifice. According to classical economists, consumers view price as the monetary sacrifice necessary to acquire a product; therefore, the higher the price of the product, the greater the consumers' perceptions of the monetary sacrifice associated with acquiring the product. The hypothesized effect of price on perception of monetary sacrifice was strongly supported. This result is consistent with the results of Rao (1986), Chapman (1987), and Grewal (1989). The largest positive estimate value of price among the estimates of independent variables indicates that price made the largest contribution in predicting consumers' perception of monetary sacrifice.

Interaction test

Steps suggested by Kleinbaum, Kupper, and Muller (1988) were performed in order to evaluate interactions for all regression models. A multiple regression model containing two-way interaction terms and all main effects was analyzed and produced no significant interactions.

However, after employing Maximum R-square improvement technique, which was used to select significant interactions to be included in the model in addition to main effects, there was a significant interaction between price and clothing interest. Table 18 presents a significant F value of 6.19 at $\alpha = .05$. The percentage of variance in total perception of monetary sacrifice associated with this interaction was 11.9% in a negative direction. In other words, perception of monetary sacrifice as a function of price cannot be considered independently of clothing interest level. There can be 4 matrix combinations of price levels and clothing interest levels for making negative interaction (i.e., (1, -1) and (-1, 1) at lower level of one of the independent variables, (-1, -1) and (1, 1) at higher level of one of the independent variable). Therefore, when one independent variable is low, the other independent variable moves in the opposite direction with the dependent variable.

Tests for gender difference

Table 19 presents a nonsignificant t value on sex as a dummy variable indicating no slope difference between males and females. Thus, it is concluded that there is not sufficient evidence to reject the null hypothesis of parallelism (i.e., the lines for males and females have the same slope). Based on Table 19, separate regression equations for both male and female subjects are formulated as follows:

For male, sex dummy = 0

$$\hat{Y}_M = 4.466 + 0.999PR - 0.101IA + 0.064IN$$

For female, sex dummy = 1

TABLE 18

INTERACTION EFFECTS ON PERCEPTIONS OF MONETARY SACRIFICE

R-square = 0.37277039

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	5	236.38874820	47.27774964	48.97	0.0001
Error	412	397.75160267	0.96541651		
Total	417	634.14035088			

Variable	Parameter Estimate	Standard Error	Type II Sum of Squares	F	Prob>F
INTERCEP	4.44941722	0.04808952	8264.56782053	8560.62	0.0001
PR	0.70947157	0.04821451	209.03989440	216.53	0.0001
IA	-0.13735918	0.04842638	7.76722786	8.05	0.0048
KN	0.07959673	0.05572519	1.96970881	2.04	0.1539
IN	-0.16855293	0.05578213	8.81448957	9.13	0.0027
PR_IN	-0.11920201	0.04789442	5.98014845	6.19	0.0132

All variables left in the model are required or significant level.

at the 0.0500

Summary of Stepwise Procedure

Step	Variable Entered	Variable Removed	Number In	Partial R**2	Model R**2	F	Prob>F
1	PR_IN		5	0.0094	0.3728	6.1944	0.0132

TABLE 19

GENDER DIFFERENCE IN PERCEPTIONS OF MONETARY SACRIFICE

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	9	247.66668	27.51852	29.051	0.0001
Error	408	386.47367	0.94724		
C Total	417	634.14035			
Root MSE	0.97326	R-square	0.3906		
Dep Mean	4.45614	Adj R-sq	0.3771		
C.V.	21.84092				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.465518	0.16677290	26.776	0.0001
SEXDUMMY	1	0.022714	0.17857702	0.127	0.8988
PR	1	0.998669	0.09763912	10.228	0.0001
IA	1	-0.101229	0.09197168	-1.101	0.2717
KN	1	-0.000553	0.13013805	-0.004	0.9966
IN	1	-0.064016	0.09953559	-0.643	0.5205
PR_SEX	1	-0.404241	0.11254523	-3.592	0.0004
IA_SEX	1	-0.051154	0.10806234	-0.473	0.6362
KN_SEX	1	0.131175	0.14527608	0.903	0.3671
IN_SEX	1	-0.244324	0.13376063	-1.827	0.0685

$$\hat{Y}_f = 4.487 + 0.595PR - 0.152IA + 0.115KN - 0.308IN$$

As shown in the equations, the largest contribution of price for males indicates male subjects' perception of monetary sacrifice are highly affected by the price. On the other hand, the effect of price on female subjects' perception of monetary sacrifice was half that of male's perceptions indicating female subjects perceived a lot less monetary sacrifice based on price than males did. The large, negative effect of clothing interest for females suggests that female subjects' perceptions of monetary sacrifice are affected by the level of clothing interest. In other words, female subjects with high clothing interest perceive less monetary sacrifice than did female subjects with less clothing interest.

Perception of Benefits

Overall test

In Table 20, the computed value of the F statistic of 9.34 exceeds the critical value of the F distribution at $\alpha = .0001$. Therefore, the null hypothesis was rejected and the F value was sufficient to support the proposition that, taken together, the price, intrinsic attributes, clothing knowledge and clothing interest, significantly contribute to predict perception of benefits. The R^2 , coefficient of multiple determination for perception of benefits, equals 0.083 and indicates that 8.3% of the variance in perception of benefits is explained by the combination of price, intrinsic attributes, clothing knowledge and clothing interest.

TABLE 20

MAIN EFFECTS ON PERCEPTIONS OF BENEFITS

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	4	52.94076	13.23519	9.340	0.0001
Error	413	585.25891	1.41709		
C Total	417	638.19967			
Root MSE		1.19042	R-square	0.0830	
Dep Mean		4.18026	Adj R-sq	0.0741	
C.V.		28.47707			
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.180787	0.05822573	71.803	0.0001
PR	1	0.180184	0.05840915	3.085	0.0022
IA	1	0.260857	0.05858928	4.452	0.0001
KN	1	0.049079	0.06750873	0.727	0.4676
IN	1	0.149649	0.06737986	2.221	0.0269

Individual tests

A test of the relative contribution of each independent variable to perception of benefits yielded significant t values ($\alpha = .05$) for price, intrinsic attributes, and clothing interest, and a rejection of the null hypothesis involving the 3 independent variables (Table 20).

The largest estimated value for regression coefficient (0.261) indicated that intrinsic attributes made the largest contribution, followed by the price (0.18) and clothing interest (0.150). The relationships between the perception of benefits and intrinsic attributes, price, and clothing interest were positive as expected and consistent with the results of the previous research. Therefore, the higher the levels of intrinsic attributes, price, and clothing interest, the higher the perceptions of benefits.

Interaction test

In order to evaluate interactions for all regression models, steps suggested by Kleinbaum, Kupper, and Muller (1988) were performed. After following these prescriptions, a multiple regression model containing two-way interaction terms and all main effects were analyzed and no significant interaction was found. However, after employing Maximum R-square improvement technique, which was used to select significant interactions to be included in the model in addition to main effects, there was a significant interaction between price and clothing interest. Table 21 presents a significant F value of 4.05 at $\alpha = .05$. The percentage of variance in total perceptions of benefits associated with this interaction was 11.6% in a negative direction. In other words, the perceptions of benefits as a function of price cannot be considered independently of clothing interest level. There can be 4 matrix

TABLE 21

INTERACTION EFFECTS ON PERCEPTIONS OF BENEFITS

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	10	64.56910	6.45691	4.581	0.0001
Error	407	573.63057	1.40941		
C Total	417	638.19967			
Root MSE	1.18719	R-square	0.1012		
Dep Mean	4.18026	Adj R-sq	0.0791		
C.V.	28.39980				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.143735	0.07026902	58.970	0.0001
PR	1	0.180742	0.05846824	3.091	0.0021
IA	1	0.257489	0.05855988	4.397	0.0001
KN	1	0.039043	0.06927188	0.564	0.5733
IN	1	0.155029	0.07127095	2.175	0.0302
PR_IA	1	-0.084818	0.05862644	-1.447	0.1487
PR_KN	1	-0.029573	0.06855809	-0.431	0.6664
PR_IN	1	-0.108903	0.06829151	-1.595	0.1116
IA_KN	1	0.038664	0.06867093	0.563	0.5737
IA_IN	1	0.038306	0.06816764	0.562	0.5745
KN_IN	1	0.054699	0.07672771	0.713	0.4763

combinations of price levels and clothing interest levels for making negative interaction (i.e., (1, -1) and (-1, 1) at lower level of one of the independent variables, (-1, -1) and (1, 1) at higher level of one of the independent variable). Therefore, when one independent variable is low, the other independent variable moves in the opposite direction with the dependent variable.

Tests for gender difference

Table 22 presents a nonsignificant t value on the sex dummy variable indicating no slope difference between males and females. Thus, it is concluded that there is not sufficient evidence to reject the null hypothesis of parallelism (i.e., the lines for males and females have the same slope). Based on Table 22, separate regression equations for both male and female subjects were written:

For male, sex dummy = 0

$$\hat{Y}_M = 4.264 + 0.379PR + 0.113IA - 0.135KN + 0.181IN$$

For female, sex dummy = 1

$$\hat{Y}_F = 4.011 + 0.106PR + 0.337IA + 0.115KN + 0.316IN$$

The magnitude of the effect of price is the greatest on male subjects' perceptions of benefits. Therefore, male subjects perceived higher benefits based on the high price of the dress slacks. On the other hand, intrinsic attributes and clothing interest affected female subjects' perceptions of benefits. Thus, female subjects perceive more benefits as their clothing interest increases. Intrinsic attributes with traditionally

TABLE 22

GENDER DIFFERENCE IN PERCEPTIONS OF BENEFITS

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	9	80.23964	8.91552	6.519	0.0001
Error	408	557.96003	1.36755		
C Total	417	638.19967			
Root MSE	1.16942	R-square	0.1257		
Dep Mean	4.18026	Adj R-sq	0.1064		
C.V.	27.97485				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.264285	0.20038586	21.280	0.0001
SEXDUMMY	1	-0.253229	0.21456909	-1.180	0.2386
PR	1	0.378830	0.11731821	3.229	0.0013
IA	1	0.113499	0.11050851	1.027	0.3050
KN	1	-0.134786	0.15636728	-0.862	0.3892
IN	1	0.181364	0.11959692	1.516	0.1302
PR_SEX	1	-0.273159	0.13522865	-2.020	0.0440
IA_SEX	1	0.223504	0.12984222	1.721	0.0859
KN_SEX	1	0.249907	0.17455637	1.432	0.1530
IN_SEX	1	0.134794	0.16071999	0.839	0.4021

styled dress slacks are 100% wool fiber content, compared to 82% wool/18% polyester blend with fashionably styled dress slacks.

Perceptions of Value

Overall test

In Table 23, the computed value of the F statistic of 2.85 exceeds the critical value of the F distribution at $\alpha = .05$. Therefore, the null hypothesis was rejected and the F value was sufficient to support the proposition that, taken together, the price, intrinsic attributes, knowledge and clothing interest, significantly contribute to predict perceptions of values. The R^2 , coefficient of multiple determination for perceptions of benefits, equals 0.0268 and indicates that only 2.68% of the variance in perceptions of values is explained by the combination of price, intrinsic attributes, knowledge, and clothing interest.

Individual test

Given the overall function is significant, the slope coefficients were tested individually for their statistical significance in the model for predicting perceptions of value. A test of relative contribution of each independent variable to perceptions of values yielded significant t values ($\alpha = .05$) of intrinsic attributes and clothing interest and a rejection of the null hypothesis involving the independent variables and an acceptance of the null hypotheses involving price and knowledge (Table 23). The estimates of the clothing interest and intrinsic attributes are

TABLE 23

MAIN EFFECTS ON PERCEPTIONS OF VALUE

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	4	21.13637	5.28409	2.846	0.0238
Error	413	766.89473	1.85689		
C Total	417	788.03110			
Root MSE		1.36268	R-square	0.0268	
Dep Mean		4.53349	Adj R-sq	0.0174	
C.V.		30.05799			
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.534272	0.06665132	68.030	0.0001
PR	1	-0.034897	0.06686129	-0.522	0.6020
IA	1	0.153982	0.06706748	2.296	0.0222
KN	1	-0.012886	0.07727763	-0.167	0.8676
IN	1	0.167622	0.07713012	2.173	0.0303

about the same, indicating similar effects on perceptions of values. The relationships between the perceptions of values and clothing interest and intrinsic attributes are positive; therefore, the higher the levels of clothing interest and intrinsic attributes, the higher subjects' perceptions of values.

Interaction test

In order to evaluate interactions for all regression models, steps suggested by Kleinbaum, Kupper, and Muller (1988) were performed. After following these prescriptions, a multiple regression model containing two-way interaction term and all main effects were analyzed and no significant interaction was found (Table 24). Even after Maximum R-square improvement technique was employed to select significant interactions to be included in the model, in addition to main effects, no significant interaction was detected (Appendix).

Tests for gender difference

Table 25 presents a nonsignificant t value on the sex dummy variable indicating no slope difference between males and females. Thus, it is concluded that there is not sufficient evidence to reject the null hypothesis of parallelism (i.e., the lines for males and females have the same slope). Based on Table 25, separate regression equations for both male and female subjects were written:

For male, sex dummy = 0

$$\hat{Y}_M = 4.662 - 0.204PR - 0.023IA + 0.153KN + 0.196IN$$

TABLE 24

INTERACTION EFFECTS ON PERCEPTIONS OF VALUE

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	10	27.37651	2.73765	1.465	0.1501
Error	407	760.65459	1.86893		
C Total	417	788.03110			
Root MSE		1.36709	R-square	0.0347	
Dep Mean		4.53349	Adj R-sq	0.0110	
C.V.		30.15530			
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.555536	0.08091732	56.299	0.0001
PR	1	-0.028747	0.06732830	-0.427	0.6696
IA	1	0.151119	0.06743383	2.241	0.0256
KN	1	-0.005325	0.07976907	-0.067	0.9468
IN	1	0.170184	0.08207108	2.074	0.0387
PR_IA	1	0.053969	0.06751047	0.799	0.4245
PR_KN	1	-0.001051	0.07894712	-0.013	0.9894
PR_IN	1	-0.018117	0.07864014	-0.230	0.8179
IA_KN	1	-0.104480	0.07907707	-1.321	0.1872
IA_IN	1	0.114042	0.07849751	1.453	0.1470
KN_IN	1	-0.020925	0.08835474	-0.237	0.8129

TABLE 25

GENDER DIFFERENCE IN PERCEPTIONS OF VALUE

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	9	30.64789	3.40532	1.834	0.0604
Error	408	757.38321	1.85633		
C Total	417	788.03110			
Root MSE		1.36247	R-square	0.0389	
Dep Mean		4.53349	Adj R-sq	0.0177	
C.V.		30.05348			
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.661896	0.23346585	19.968	0.0001
SEXDUMMY	1	-0.105873	0.24999047	-0.424	0.6721
PR	1	-0.203858	0.13668528	-1.491	0.1366
IA	1	-0.022580	0.12875141	-0.175	0.8609
KN	1	0.153108	0.18218062	0.840	0.4012
IN	1	0.196284	0.13934016	1.409	0.1597
PR_SEX	1	0.220326	0.15755239	1.398	0.1627
IA_SEX	1	0.240772	0.15127676	1.592	0.1122
KN_SEX	1	-0.216517	0.20337239	-1.065	0.2877
IN_SEX	1	-0.014292	0.18725188	-0.076	0.9392

For female, sex dummy = 1

$$\hat{Y}_f = 4.556 + 0.016PR + 0.118IA - 0.064KN + 0.182IN$$

The effect of price is the greatest on male subjects' perceptions of values in a negative way. Therefore, the higher the price, the less the male subjects' perceptions of value. The positive effects of clothing interest and knowledge indicates male subjects' higher perceptions of value are affected by higher levels of clothing interest and knowledge. On the other hand, clothing interest most affected female subjects' perceptions of values in a positive direction.

Willingness to Buy

Overall test

In Table 26, the computed value of the F statistic of 8.979 exceeds the critical value of the F distribution at $\alpha = .0001$. Therefore, the null hypothesis was rejected and the F value was sufficient to support the proposition that, taken together, the price, intrinsic attributes, knowledge and clothing interest significantly help to predict willingness to buy. The R^2 , coefficient of multiple determination for willingness to buy, equals 0.08 and indicates that 8% of the variance in willingness to buy is explained by the combination of price, intrinsic attributes, knowledge, and clothing interest.

TABLE 26

MAIN EFFECTS ON WILLINGNESS TO BUY

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	4	67.89466	16.97366	8.979	0.0001
Error	413	780.72423	1.89037		
C Total	417	848.61889			
Root MSE		1.37491	R-square	0.0800	
Dep Mean		3.39992	Adj R-sq	0.0711	
C.V.		40.43943			
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	3.401329	0.06724960	50.578	0.0001
PR	1	-0.054021	0.06746145	-0.801	0.4237
IA	1	0.269399	0.06766950	3.981	0.0001
KN	1	0.004196	0.07797130	0.054	0.9571
IN	1	0.293934	0.07782246	3.777	0.0002

Individual tests

Given that the overall function is significant, the slope coefficients were tested individually for their statistical significance in the model. A test of relative contribution of each independent variable to willingness to buy, yielded significant t values ($\alpha = .05$) of clothing interest and intrinsic attributes and a rejection of the null hypotheses involving the two independent variables (Table 26). Hence, the null hypotheses concerning no effects of price and knowledge were accepted. The largest estimated value of the clothing interest parameter ($\beta^* = 0.294$) among the estimates of independent variables indicated that clothing interest made the largest contribution, followed by the intrinsic attributes ($\beta^* = 0.269$). The relationships between the willingness to buy, and clothing interest, and intrinsic attributes were positive; therefore, the higher the level of clothing interest and intrinsic attributes, the higher the willingness to buy.

Interaction test

Table 27 presents nonsignificant interactions among independent variables in a regression model for willingness to buy ($\alpha = .05$). Even after Maximum R-square improvement technique was employed to select significant interactions to be included in the model, in addition to main effects, no significant interaction was detected (Appendix).

Test for gender difference

Table 28 presents a nonsignificant t value on the sex dummy variable indicating no slope differences between males and females. Thus, it is

TABLE 27

INTERACTION EFFECTS ON WILLINGNESS TO BUY

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	10	75.66367	7.56637	3.984	0.0001
Error	407	772.95522	1.89915		
C Total	417	848.61889			
Root MSE	1.37810	R-square	0.0892		
Dep Mean	3.39992	Adj R-sq	0.0668		
C.V.	40.53323				

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	3.444157	0.08156896	42.224	0.0001
PR	1	-0.052361	0.06787050	-0.771	0.4409
IA	1	0.265223	0.06797688	3.902	0.0001
KN	1	0.026999	0.08041146	0.336	0.7372
IN	1	0.276883	0.08273201	3.347	0.0009
PR_IA	1	0.011703	0.06805414	0.172	0.8636
PR_KN	1	-0.009434	0.07958289	-0.119	0.9057
PR_IN	1	-0.003457	0.07927344	-0.044	0.9652
IA_KN	1	-0.154299	0.07971388	-1.936	0.0536
IA_IN	1	0.087909	0.07912966	1.111	0.2672
KN_IN	1	-0.060959	0.08906627	-0.684	0.4941

TABLE 28

GENDER DIFFERENCE IN WILLINGNESS TO BUY

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	9	70.68317	7.85369	4.119	0.0001
Error	408	777.93572	1.90671		
C Total	417	848.61889			
Root MSE	1.38083	R-square	0.0833		
Dep Mean	3.39992	Adj R-sq	0.0631		
C.V.	40.61375				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	3.422554	0.23661233	14.465	0.0001
SEXDUMMY	1	-0.065252	0.25335966	-0.258	0.7969
PR	1	-0.044073	0.13852742	-0.318	0.7505
IA	1	0.185991	0.13048663	1.425	0.1548
KN	1	-0.083940	0.18463592	-0.455	0.6496
IN	1	0.326958	0.14121808	2.315	0.0211
PR_SEX	1	-0.016790	0.15967577	-0.105	0.9163
IA_SEX	1	0.117658	0.15331557	0.767	0.4433
KN_SEX	1	0.116310	0.20611330	0.564	0.5729
IN_SEX	1	0.002387	0.18977553	0.013	0.9900

concluded that there is not sufficient evidence to reject the null hypothesis of parallelism (i.e., accepting the null hypothesis that the lines for males and females have the same slope).

Based on Table 28, separate regression equations for both male and female subjects were written:

For males, sex dummy = 0

$$\hat{Y}_M = 3.423 - 0.044PR + 0.186IA - 0.084KN + 0.327IN$$

For females, sex dummy = 1

$$\hat{Y}_F = 3.36 - 0.061PR + 0.304IA + 0.032KN + 0.329IN$$

Higher estimates of clothing interest in regression equations for both male and female subjects indicate that the higher the subjects' clothing interest is, the more subjects are willing to buy. Therefore, both male and female subjects have greater willingness to buy when they have high clothing interest. Intrinsic attributes again contributed to female subjects' willingness to buy in a positive direction.

Search Intention

Overall test

In Table 29, the computed value of the F statistic of 8.622 exceeds the critical value of the F distribution at $\alpha = .0001$. Therefore, the null hypothesis was rejected and the F value was sufficient to support the

TABLE 29

MAIN EFFECTS ON SEARCH INTENTION

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	4	69.49527	17.37382	8.622	0.0001
Error	413	832.25593	2.01515		
C Total	417	901.75120			
Root MSE	1.41956	R-square	0.0771		
Dep Mean	5.77990	Adj R-sq	0.0681		
C.V.	24.56025				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	5.778203	0.06943354	83.219	0.0001
PR	1	0.254015	0.06965227	3.647	0.0003
IA	1	-0.151285	0.06986708	-2.165	0.0309
KN	1	-0.245463	0.08050343	-3.049	0.0024
IN	1	-0.029773	0.08034976	-0.371	0.7112

proposition that, taken together, the price, intrinsic attributes, knowledge and clothing interest significantly help to predict search intentions. The R^2 , coefficient of multiple determination for search intentions, equals 0.077 and indicates that 7.7% of the variance in search intentions is explained by the combination of price, intrinsic attributes, knowledge, and clothing interest.

Individual tests

Given that the overall function is significant, the slope coefficients were tested individually for their statistical significance in the model. A test of relative contribution of each independent variable to search intentions yielded significant t values ($\alpha = .05$) of price, intrinsic attributes, and knowledge and a rejection of the null hypotheses involving the three independent variables (Table 29). Hence, the null hypothesis concerning no effects of clothing interest was accepted. The estimates of the price ($\beta^* = 0.254$) and knowledge parameter ($\beta^* = - 0.245$) were about the same and larger than intrinsic attributes. The results are consistent with those of past research indicating that subjects' knowledge negatively affects search intentions. The relationship between search intentions and price was positive; therefore, the higher the level of price, the higher subjects' search intentions.

Interaction test

Table 30 presents nonsignificant interactions among independent variables in a regression model for search intention ($\alpha = .05$). Maximum R-square improvement technique was used to select significant interactions

TABLE 30

INTERACTION EFFECTS ON SEARCH INTENTION

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	10	78.93757	7.89376	3.905	0.0001
Error	407	822.81362	2.02166		
C Total	417	901.75120			
Root MSE	1.42185	R-square	0.0875		
Dep Mean	5.77990	Adj R-sq	0.0651		
C.V.	24.59987				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	5.760603	0.08415860	68.449	0.0001
PR	1	0.250973	0.07002525	3.584	0.0004
IA	1	-0.153296	0.07013500	-2.186	0.0294
KN	1	-0.251393	0.08296435	-3.030	0.0026
IN	1	-0.026953	0.08535857	-0.316	0.7523
PR_IA	1	0.066336	0.07021471	0.945	0.3453
PR_KN	1	0.068833	0.08210948	0.838	0.4024
PR_IN	1	-0.042552	0.08179020	-0.520	0.6032
IA_KN	1	-0.010638	0.08224463	-0.129	0.8972
IA_IN	1	-0.112919	0.08164186	-1.383	0.1674
KN_IN	1	0.037593	0.09189394	0.409	0.6827

to be included in the model in addition to main effects and no significant interaction was found (Appendix).

Test for gender difference

Table 31 presents a significant t value ($\alpha = .05$) on the sex dummy variable indicating slope differences between males and females. Thus, the null hypothesis of parallelism was rejected. Based on Table 31, separate regression equations for both male and female subjects were written:

For males, sex dummy = 0

$$\hat{Y}_M = 6.314 + 0.192PR - 0.027IA - 0.030KN + 0.198IN$$

For females, sex dummy = 1

$$\hat{Y}_F = 5.747 + 0.241PR - 0.205IA - 0.226KN - 0.079IN$$

Higher estimates of price, intrinsic attributes, and knowledge in regression equations for female subjects indicate that the higher the price, the more subjects' search intentions increased. Intrinsic attributes and knowledge affected female subjects' search intentions in a negative direction. Therefore, female subjects want to search more when they have high clothing interest and when intrinsic attributes change in terms of wool percentage and style.

TABLE 31

GENDER DIFFERENCE IN SEARCH INTENTION

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	9	83.28837	9.25426	4.613	0.0001
Error	408	818.46283	2.00604		
C Total	417	901.75120			
Root MSE	1.41635	R-square	0.0924		
Dep Mean	5.77990	Adj R-sq	0.0723		
C.V.	24.50466				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	6.314217	0.24269733	26.017	0.0001
SEXDUMMY	1	-0.567410	0.25987536	-2.183	0.0296
PR	1	0.191531	0.14208995	1.348	0.1784
IA	1	-0.027062	0.13384238	-0.202	0.8399
KN	1	-0.029960	0.18938424	-0.158	0.8744
IN	1	0.197968	0.14484981	1.367	0.1725
PR_SEX	1	0.048502	0.16378217	0.296	0.7673
IA_SEX	1	-0.177809	0.15725841	-1.131	0.2589
KN_SEX	1	-0.195981	0.21141395	-0.927	0.3545
IN_SEX	1	-0.277482	0.19465601	-1.425	0.1548

Attitude Toward Advertisements

Overall test

In Table 32, the computed value of the F statistic of 5.808 exceeds the critical value of the F distribution at $\alpha = .0001$. Therefore, the null hypothesis was rejected and the F value was sufficient to support the proposition that, taken together, the price, intrinsic attributes, knowledge and clothing interest significantly help to predict attitude toward advertisements. The R^2 , coefficient of multiple determination for search intentions, equals 0.077 and indicates that 7.7% of the variance in attitude toward advertisements is explained by the combination of price, intrinsic attributes, knowledge, and clothing interest.

Individual tests

Given that the overall function is significant, slope coefficients were tested individually for their statistical significance in the model. A test of relative contribution of each independent variable to attitude toward advertisements yielded significant t value ($\alpha = .05$) of intrinsic attributes and a rejection of the null hypothesis involving the independent variable (Table 32). Hence, the null hypotheses concerning no effects of price, knowledge, and clothing interest were accepted. The positive estimates of the intrinsic attributes ($\beta^* = 0.283$) indicates the higher the level of intrinsic attributes, the more favorable the subjects' attitude toward advertisements. The results are consistent with those of past research.

TABLE 32

MAIN EFFECTS ON ATTITUDE TOWARD AD

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	4	40.40151	10.10038	5.808	0.0001
Error	413	718.25559	1.73912		
C Total	417	758.65710			
Root MSE		1.31876	R-square	0.0533	
Dep Mean		4.33812	Adj R-sq	0.0441	
C.V.		30.39927			
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.338695	0.06450307	67.263	0.0001
PR	1	0.093104	0.06470627	1.439	0.1509
IA	1	0.283285	0.06490582	4.365	0.0001
KN	1	-0.033298	0.07478688	-0.445	0.6564
IN	1	0.129036	0.07464412	1.729	0.0846

Interaction test

Table 33 presents nonsignificant interactions among independent variables in a regression model for attitude toward advertisements ($\alpha = .05$). Maximum R-square improvement technique was used to select significant interactions to be included in the model in addition to main effects and no significant interaction was found (Appendix).

Test for gender difference

Table 34 presents a nonsignificant t value ($\alpha = .05$) on the sex dummy variable indicating no slope differences between males and females. Thus, the null hypothesis of parallelism was accepted. Based on Table 34, separate regression equations for both male and female subjects were written:

For males, sex dummy = 0

$$\hat{Y}_M = 4.227 + 0.139PR + 0.021IA - 0.208KN + 0.112IN$$

For females, sex dummy = 1

$$\hat{Y}_F = 4.274 + 0.08PR + 0.391IA - 0.007KN + 0.216IN$$

The highest estimate of intrinsic attributes in a regression equation for female subjects indicates the higher the level of intrinsic attributes (i.e., from a blend of 82% wool and 18% polyester with fashionable style to 100% wool with typical style), the more favorable was subjects' attitude toward advertisements.

TABLE 33

INTERACTION EFFECTS ON ATTITUDE TOWARD AD

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	10	49.51294	4.95129	2.842	0.0020
Error	407	709.14416	1.74237		
C Total	417	758.65710			
Root MSE	1.31999	R-square	0.0653		
Dep Mean	4.33812	Adj R-sq	0.0423		
C.V.	30.42767				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.319065	0.07812949	55.281	0.0001
PR	1	0.098442	0.06500865	1.514	0.1307
IA	1	0.282532	0.06511055	4.339	0.0001
KN	1	-0.039589	0.07702081	-0.514	0.6075
IN	1	0.141618	0.07924350	1.787	0.0747
PR_IA	1	-0.057389	0.06518454	-0.880	0.3792
PR_KN	1	-0.044484	0.07622717	-0.584	0.5598
PR_IN	1	-0.040054	0.07593077	-0.528	0.5981
IA_KN	1	-0.008730	0.07635264	-0.114	0.9090
IA_IN	1	0.113615	0.07579305	1.499	0.1346
KN_IN	1	0.035704	0.08531068	0.419	0.6758

TABLE 34

GENDER DIFFERENCE IN ATTITUDE TOWARD AD

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	9	55.98111	6.22012	3.612	0.0002
Error	408	702.67599	1.72225		
C Total	417	758.65710			
Root MSE	1.31234	R-square	0.0738		
Dep Mean	4.33812	Adj R-sq	0.0534		
C.V.	30.25144				

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.226509	0.22487598	18.795	0.0001
SEXDUMMY	1	0.046946	0.24079262	0.195	0.8455
PR	1	0.139137	0.13165624	1.057	0.2912
IA	1	0.020009	0.12401429	0.161	0.8719
KN	1	-0.207575	0.17547769	-1.183	0.2375
IN	1	0.111726	0.13421344	0.832	0.4056
PR_SEX	1	-0.058764	0.15175559	-0.387	0.6988
IA_SEX	1	0.370815	0.14571087	2.545	0.0113
KN_SEX	1	0.200926	0.19588975	1.026	0.3056
IN_SEX	1	0.103684	0.18036236	0.575	0.5657

Results of Analysis of Variance

Results of analysis of variances are presented for the main effects of 4 independent variables on each dependent variable. In the same table, the results of Duncan's Multiple Range tests are reported for identifying a trend within groups or group differences. For all tests, α level of 0.05 or lower was utilized. In reporting results for each dependent variable, the effect of each independent variable is explained.

Perceived Quality

Table 35 presents the results of analysis of variance and Duncan's test.

Effect of price

The hypothesis proposing the positive effect of price on subjects' perceptions of quality was supported as shown in the significant F value (10.89 at $\alpha = 0.0001$). As price increased from \$32.99 to \$52.99, the mean response for perceptions of quality also increased from 5.18 to 5.55. As price increased from \$32.99 to \$72.99, the mean response for perceptions of quality also increased from 5.18 to 5.52. As shown by Duncan's Multiple Range Test in the same table, there were significant differences of perceptions of quality at the price of \$72.99 compared to the price of \$32.99, and, accordingly, at the price of \$52.99 compared to the price of \$32.99. These results provided support for a positive price/perception of quality as hypothesized.

TABLE 35

ANALYSIS OF VARIANCE RESULTS FOR
PERCEPTIONS OF QUALITY: 3 x 2 x 2 x 2 DESIGN

<u>SOURCE</u>	<u>DF</u>	<u>F-VALUE</u>	<u>P-VALUE</u>
Price	2	10.89	0.0001
Intrinsic Attribute	1	8.00	0.0049
Knowledge	1	0.80	0.3712
Interest	1	1.62	0.2040

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>PRICE</u>
A	5.55	146	52.99
A	5.52	126	72.99
B	5.18	148	32.99

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>INTRINSIC ATTRIBUTE</u>
A	5.51	223	100% Wool
B	5.30	197	82% Wool

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>KNOWLEDGE</u>
A	5.48	205	High
A	5.34	215	Low

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>CLOTHING INTEREST</u>
A	5.45	285	High
A	5.32	135	Low

Note: Means with the same letter are not significantly different at $p=.05$ level. This comparison is based on Duncan's Multiple Range Test. This test controls the Type I comparison wise error rate, not the experiment wise error rate.

Effect of intrinsic attributes

The proposition suggesting the effect of intrinsic attribute on subjects' perceptions of product quality was significant ($F = 8.00$ at $\alpha = .05$). As intrinsic attributes changed from a pair of dress slacks of 82% wool/18% polyester with fashionable style to 100% worsted wool gabardine with traditional style, the mean response for perceptions of quality also increased from 5.30 to 5.51. As shown by Duncan's Multiple Range test, subjects perceived the traditionally styled 100% wool dress slacks as high quality products and the fashionably styled dress slacks with a blend of 82% wool/18% polyester as lower quality.

Effect of clothing interest

The effect of clothing interest on subjects' perceptions of product quality was not supported ($F = 1.62$ at $\alpha = 0.05$). As shown by Duncan's Multiple Range Test in the same table, there was no significant difference in perceptions of quality at the different levels of clothing interest.

Effect of clothing knowledge

The effect of clothing knowledge on subjects' perceptions of product quality was not significant ($F = 0.80$ at $\alpha = .05$), though the effect of knowledge on the perceptions of quality was significant in the multiple regression. The hypothesis that subjects who are knowledgeable about clothing would perceive the quality of dress slacks differently from subjects who are not knowledgeable was not supported. The contrasting results from analysis of variance from multiple regression might be due to the fact that in analysis of variance, data were divided into two

groups for the purpose of comparison (high and low clothing interest and knowledge), thereby possible loss of data could be induced.

Perceptions of Monetary Sacrifice

Table 36 presents ANOVA results for a 3x2x2x2 model, the result of Duncan's test for perceptions of monetary sacrifice.

Effect of price

The effect of price on subjects' perceptions of monetary sacrifice was extremely significant ($F = 107.13$ at $\alpha = 0.0001$) and the hypothesis was supported. As shown by Duncan's test, there were significant differences in perceptions of monetary sacrifice across levels of price. This result provides support for a positive price/monetary sacrifice as hypothesized and consistent with the results in other studies (Chapman, 1987; Dodds, 1985; Grewal, 1989; Krishnan and Monroe, 1985; Rao, 1986).

Effect of intrinsic attributes

The effect of intrinsic attributes on subjects' perceptions of monetary sacrifice was significant ($F = 8.02$ at $\alpha = 0.05$), thus the hypothesis was supported. The result of Duncan's test showed that, as intrinsic attributes changed from fashionably styled dress slacks with a blend of 82% wool/18% polyester dress slacks to 100% wool traditionally styled dress slacks, subjects perceived higher monetary sacrifice.

TABLE 36

ANALYSIS OF VARIANCE RESULTS FOR
PERCEPTIONS OF MONETARY SACRIFICE: 3 x 2 x 2 x 2 DESIGN

<u>SOURCE</u>	<u>DF</u>	<u>F-VALUE</u>	<u>P-VALUE</u>
Price	2	107.13	0.0001
Intrinsic Attribute	1	8.02	0.0048
Knowledge	1	2.58	0.1087
Interest	1	9.92	0.0018

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>PRICE</u>
A	5.35	126	72.99
B	4.57	146	52.99
C	3.58	148	32.99

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>INTRINSIC ATTRIBUTE</u>
A	4.62	197	82% Wool
B	4.32	223	100% Wool

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>KNOWLEDGE</u>
A	4.48	215	Low
A	4.44	205	High

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>CLOTHING INTEREST</u>
A	4.68	135	Low
B	4.35	285	High

Note: Means with the same letter are not significantly different at $p=.05$ level. This comparison is based on Duncan's Multiple Range Test. This test controls the Type I comparison wise error rate, not the experiment wise error rate.

Effect of clothing interest

The effect of clothing interest on subjects' perceptions of monetary sacrifice was significant ($F = 9.92$ at $\alpha = 0.05$). As shown by Duncan's test, the mean response for perceptions of monetary sacrifice decreased from 4.68 to 4.35 as clothing interest increased from low to high. Therefore, subjects with high clothing interest would perceive less monetary sacrifice than subjects with lower clothing interest. The results are consistent with those of past clothing interest studies.

Effect of clothing knowledge

The effect of clothing knowledge on subjects' perceptions of monetary sacrifice was not significant ($F = 2.58$, at $\alpha = 0.05$).

Perceptions of Benefits

Table 37 presents ANOVA results for a $3 \times 2 \times 2 \times 2$ model and the results of Duncan's test for the means for perceptions of benefits.

Effect of price

As hypothesized, the effect of price on subjects' perceptions of benefits was significant ($F = 5.08$, at $\alpha = 0.05$). The proposition that price as an extrinsic attribute would affect consumers' perceptions of benefits was supported. Duncan's test further showed that, as price increased from \$32.99 to \$52.99, the mean response for perceptions of

TABLE 37

ANALYSIS OF VARIANCE RESULTS FOR
PERCEPTIONS OF BENEFITS: 3 x 2 x 2 x 2 DESIGN

<u>SOURCE</u>	<u>DF</u>	<u>F-VALUE</u>	<u>P-VALUE</u>
Price	2	5.08	0.0066
Intrinsic Attribute	1	20.95	0.0001
Knowledge	1	0.06	0.7999
Interest	1	7.74	0.0057

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>PRICE</u>
A	4.35	126	72.99
A	4.26	146	52.99
B	3.96	148	32.99

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>INTRINSIC ATTRIBUTE</u>
A	4.42	223	100% Wool
B	3.92	197	82% Wool

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>KNOWLEDGE</u>
A	4.27	205	High
A	4.10	215	Low

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>CLOTHING INTEREST</u>
A	4.29	285	High
B	3.96	135	Low

Note: Means with the same letter are not significantly different at p=.05 level. This comparison is based on Duncan's Multiple Range Test. This test controls the Type I comparison wise error rate, not the experiment wise error rate.

benefits also increased from 3.96 to 4.26. As price increased from \$32.99 to \$72.99, the mean response for perceptions of benefits also increased from 3.96 to 4.35. There were significant differences in perceptions of benefits at the \$72.99 price compared to \$32.99, and at the \$52.99 price compared to \$32.99. Therefore, subjects perceive more benefits when they see the higher priced dress slacks.

Effect of intrinsic attributes

The hypothesized effect of intrinsic attributes on subjects' perceptions of benefits was very significant ($F = 20.95$, at $\alpha = 0.0001$). The proposition that the differences in intrinsic attributes would affect consumers' perceptions of benefits was supported. As intrinsic attributes changed from 82% wool/18% polyester with fashionable style to 100% wool with traditional style, the mean response for perceptions of benefits also increased from 3.92 to 4.42. Therefore, subjects perceived the traditionally styled 100% wool dress slacks as highly beneficial to wear, compared to the fashionably styled dress slacks with a blend of 82% wool/18% polyester dress slacks. Grewal (1989) found only partial support for this effect.

Effect of clothing interest

The hypothesis proposing the effect of clothing interest on subjects' perceptions of benefits was supported as evidenced by significant F value (7.74, at $\alpha = 0.05$). As indicated by Duncan's test, subjects with high clothing interest perceived significantly higher benefits than subjects with low clothing interest.

Effect of clothing knowledge

The effect of differential clothing knowledge on subjects' perceptions of benefits was not significant ($F= 0.06$, at $\alpha = 0.05$) and the hypothesis was not supported. The results of Duncan's test also show no significant effect of knowledge on perceptions of benefits.

Perceptions of Value

Table 38 presents ANOVA results and the results of Duncan's test for the means for perceptions of value.

Effect of price

The hypothesis suggesting the effect of price on subjects' perceptions of value was not supported as shown by nonsignificant F value ($F= 0.18$, at $\alpha = 0.05$). Duncan's test also indicated no difference among the mean scores for perceptions of value at three different price levels. As previously mentioned, perceived value depends to some extent on the trade off between perceptions of quality and perceptions of monetary sacrifice. In studies conducted by Dodds (1985,) Rao(1986), Chapman(1987), Grewal(1989), this relationship was not significant. It is considered that value construct has multidimensional nature. These results, taken together, show there was not enough evidence to show a significant price-perceptions of value relationship.

TABLE 38

ANALYSIS OF VARIANCE RESULTS FOR
PERCEPTIONS OF VALUE: 3 x 2 x 2 x 2 DESIGN

<u>SOURCE</u>	<u>DF</u>	<u>F-VALUE</u>	<u>P-VALUE</u>
Price	2	0.18	0.8372
Intrinsic Attribute	1	6.01	0.0146
Knowledge	1	1.12	0.2896
Interest	1	6.40	0.0118

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>PRICE</u>
A	4.60	148	32.99
A	4.52	146	52.99
A	4.48	126	72.99

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>INTRINSIC ATTRIBUTE</u>
A	4.68	223	100% Wool
B	4.38	197	82% Wool

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>KNOWLEDGE</u>
A	4.56	205	High
A	4.52	215	Low

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>CLOTHING INTEREST</u>
A	4.64	285	High
B	4.33	135	Low

Note: Means with the same letter are not significantly different at $p=.05$ level. This comparison is based on Duncan's Multiple Range Test. This test controls the Type I comparison wise error rate, not the experiment wise error rate.

Effect of intrinsic attributes

The hypothesis suggesting the effect of intrinsic attributes on subjects' perceptions of value was supported as evidenced by significant F value (6.01 at $\alpha = 0.05$). The results of Duncan's test indicated mean response of perceptions of value increased from 4.38 to 4.68, as the intrinsic attributes changed from 82% wool/18% polyester blend with fashionable style to 100% worsted wool dress slacks with traditional style. Therefore, subjects perceived the traditionally styled dress slacks with 100% wool dress slacks giving more purchase value than the fashionably styled dress slacks in 82% wool/18% polyester blend.

Effect of clothing interest

The hypothesis proposing the effect of clothing interest on perceptions of value was supported. As hypothesized, the effect of clothing interest on subjects' perceptions of value was significant ($F = 6.40$, at $\alpha = 0.05$). The Duncan's test further supported this hypothesis showing higher mean response of perceived value in the high clothing interest subjects, compared to the lower mean scores of perceptions of value in subjects with lower clothing interest. That is, subjects who have high clothing interest would perceive more value in purchasing the dress slacks than subjects with lower clothing interest. Therefore, the proposition that clothing interest, as a motivational factor affecting the subjects' perceptions of value, was supported.

Effect of clothing knowledge

The hypothesis suggesting the effect of clothing knowledge on perceptions of value was not supported. The results of Duncan's test revealed no difference in perceptions of value across knowledge condition.

Willingness to Buy

Table 39 presents ANOVA results for a 3x2x2x2 model and the results of Duncan's test for the means for willingness to buy.

Effect of price

The hypothesis suggesting the effect of price on subjects' willingness to buy was not supported as revealed by nonsignificant F value (0.38, at $\alpha = 0.05$). The result of Duncan's test also indicated there was no difference among the mean scores for willingness to buy at three levels of price. Contrastingly, Grewal (1989) found a negative price/willingness to buy relationship. In Rao's (1986) study, partial support for this relationship was found.

Effect of intrinsic attributes

The hypothesis proposing the effect of intrinsic attribute on subjects' willingness to buy the dress slacks was supported as evidenced by very significant F value (17.41 at $\alpha = 0.0001$). Further, the result of Duncan's Multiple Range Test showed the mean response for willingness to

TABLE 39

ANALYSIS OF VARIANCE RESULTS FOR
WILLINGNESS TO BUY: 3 x 2 x 2 x 2 DESIGN

<u>SOURCE</u>	<u>DF</u>	<u>F-VALUE</u>	<u>P-VALUE</u>
Price	2	0.38	0.6870
Intrinsic Attribute	1	17.41	0.0001
Knowledge	1	0.96	0.3275
Interest	1	19.98	0.0001

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>PRICE</u>
A	3.50	148	32.99
A	3.37	146	52.99
A	3.32	126	72.99

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>INTRINSIC ATTRIBUTE</u>
A	3.64	223	100% Wool
B	3.12	197	82% Wool

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>KNOWLEDGE</u>
A	3.51	205	High
A	3.30	215	Low

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>CLOTHING INTEREST</u>
A	3.60	285	High
B	2.98	135	Low

Note: Means with the same letter are not significantly different at $p=.05$ level. This comparison is based on Duncan's Multiple Range Test. This test controls the Type I comparison wise error rate, not the experiment wise error rate.

buy increased from 3.12 to 3.64 as intrinsic attributes changed from 82% wool/18% polyester with fashionable style to 100% worsted wool gabardine with traditional style. Therefore, subjects would be more willing to buy the dress slacks in 100% wool with traditional style. Grewal (1989) didn't find the support for this hypothesis.

Effect of clothing interest

The hypothesized effect of clothing interest on subjects' willingness to buy was supported as shown by a significant F value (19.98 at $\alpha = 0.0001$). The result of Duncan's test further indicated a difference in willingness to buy between the levels of clothing interest. Subjects who had high clothing interest showed more willingness to purchase the dress slacks, while subjects who had lower clothing interest showed less willingness to buy the dress slacks.

Effect of knowledge

The proposed effect of knowledge on willingness to buy was not supported as evidenced by nonsignificant F value (0.96 at $\alpha = 0.05$). There was no significant difference in willingness to buy across levels of knowledge, as further evidenced by the result of Duncan's Multiple Range Test.

Search Intention

Table 40 presents ANOVA results for a 3x2x2x2 model and the results of Duncan's Multiple Range Test for the means of search intention.

Effect of price

The effect of price on subjects' search intention was very significant ($F = 8.17$, $\alpha = 0.0001$) and the hypothesis was supported. The result of Duncan's Test also showed the mean response for search intention increased from 5.39 to 5.98 as the price of the dress slacks increased from \$32.99 to \$52.99. As price increased from \$32.99 to \$72.99, the mean response for search intention also increased from 5.39 to 6.02. Therefore, subjects want to search more or shop around more when they see a pair of dress slacks with a high price. Grewal (1989) found some support for this relationship.

Effect of intrinsic attributes

The hypothesis that intrinsic attributes would affect subjects' search intention was supported and effect of intrinsic attributes on search intention was significant ($F = 4.55$, at $\alpha = 0.05$). As shown in the result of Duncan's test, the mean response for search intention decreased from 5.97 to 5.62 as intrinsic attributes changed from a blend of 82% wool/18% polyester with fashionable style to 100% wool with traditional style. Therefore, subjects who see a pair of fashionably styled dress slacks in 82% wool/18% polyester blend would like to continue to search and shop around, while subjects who see 100% worsted wool gabardine dress slacks of traditional style have less intention to search.

TABLE 40

ANALYSIS OF VARIANCE RESULTS FOR
SEARCH INTENTION: 3 x 2 x 2 x 2 DESIGN

<u>SOURCE</u>	<u>DF</u>	<u>F-VALUE</u>	<u>P-VALUE</u>
Price	2	8.17	0.0003
Intrinsic Attribute	1	4.55	0.0334
Knowledge	1	9.09	0.0027
Interest	1	0.17	0.6814

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>PRICE</u>
A	6.02	126	72.99
A	5.98	146	52.99
B	5.39	148	32.99

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>INTRINSIC ATTRIBUTE</u>
A	5.97	197	82% Wool
B	5.62	223	100% Wool

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>KNOWLEDGE</u>
A	6.05	215	Low
B	5.51	205	High

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>CLOTHING INTEREST</u>
A	5.99	135	Low
A	5.69	285	High

Note: Means with the same letter are not significantly different at $p=.05$ level. This comparison is based on Duncan's Multiple Range Test. This test controls the Type I comparison wise error rate, not the experiment wise error rate.

Effect of clothing interest

The hypothesis that degree of clothing interest would affect subjects' search intention was not supported. The effect of clothing interest on subjects' search intention was not significant ($F = 0.17$, at $\alpha = 0.05$). Duncan's Test also indicated there was no difference between the mean scores for search intention at two different levels of clothing interest.

Effect of knowledge

The hypothesis that degree of clothing knowledge would affect subjects' search intention was supported. Levels of clothing knowledge affected subjects' search intentions significantly ($F = 9.09$, at $\alpha = 0.05$). The result of Duncan's test also indicated that the mean response for search intention decreased when subjects had higher knowledge levels. Therefore, subjects who are knowledgeable about clothing in general would have less intention to search than subjects who are not knowledgeable about clothing.

Attitude Toward Advertisements

Table 41 presents ANOVA results for a $3 \times 2 \times 2 \times 2$ model and the results of Duncan's Multiple Range Test for the means of attitude toward advertisements.

TABLE 41

ANALYSIS OF VARIANCE RESULTS FOR
ATTITUDE TOWARD AD: 3 x 2 x 2 x 2 DESIGN

<u>SOURCE</u>	<u>DF</u>	<u>F-VALUE</u>	<u>P-VALUE</u>
Price	2	1.50	0.2245
Intrinsic Attribute	1	19.15	0.0001
Knowledge	1	0.60	0.4393
Interest	1	4.19	0.0414

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>PRICE</u>
A	4.45	146	52.99
A	4.39	126	72.99
A	4.20	147	32.99

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>INTRINSIC ATTRIBUTE</u>
A	4.60	222	100% Wool
B	4.06	197	82% Wool

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>KNOWLEDGE</u>
A	4.38	204	High
A	4.31	215	Low

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>CLOTHING INTEREST</u>
A	4.41	284	High
A	4.19	135	Low

Note: Means with the same letter are not significantly different at $p=.05$ level. This comparison is based on Duncan's Multiple Range Test. This test controls the Type I comparison wise error rate, not the experiment wise error rate.

Effect of price

The effect of price on subjects' attitude toward advertisements was not significant and the hypothesis was not supported. The result of Duncan's test also showed no significant effect of price on subjects' attitude toward advertisements.

Effect of intrinsic attributes

The hypothesis that intrinsic attributes would affect subjects' attitude toward advertisements was supported. The effect of intrinsic attributes on subjects' attitude toward advertisements was significant ($F = 19.15$, at $\alpha = 0.0001$). The result of Duncan's Test showed that the mean response for attitude toward advertisements increased from 4.06 to 4.60 as intrinsic attributes changed from a blend of 82% wool/18% polyester with fashionable style to 100% wool with traditional style. Therefore, subjects who see an advertisement for a pair of 82% wool/polyester blend dress slacks with fashionable style would have a less favorable attitude toward the product, while subjects who see an advertisements for the traditionally styled 100% wool dress slacks, would have a more favorable attitude toward the product. The result consistent with the studies in the clothing evaluation stating the fiber content and styling of clothing products have powerful effects on consumers' mind. This result suggests that advertisers should carefully choose the style and the fiber content favored by their target customers.

Effect of clothing interest

The effect of clothing interest on subjects' attitude toward advertisements was not significant and the hypothesis was not supported. The result of Duncan's Test indicated there was no difference between the mean scores for attitude toward advertisements at two different levels of clothing interest.

Effect of knowledge

The effect of knowledge on subjects' attitudes toward advertisements was not significant and the hypothesis was not supported. The result of Duncan's Test also indicated that there was no difference between the mean score for attitude toward advertisements at two conditions of knowledge.

Perceptions of Relevance, Typicality, and Fashionability

It was proposed that perceptions of typicality, relevance, and fashionability of the dress slacks would be influenced by price, intrinsic attributes, knowledge, and clothing interest. In addition, it was proposed that the effects of price, intrinsic attributes, knowledge, and clothing interest on perceptions of typicality, relevance, and fashionability would be different between males and females. In order to test these hypotheses, multiple regression, analyses of variance, and Duncan's Multiple Range Tests were performed.

Perceptions of Relevance

Overall test

In Table 42 the computed value of the F statistic of 0.896 does not exceed the critical value of the F distribution at $\alpha = .05$. Therefore, the null hypothesis was accepted and the F value was not sufficient to support the proposition that, taken together, the price, intrinsic attributes, knowledge and clothing interest, significantly contributed to predict perceptions of relevance. The R^2 , coefficient of multiple determination for perceptions of relevance, equals 0.0086 and indicates that almost 0.9% of the variance in perceptions of relevance is explained by the combination of price, intrinsic attributes, knowledge, and clothing interest. None of the independent variables had a significant effect on the perceptions of relevance as indicated by nonsignificant t values in individual tests.

Interaction effect

Table 43 reports the result of Maximum R-square improvement technique used to select significant interactions to be included in the model, in addition to main effects after having found no significant interaction effect in a model containing two-way interaction terms. As shown in the table, none of the independent variables had significant effect on the perceptions of relevance. Instead, there was a negative interaction between price and clothing interest. This indicates the relationship between perceptions of relevance and price is dependent upon the levels of clothing interest. There can be 4 matrix combinations of price levels and clothing interest levels for making negative interaction

TABLE 42

MAIN EFFECTS ON PERCEPTIONS OF RELEVANCE

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	4	5.24875	1.31219	0.896	0.4660
Error	413	604.59183	1.46390		
C Total	417	609.84058			
Root MSE		1.20992	R-square	0.0086	
Dep Mean		4.80662	Adj R-sq	-0.0010	
C.V.		25.17192			
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.806623	0.05917960	81.221	0.0001
PR	1	0.078813	0.05936603	1.328	0.1850
IA	1	0.038460	0.05954911	0.646	0.5187
KN	1	-0.018452	0.06861468	-0.269	0.7881
IN	1	0.083513	0.06848371	1.219	0.2234

TABLE 43

INTERACTION EFFECTS ON PERCEPTIONS OF RELEVANCE

R-square = 0.01846623

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	5	11.26145702	2.25229140	1.55	0.1731
Error	412	598.57911980	1.45286194		
Total	417	609.84057682			

Variable	Parameter Estimate	Standard Error	Type II Sum of Squares	F	Prob>F
INTERCEP	4.80233675	0.05899365	9627.62368333	6626.66	0.0001
PR	0.07721074	0.05914698	2.47579453	1.70	0.1925
IA	0.03208311	0.05940690	0.42374396	0.29	0.5894
KN	-0.01673110	0.06836068	0.08702835	0.06	0.8068
IN	0.07273052	0.06843053	1.64118663	1.13	0.2885
PR_IN	-0.11952609	0.05875432	6.01270965	4.14	0.0426

All variables left in the model are required or significant
at the 0.0500 level.

Summary of Stepwise Procedure

Step	Variable Entered	Removed	Number In	Partial R**2	Model R**2	F	Prob>F
1	PR_IN		5	0.0099	0.0185	4.1385	0.0426

(i.e., (1, -1) and (-1, 1) at lower level of one of the independent variables, (-1, -1) and (1, 1) at higher level of one of the independent variable). Therefore, when one independent variable is low, the other independent variable moves in the opposite direction with the dependent variable.

Test for gender difference

Table 44 presents a nonsignificant t value on a sex dummy variable indicating no slope differences between males and females. Thus, there is not sufficient evidence to reject the null hypothesis of parallelism (i.e., the lines for males and females have the same slope). Based on Table 44, separate regression equations for both male and female subjects were written:

For males, sex dummy = 0

$$\hat{Y}_M = 4.755 + 0.264PR - 0.052IA - 0.031KN + 0.056IN$$

For females, sex dummy = 1

$$\hat{Y}_F = 4.791 + 0.014PR + 0.078IA - 0.019KN + 0.093IN$$

In fact, the significant t value of price in males indicates male subjects perceive more relevance in the dress slacks based on high price. As shown in Table 45, ANOVA and a Duncan's test indicate nonsignificant effects of price, intrinsic attributes, knowledge, and clothing interest on subjects' perceptions of relevance.

TABLE 44

GENDER DIFFERENCE IN PERCEPTIONS OF RELEVANCE

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	9	11.83691	1.31521	0.897	0.5276
Error	408	598.00367	1.46570		
C Total	417	609.84058			
Root MSE	1.21066	R-square	0.0194		
Dep Mean	4.80662	Adj R-sq	-0.0022		
C.V.	25.18733				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.755297	0.20745191	22.922	0.0001
SEXDUMMY	1	0.036636	0.22213528	0.165	0.8691
PR	1	0.263821	0.12145512	2.172	0.0304
IA	1	-0.051742	0.11440528	-0.452	0.6513
KN	1	-0.031207	0.16188115	-0.193	0.8472
IN	1	0.055959	0.12381418	0.452	0.6515
PR_SEX	1	-0.250128	0.13999711	-1.787	0.0747
IA_SEX	1	0.129631	0.13442075	0.964	0.3354
KN_SEX	1	0.011873	0.18071162	0.066	0.9476
IN_SEX	1	0.036937	0.16638734	0.222	0.8244

TABLE 45

ANALYSIS OF VARIANCE RESULTS FOR
PERCEPTIONS OF RELEVANCE : 3 x 2 x 2 x 2 DESIGN

<u>SOURCE</u>	<u>DF</u>	<u>F-VALUE</u>	<u>P-VALUE</u>
Price	2	1.78	0.1695
Intrinsic Attribute	1	0.48	0.4879
Knowledge	1	0.81	0.3685
Interest	1	2.16	0.1428

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>PRICE</u>
A	4.93	146	52.99
A	4.84	126	72.99
A	4.67	147	32.99

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>INTRINSIC ATTRIBUTE</u>
A	4.84	222	100% Wool
A	4.78	197	82% Wool

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>KNOWLEDGE</u>
A	4.82	215	Low
A	4.79	204	High

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>CLOTHING INTEREST</u>
A	4.86	284	High
A	4.71	135	Low

Note: Means with the same letter are not significantly different at p=.05 level. This comparison is based on Duncan's Multiple Range Test. This test controls the Type I comparison wise error rate, not the experiment wise error rate.

Perceptions of Typicality

Overall test

In Table 46, the computed value of the F statistic of 1.911 does not exceed the critical value of the F distribution at $\alpha = 0.05$. Therefore, the null hypothesis was accepted and the F value was not sufficient to support the proposition that, taken together, the price, intrinsic attributes, knowledge and clothing interest significantly helped predict perception of typicality. The R^2 , coefficient of multiple determination for perceptions of typicality, equals 0.018 and indicates that 1.8% of the variance in perceptions of typicality is explained by the combination of price, intrinsic attributes, knowledge, and clothing interest.

Individual tests

A test of relative contribution of each independent variable to perceptions of typicality yielded significant t-value ($\alpha = .05$) of intrinsic attributes and a rejection of the null hypothesis involving the independent variable (Table 46). The estimated value of the intrinsic attribute parameter ($\beta^* = 0.111$) indicated positive relationships between perceptions of typicality and intrinsic attributes.

Interaction test

Table 47 presents nonsignificant interaction among independent variables in a regression model for perceptions of typicality ($\alpha = .05$).

TABLE 46

MAIN EFFECTS ON PERCEPTIONS OF TYPICALITY

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	4	9.58506	2.39627	1.911	0.1078
Error	413	517.95800	1.25414		
C Total	417	527.54306			
Root MSE		1.11988	R-square	0.0182	
Dep Mean		4.67943	Adj R-sq	0.0087	
C.V.		23.93204			
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.679894	0.05477573	85.437	0.0001
PR	1	0.015811	0.05494828	0.288	0.7737
IA	1	0.111213	0.05511774	2.018	0.0443
KN	1	0.057869	0.06350870	0.911	0.3627
IN	1	0.057280	0.06338747	0.904	0.3667

TABLE 47

INTERACTION EFFECTS ON PERCEPTIONS OF TYPICALITY

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	10	13.38355	1.33835	1.059	0.3927
Error	407	514.15951	1.26329		
C Total	417	527.54306			
Root MSE	1.12396	R-square	0.0254		
Dep Mean	4.67943	Adj R-sq	0.0014		
C.V.	24.01923				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.704358	0.06652681	70.714	0.0001
PR	1	0.016127	0.05535449	0.291	0.7709
IA	1	0.108067	0.05544125	1.949	0.0520
KN	1	0.071091	0.06558277	1.084	0.2790
IN	1	0.045850	0.06747538	0.680	0.4972
PR_IA	1	-0.029474	0.05550426	-0.531	0.5957
PR_KN	1	0.017316	0.06490699	0.267	0.7898
PR_IN	1	-0.020889	0.06465461	-0.323	0.7468
IA_KN	1	-0.096709	0.06501383	-1.488	0.1377
IA_IN	1	0.066801	0.06453734	1.035	0.3012
KN_IN	1	-0.036535	0.07264154	-0.503	0.6153

Test for gender difference

This test compares the regression coefficients of the separate models for both sexes and compares the regression coefficients of the separate models for both sexes and allows for different slopes (β_1 for males and $\beta_1 + \beta_3$ for females, under $D = 0$, male; $D = 1$, female) and different intercepts (β_0 for males and $\beta_0 + \beta_2$ for females). Table 48 presents a nonsignificant t value on a sex dummy variable indicating no slope differences between males and females. Thus, there is not sufficient evidence to reject the null hypothesis of parallelism (i.e., the lines for males and females have the same slope). Based on Table 48, separate regression equations for both male and female subjects were written:

For males, sex dummy = 0

$$\hat{Y}_M = 4.67 + 0.072PR + 0.057IA + 0.033KN + 0.053IN$$

For females, sex dummy = 1

$$\hat{Y}_F = 4.659 - 0.005PR + 0.135IA + 0.063KN + 0.079IN$$

In fact, none of the independent variables had significant effect on both male and female subjects' perceptions of typicality.

As shown in Table 49, ANOVA's and the result of Duncan's Test indicate the mean typicality score of 100% wool traditionally styled dress slacks is higher (4.786) than 82% wool/18% polyester fashionably styled dress slacks (4.566), resulting in a significant effect, as anticipated. In addition, the mean typicality score of the high clothing interest group is a higher intrinsic attribute (4.778) than the high score of the low clothing interest group, resulting in significant clothing interest effect on subjects' perceptions of typicality.

TABLE 48

GENDER DIFFERENCE IN PERCEPTIONS OF TYPICALITY

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	9	10.82014	1.20224	0.949	0.4820
Error	408	516.72292	1.26648		
C Total	417	527.54306			
Root MSE	1.12538	R-square	0.0205		
Dep Mean	4.67943	Adj R-sq	-0.0011		
C.V.	24.04951				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.670389	0.19283878	24.219	0.0001
SEXDUMMY	1	-0.011211	0.20648784	-0.054	0.9567
PR	1	0.072387	0.11289969	0.641	0.5218
IA	1	0.056850	0.10634646	0.535	0.5932
KN	1	0.033299	0.15047807	0.221	0.8250
IN	1	0.052671	0.11509258	0.458	0.6475
PR_SEX	1	-0.076779	0.13013557	-0.590	0.5555
IA_SEX	1	0.078267	0.12495201	0.626	0.5314
KN_SEX	1	0.029919	0.16798211	0.178	0.8587
IN_SEX	1	0.026499	0.15466684	0.171	0.8640

TABLE 49

ANALYSIS OF VARIANCE RESULTS FOR
PERCEPTIONS OF TYPICALITY : 3 x 2 x 2 x 2 DESIGN

<u>SOURCE</u>	<u>DF</u>	<u>F-VALUE</u>	<u>P-VALUE</u>
Price	2	0.28	0.7544
Intrinsic Attribute	1	5.02	0.0256
Knowledge	1	0.63	0.4293
Interest	1	7.43	0.0067

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>PRICE</u>
A	4.74	146	52.99
A	4.66	126	72.99
A	4.64	147	32.99

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>INTRINSIC ATTRIBUTE</u>
A	4.79	222	100% Wool
B	4.57	197	82% Wool

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>KNOWLEDGE</u>
A	4.72	204	High
A	4.65	215	Low

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>CLOTHING INTEREST</u>
A	4.78	284	High
B	4.48	135	Low

Note: Means with the same letter are not significantly different at $p=.05$ level. This comparison is based on Duncan's Multiple Range Test. This test controls the Type I comparison wise error rate, not the experiment wise error rate.

Perceptions of Fashionability

Overall test

In Table 50, the computed value of the F statistic of 1.315 does not exceed the critical value of the F distribution at $\alpha = 0.05$. Therefore, the null hypothesis was accepted and the F value was not sufficient to support the proposition that, taken together, the price, intrinsic attributes, knowledge and clothing interest, significantly help predict perceptions of fashionability. The R^2 , coefficient of multiple determination for perceptions of fashionability, equals 0.013 and indicates that 1.3% of the variance in perceptions of fashionability is explained by the combination of price, intrinsic attributes, knowledge, and clothing interest.

Individual test

Though no collective effects of independent variables were significant, the individual effect of price was significant ($t = 2.205$, at $\alpha = 0.05$) and in a positive direction.

Interaction test

To recapitulate, interaction is the condition in which the relationship of interest is different at different values of the extraneous variables.

TABLE 50

MAIN EFFECTS ON PERCEPTIONS OF FASHIONABILITY

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	4	7.09532	1.77383	1.315	0.2637
Error	413	557.25403	1.34928		
C Total	417	564.34935			
Root MSE		1.16159	R-square	0.0126	
Dep Mean		4.01715	Adj R-sq	0.0030	
C.V.		28.91572			
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.016787	0.05681559	70.699	0.0001
PR	1	0.125664	0.05699457	2.205	0.0280
IA	1	0.021791	0.05717034	0.381	0.7033
KN	1	-0.038035	0.06587377	-0.577	0.5640
IN	1	0.016375	0.06574803	0.249	0.8034

Table 51 presents a significant interaction between price and intrinsic attributes in a regression model for perceptions of fashionability in a negative direction (t value = -2.893 at $\alpha = .05$). To verify the result, the Maximum R-square improvement technique was employed and the result was the same as the result of the interaction model (Table 52). In Table 52, surprisingly, the percentage of variance in total perceptions of fashionability associated with this interaction (16.2%) is larger than the main effect (12.1%). Therefore, the interaction effect is analyzed in more detail. Rosenthal and Rosnow (1984) have cautioned that misinterpretations of interaction effects are a common error. Hence, Kleinbaum, Kupper, and Muller (1988) suggest the assessment of interaction focus on describing the relationship of interest at different values of the extraneous variables. There can be 4 matrix combinations of price levels and intrinsic attribute levels for making negative interaction (i.e., (1, -1) and (-1, 1) at lower level of one of the independent variables, (-1, -1) and (1, 1) at higher level of one of the independent variable). Therefore, when one independent variable is low, the other independent variable moves in the opposite direction with the dependent variable.

The negative estimate of the interaction between price and intrinsic attributes leads to the following interpretation: due to interaction alone, the relationship between price and perceptions of fashionability depends on intrinsic attributes. In particular, perceptions of fashionability appear to increase with increasing price when intrinsic attributes are high but decrease with increasing price when intrinsic attributes are low. In other words, the slope of the linear relationship between perceptions of fashionability and price goes from positive to negative as intrinsic attributes change from high to low. As mentioned earlier, no hypotheses focusing on interaction were offered in the conceptual development. The analysis of the interaction effects described

TABLE 51

INTERACTION EFFECTS ON PERCEPTIONS OF FASHIONABILITY

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	10	19.50982	1.95098	1.457	0.1531
Error	407	544.83953	1.33867		
C Total	417	564.34935			
Root MSE	1.15701	R-square	0.0346		
Dep Mean	4.01715	Adj R-sq	0.0108		
C.V.	28.80180				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.017198	0.06848289	58.660	0.0001
PR	1	0.120444	0.05698207	2.114	0.0351
IA	1	0.019376	0.05707138	0.339	0.7344
KN	1	-0.031054	0.06751109	-0.460	0.6458
IN	1	0.001651	0.06945935	0.024	0.9811
PR_IA	1	-0.165299	0.05713624	-2.893	0.0040
PR_KN	1	0.044959	0.06681544	0.673	0.5014
PR_IN	1	-0.048767	0.06655564	-0.733	0.4641
IA_KN	1	-0.037271	0.06692542	-0.557	0.5779
IA_IN	1	0.023320	0.06643492	0.351	0.7258
KN_IN	1	-0.010184	0.07477741	-0.136	0.8917

TABLE 52

MAXIMUM R-SQUARE FOR INTERACTION EFFECTS ON
PERCEPTIONS OF FASHIONABILITY

R-square = 0.03197353

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	5	18.04424041	3.60884808	2.72	0.0196
Error	412	546.30510834	1.32598327		
Total	417	564.34934875			

Variable	Parameter Estimate	Standard Error	Type II Sum of Squares	F	Prob>F
INTERCEP	4.01019521	0.05636958	6710.87952602	5061.06	0.0001
PR	0.12060745	0.05652772	6.03619737	4.55	0.0335
IA	0.02236606	0.05667492	0.20650729	0.16	0.6933
KN	-0.03343938	0.06532211	0.34748341	0.26	0.6090
IN	0.00576339	0.06528241	0.01033478	0.01	0.9297
PR_IA	-0.16246554	0.05653855	10.94891749	8.26	0.0043

All variables left in the model are required or significant
at the 0.0500 level.

Summary of Stepwise Procedure

Step	Variable Entered	Removed	Number In	Partial R**2	Model R**2	F	Prob>F
1	PR_IA		5	0.0194	0.0320	8.2572	0.0043

above, however, indicates the interaction between price and intrinsic attributes influences perceptions of fashionability.

Figure 10 depicts a situation in which the relationship between perceptions of fashionability and price depends on the level of intrinsic attributes. In other words, perception of fashionability as a function of price cannot be considered independently of intrinsic attributes. The change in the mean value of perceptions of fashionability for a unit in price clearly depends on the level of intrinsic attributes. Perceptions of fashionability appear to increase with increasing price (low to middle price) when the intrinsic attributes are both low and high. However, as the level of price goes up from middle to high, perceptions of fashionability appear to decrease when the intrinsic attributes are high (100% worsted wool with traditional style), but perceptions of fashionability appear to increase with increasing price when the intrinsic attributes are low (82% wool/18% polyester blend with fashionable design).

Test for gender difference

Table 53 presents a nonsignificant t value on sexdummy variable indicating no slope differences between males and females. Thus, it is concluded that there is not sufficient evidence to reject the null hypothesis of parallelism (i.e. the lines for males and females have the same slope). Based on Table 53, separate regression equations for both male and female subjects were written:

For males, sex dummy = 0

$$\hat{Y}_M = 4.115 + 0.328PR + 0.032IA - 0.13KN + 0.058IN$$

For females, sex dummy = 1

IA_LEVEL	PR_LEVEL	N	FASHION_MEAN	FASHION_S.D.
Low	Low	67	3.57711	1.12004
Low	Medium	65	4.14615	1.23937
Low	High	64	4.30208	1.05529
High	Low	80	3.92917	1.21488
High	Medium	80	4.30000	1.04147
High	High	62	3.81183	1.15883

Plot of F_MEAN*PR_LEVEL. Symbol is value of IA_LEVEL.

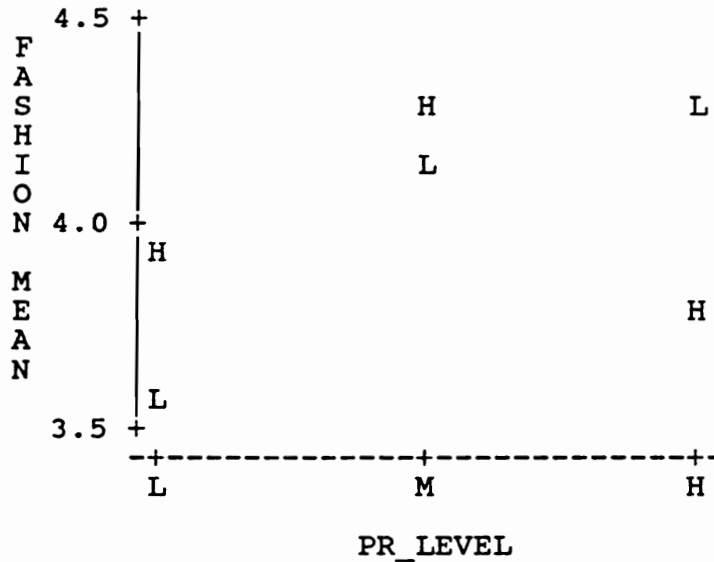


FIGURE 10: PRICE BY INTRINSIC ATTRIBUTES INTERACTION IN THE REGRESSION MODEL FOR PERCEPTIONS OF FASHIONABILITY

TABLE 53

GENDER DIFFERENCE IN PERCEPTIONS OF FASHIONABILITY

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	9	19.74152	2.19350	1.643	0.1010
Error	408	544.60783	1.33482		
C Total	417	564.34935			
Root MSE	1.15535	R-square	0.0350		
Dep Mean	4.01715	Adj R-sq	0.0137		
C.V.	28.76036				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.115250	0.19797368	20.787	0.0001
SEXDUMMY	1	-0.197517	0.21198618	-0.932	0.3520
PR	1	0.328472	0.11590598	2.834	0.0048
IA	1	0.031886	0.10917824	0.292	0.7704
KN	1	-0.130327	0.15448499	-0.844	0.3994
IN	1	0.057681	0.11815726	0.488	0.6257
PR_SEX	1	-0.280858	0.13360081	-2.102	0.0361
IA_SEX	1	-0.002690	0.12827923	-0.021	0.9833
KN_SEX	1	0.143165	0.17245512	0.830	0.4069
IN_SEX	1	0.025505	0.15878530	0.161	0.8725

$$\hat{Y}_f = 3.917 + 0.047PR + 0.029IA + 0.013KN + 0.084IN$$

In fact, the significant t value of price in males indicates male subjects perceive the dress slacks with the higher price more fashionable. As shown in Table 54, the results of ANOVA and Duncan's Test indicate the significant effect of price on perceptions of fashionability (F value = 6.05 at $\alpha = .05$). The hypothesis involving the effect of price was supported. The mean fashionability scores of for the \$52.99 and \$72.99 dress slacks are higher than for the \$32.99 dress slacks, resulting in significant price effect on perceptions of fashionability as shown in Duncan's test.

TABLE 54

ANALYSIS OF VARIANCE RESULTS FOR
PERCEPTIONS OF FASHIONABILITY: 3 x 2 x 2 x 2 DESIGN

<u>SOURCE</u>	<u>DF</u>	<u>F-VALUE</u>	<u>P-VALUE</u>
Price	2	6.05	0.0026
Intrinsic Attribute	1	0.12	0.7287
Knowledge	1	0.21	0.6471
Interest	1	0.79	0.3735

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>PRICE</u>
A	4.23	146	52.99
A	4.06	126	72.99
B	3.77	147	32.99

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>INTRINSIC ATTRIBUTE</u>
A	4.03	222	100% Wool
A	4.00	197	82% Wool

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>KNOWLEDGE</u>
A	4.02	215	Low
A	4.01	204	High

<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>CLOTHING INTEREST</u>
A	4.05	284	High
A	3.96	135	Low

Note: Means with the same letter are not significantly different at $p=.05$ level. This comparison is based on Duncan's Multiple Range Test. This test controls the Type I comparison wise error rate, not the experiment wise error rate.

Summary of Findings

As indicated by overall tests, taken together, price, intrinsic attributes, knowledge and clothing interest significantly help to predict perceptions of quality, monetary sacrifice, perceptions of benefits, perceptions of value, willingness to buy, search intention, and attitude toward advertisements.

Individual tests show that the largest contribution of price was followed by intrinsic attributes, knowledge, and an interaction of intrinsic attributes and clothing interest in predicting perceptions of quality in the model. Individual tests for monetary sacrifice show that the largest contribution of price was followed by clothing interest, and intrinsic attribute, in predicting perceptions of monetary sacrifice. For perceptions of benefits, individual tests show that the largest contribution of intrinsic attributes was followed by price and clothing interest. Contributions of intrinsic attributes and clothing interest were significant in predicting perceptions of value and willingness to buy. For search intention, the significant contributions were price, knowledge, and intrinsic attributes. Only contributions of intrinsic attributes were significant in predicting attitude toward advertisements.

For differences in gender, price was the significant contributor for the models of both sexes in predicting perceptions of quality, monetary sacrifice, and perceptions of benefits. There were overall significant sex differences in models of males and females for perceptions of quality, monetary sacrifice, benefits, willingness to buy, search intention, and attitude toward advertisements. There were significant intercept differences between models of males and females only in search intention. Clothing interest was the significant contributor, though negative, in predicting willingness to buy in males. Therefore, male consumers who have high clothing interest would not have willingness to purchase the dress

slacks. Intrinsic attributes were the significant contributors in predicting attitude toward the advertisements. Tables 55 through 63 present summary of findings.

TABLE 55

SUMMARY OF REGRESSION RESULTS I

 Price Effects

H2a:	(yes) Price - PQ	supported*** (PR - PQ(+))
H2b:	(yes) Price - MS	supported*** (PR - MS(+))
H2c:	(yes) Price - PB	supported* (PR - PB(+))
H2d:	(yes) Price - PV	not supported (PR - PV(0))
H2e:	(yes) Price - WB	not supported (PR - WB(0))
H2f:	(yes) Price - SI	supported*** (PR - SI(+))
H2g:	(yes) Price - A _{ad}	not supported (PR - A _{ad} (0))
H8a:	(yes) Price - RV	not supported (PR - RV(0))
H8b:	(yes) Price - TY	not supported (PR - TY(0))
H8c:	(yes) Price - FS	supported* (PR - FS(+))

Intrinsic Attribute Effects

H3a:	(yes) Intrinsic Attribute - PQ	supported* (IA - PQ(+))
H3b:	(yes) Intrinsic Attribute - MS	supported* (IA - MS(-))
H3c:	(yes) Intrinsic Attribute - PB	supported*** (IA - PB(+))
H3d:	(yes) Intrinsic Attribute - PV	supported* (IA - PV(+))
H3e:	(yes) Intrinsic Attribute - WB	supported*** (IA - WB(+))
H3f:	(yes) Intrinsic Attribute - SI	supported* (IA - SI(-))
H3g:	(yes) Intrinsic Attribute - A _{ad}	supported*** (IA - A _{ad} (+))
H9a:	(yes) Intrinsic Attribute - RV	not supported (IA - RV(0))
H9b:	(yes) Intrinsic Attribute - TY	supported* (IA - TY(+))
H9c:	(yes) Intrinsic Attribute - FS	not supported (IA - FS(0))

TABLE 56

SUMMARY OF REGRESSION RESULTS II

 Knowledge Effects

H4a:	(yes) Knowledge Effects - PQ	supported* (KN - PQ(+))
H4b:	(yes) Knowledge Effects - MS	not supported (KN - MS(0))
H4c:	(yes) Knowledge Effects - PB	not supported (KN - PB(0))
H4d:	(yes) Knowledge Effects - PV	not supported (KN - PV(0))
H4e:	(yes) Knowledge Effects - WB	not supported (KN - WB(0))
H4f:	(yes) Knowledge Effects - SI	supported (KN - SI(-))
H4g:	(yes) Knowledge Effects - A _{ad}	not supported (KN - A _{ad} (0))
H10a:	(yes) Knowledge Effects - RV	not supported (KN -RV(0))
H10b:	(yes) Knowledge Effects - TY	not supported (KN -TY(0))
H10c:	(yes) Knowledge Effects - FS	not supported (KN - FS(0))

Clothing Interest Effects

H5a:	(yes) Clothing Interest - PQ	supported (IN - PQ(+))
H5b:	(yes) Clothing Interest - MS	supported* (IN - MS(-))
H5c:	(yes) Clothing Interest - PB	supported* (IN - PB(+))
H5d:	(yes) Clothing Interest - PV	supported* (IN - PV(+))
H5e:	(yes) Clothing Interest - WB	supported*** (IN - WB(+))
H5f:	(yes) Clothing Interest - SI	not supported (IN - SI(0))
H5g:	(yes) Clothing Interest - A _{ad}	not supported (IN - A _{ad} (0))
H11a:	(yes) Clothing Interest - RV	not supported (IN -RV(0))
H11b:	(yes) Clothing Interest - TY	not supported (In -TY(0))
H11c:	(yes) Clothing Interest - FS	not supported (In -FS(0))

TABLE 57

SUMMARY OF REGRESSION EQUATIONS I

$PQ = 5.41 + 0.149PR + 0.106IA + 0.092KN + 0.040IN$	$\frac{R^2}{0.073}$
$PQ = 5.421 + 0.153PR + 0.104IA + 0.091KN - 0.045IN - 0.092WLIN + E$	
$PQ_M = 5.494 + 0.021PR - 0.032IA + 0.104KN + 0.118IN$	
$PQ_F = 5.419 + 0.114PR - 0.152IA + 0.103KN - 0.012IN$	
$MS = 4.454 + 0.711PR - 0.131IA + 0.078KN - 0.158IN$	$\frac{R^2}{0.363}$
$MS_M = 4.466 + 0.999PR - 0.101IA + 0.064IN$	
$MS_F = 4.488 + 0.595PR - 0.152IA + 0.115KN - 0.308IN$	

Where PQ = predicted perceived quality, overall
 PQ_M = predicted perceived quality of male
 PQ_F = predicted perceived quality of female
MS = predicted monetary sacrifice
 MS_M = predicted monetary sacrifice of male
 MS_F = predicted monetary sacrifice of female

TABLE 58

SUMMARY OF REGRESSION EQUATIONS II

$PB = 4.181 + 0.180PR + 0.261IA + 0.049KN + 0.150IN$	$\frac{R^2}{0.083}$
$PB_M = 4.264 + 0.379PR + 0.114IA - 0.135KN + 0.181IN$	
$PB_F = 4.011 + 0.106PR + 0.337IA + 0.115KN + 0.316IN$	
$PV = 4.534 - 0.035PR + 0.154IA - 0.013KN + 0.168IN$	$\frac{R^2}{0.027}$
$PV_M = 4.662 - 0.204PR - 0.023IA + 0.153KN + 0.196IN$	
$PV_F = 4.556 + 0.016PR + 0.118IA - 0.064KN + 0.182IN$	

Where PB = predicted perceptions of benefits
 PB_M = predicted perceptions of benefits of male
 PB_F = predicted perceptions of benefits of female
 PV = predicted perceptions of value, overall
 PV_M = predicted perceptions of value, male
 PV_F = predicted perceptions of value, female

TABLE 59

SUMMARY OF REGRESSION EQUATIONS III

WB = 3.401 - 0.054PR + 0.269IA + 0.004KN + 0.294IN	$\frac{R^2}{0.0794}$
WB _M = 3.423 - 0.044PR + 0.186IA - 0.084KN + 0.327IN	
WB _F = 3.362 - 0.061PR + 0.304IA + 0.032KN + 0.329IN	
SI = 5.778 + 0.254PR - 0.151IA - 0.245KN - 0.030IN	$\frac{R^2}{0.077}$
SI _M = 6.314 + 0.192PR - 0.027IA - 0.030KN + 0.198IN	
SI _F = 5.747 + 0.241PR - 0.205IA - 0.226KN - 0.079IN	
A _{ad} = 4.339 + 0.093PR + 0.283IA - 0.033KN + 0.129IN	$\frac{R^2}{0.053}$
A _{ad,M} = 4.227 + 0.139PR + 0.021IA - 0.208KN + 0.112IN	
A _{ad,F} = 4.274 + 0.08PR + 0.391IA - 0.007KN + 0.216IN	

Where WB = predicted willingness to buy, overall
 WB_M = predicted willingness to buy, male
 WB_F = predicted willingness to buy, female
 SI = predicted search intention, overall
 SI_M = predicted search intention, male
 SI_F = predicted search intention, female
 A_{ad} = predicted attitude toward ad, overall
 A_{ad,M} = predicted attitude toward ad, male
 A_{ad,F} = predicted attitude toward ad, female

TABLE 60

SUMMARY OF REGRESSION EQUATIONS IV

$RV = 4.810 + 0.079PR + 0.038IA - 0.018KN + 0.084IN$	$\frac{R^2}{0.009}$
$RV_M = 4.755 + 0.264PR - 0.052IA - 0.031KN + 0.051IN$	
$RV_F = 4.791 + 0.014PR + 0.078IA - 0.019KN + 0.093IN$	
$TY = 4.680 + 0.016PR + 0.111IA + 0.058KN + 0.057IN$	0.018
$TY_M = 4.67 + 0.072PR + 0.057IA + 0.033KN + 0.053IN$	
$TY_F = 4.659 - 0.005PR + 0.135IA + 0.063KN + 0.079IN$	
$FS = 4.017 + 0.126PR + 0.022IA - 0.038KN + 0.016IN$	0.013
$FS_M = 4.115 + 0.328PR + 0.032IA - 0.13KN + 0.058IN$	
$FS_F = 3.917 + 0.047PR + 0.029IA + 0.013KN + 0.084IN$	

Where RV = predicted relevance, overall
 RV_M = predicted relevance, male
 RV_F = predicted relevance, female
 TY = predicted typicality, overall
 TY_M = predicted typicality, male
 TY_F = predicted typicality, female
 FS = predicted fashionability, overall
 FS_M = predicted fashionability, male
 FS_F = predicted fashionability, female

TABLE 61

SUMMARY OF ANOVA RESULTS I

 Price Effect

H2a: (+) Price - PQ	supported *** (PR-PQ(+))
H2b: (+) Price - MS	supported *** (PR-MS(+))
H2c: (yes) Price - PB	supported ** (PR-PB(+))
H2d: (yes) Price - PV	not supported (PR-PV(0))
H2e: (yes) Price - WB	not supported (PR-WB(0))
H2f: (yes) Price - SI	supported *** (PR-SI(+))
H2g: (yes) Price - A _{ad}	not supported (PR-A _{ad} (0))
H2h: (yes) Price - Relevance	not supported (PR-RV(0))
H2i: (yes) Price - Typicality	not supported (PR-TY(0))
H2j: (yes) Price - Fashionability	supported* (PR-FS(+))

Intrinsic Attribute Effects

H3a: (yes) Intrinsic Attribute - PQ	supported* (IA-PQ(+))
H3b: (yes) Intrinsic Attribute - MS	supported* (IA-MS(-))
H3c: (yes) Intrinsic Attribute - PB	supported*** (IA-PB(+))
H3d: (yes) Intrinsic Attribute - PV	supported* (IA-PV(+))
H3e: (yes) Intrinsic Attribute - WB	supported*** (IA-WB(+))
H3f: (yes) Intrinsic Attribute - SI	supported* (IA-SI(-))
H3g: (yes) Intrinsic Attribute - A _{ad}	supported (IA-A _{ad} (+))
H3h: (yes) Intrinsic Attribute - RV	not supported (IA-RV(0))
H3i: (yes) Intrinsic Attribute - TY	supported* (IA-TY(+))
H3j: (yes) Intrinsic Attribute - FS	not supported (IA-FS(0))

TABLE 62

SUMMARY OF ANOVA RESULTS II

 Knowledge Effects

H4a: (yes) Knowledge - PQ	not supported (KN-PQ(0))
H4b: (yes) Knowledge - MS	not supported* (KN-MS(0))
H4c: (yes) Knowledge - PB	not supported (KN-PB(0))
H4d: (yes) Knowledge - PV	not supported (KN-PV(0))
H4e: (yes) Knowledge - WB	not supported (KN-WB(0))
H4f: (yes) Knowledge - SI	supported * (KN-SI(+))
H4g: (yes) Knowledge - A _{ad}	not supported (KN-A _{ad} (0))
H4h: (yes) Knowledge - RV	not supported (KN-RV(0))
H4i: (yes) Knowledge - TY	not supported (KN-TY(0))
H4j: (yes) Knowledge - FS	not supported (KN-FS(0))

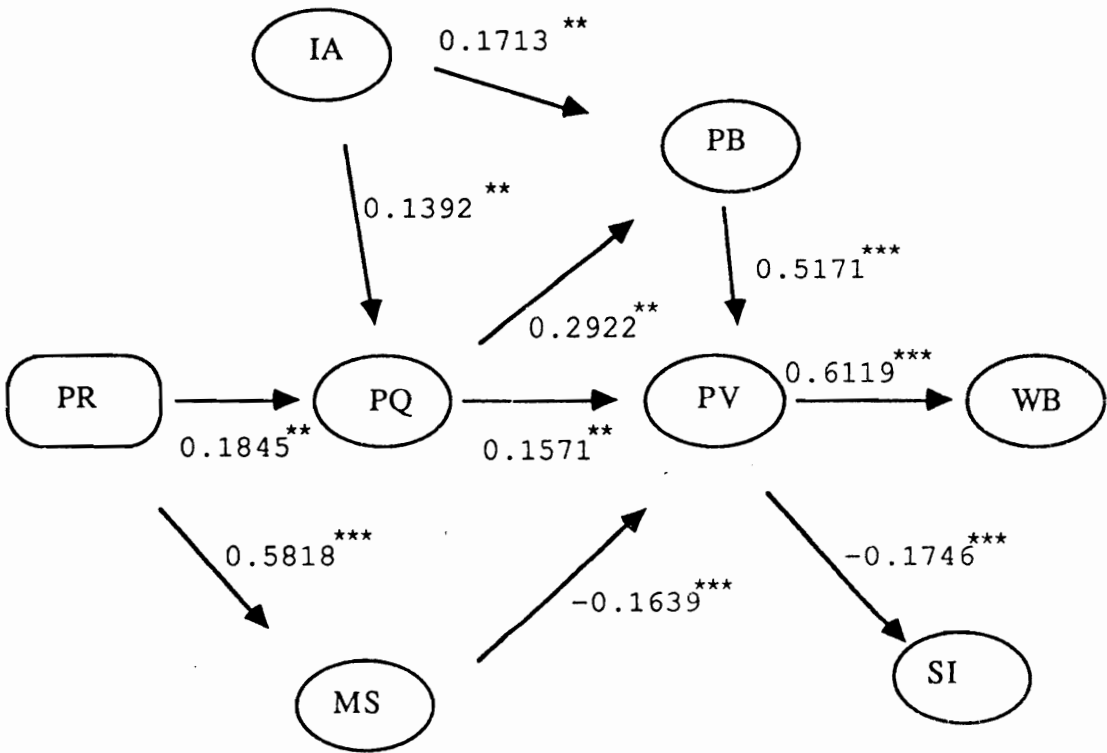
Clothing Interest Effects

H5a: (yes) Clothing Interest - PQ	not supported (IN-PQ(0))
H5b: (yes) Clothing Interest - MS	supported* (IN-MS(-))
H5c: (yes) Clothing Interest - PB	supported** (IN-PB(+))
H5d: (yes) Clothing Interest - PV	supported* (IN-PV(+))
H5e: (yes) Clothing Interest - WB	supported*** (IN-WB(+))
H5f: (yes) Clothing Interest - SI	not supported (IN-SI(0))
H5g: (yes) Clothing Interest - A _{ad}	not supported (IN-A _{ad} (0))
H5h: (yes) Clothing Interest - RV	not supported (IN-RV(0))
H5i: (yes) Clothing Interest - TY	not supported (IN-TY(0))
H5j: (yes) Clothing Interest - FS	not supported (IN-FS(0))

Causal Analysis of the Proposed Model

Figure 11 shows path estimates for the causal links and their significant effects. Statistically significant path estimates were intrinsic attributes (IA) through perceptions of quality (PQ), intrinsic attributes (IA) through perceptions of benefits (PB), price (PR) through perceptions of quality (PQ), price (PR) through monetary sacrifice (MS), perceptions of quality (PQ) through perceptions of benefits (PB), perceptions of benefits (PB) through perceptions of value (PV), perceptions of quality (PQ) through perceptions of value (PV), monetary sacrifice (MS) through perceptions of value (PV), perceptions of value (PV) through willingness to buy (WB), and perceptions of value (PV) through search intention (SI) ($\alpha = 0.05$). Note that the path estimates are to be interpreted as analogous to regression coefficients as they reflect the impact of one construct on the other.

Hypothesis positing a positive influence of perceived quality on perceived benefits was supported by path estimates. The path estimate was 0.2922 indicating the magnitude of the direct effect of perceived quality on perception of benefit. The positive sign indicates a positive causal relationship between perceived quality and perceptions of benefits. Hypotheses positing positive relationships between perceived quality and perceived value, a negative relationship between perceptions of value and monetary sacrifice, were supported. As shown in the Figure, perceptions of benefits and perceptions of quality positively influenced subjects' perceptions of value, with the path estimate being 0.5171 and 0.1571, respectively. Monetary sacrifice, as hypothesized, had negative influence on perceptions of value (-0.1639). The causal effect of perceived benefits on perceptions of value was larger than the effect of perceived quality on perceptions of value, evidenced by larger value of estimate. The hypothesis proposing the influence of perceived value on willingness to buy was supported and it was positive as expected, with the largest



Where: PR is price
 IA is intrinsic attributes
 PQ is perception of quality
 PB is perception of benefits
 MS is perception of monetary sacrifice
 PV is perception of value
 WB is willingness to buy
 SI is search intention

*** is p = 0.0001
 ** is p = 0.01
 * is p = 0.05

FIGURE 11: CAUSAL MODEL

effect among path estimates (0.6119). The last hypothesis was also supported as evidenced by the path estimate from perceived value to search intention of -0.1746 and the path estimate from monetary sacrifice of -0.1639. As reported above, all path estimates were correct in direction and statistically significant at $\alpha = 0.05$.

In summary, examination of these statistics suggested good support for the model. The path model was also used to test hypotheses and all hypotheses were supported. The hypothesized model and its relationships were supported by this empirical investigation. The multiple regressions, analyses of variance, and path causal modeling approach yielded insights that were consistent with the proposed hypotheses. Based on this evidence, next chapter concludes with the argument that conceptualization tested in this research appears promising and future investigation is recommended.

CHAPTER VI

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Overview

The hypothesized model and its relationships were supported by this empirical investigation. The multiple regressions, analyses of variance, and path causal modeling approach yielded insights that were consistent with the proposed hypotheses. Based on these evidence, this chapter concludes with the argument that conceptualization tested in this research appears promising and recommendations for future investigation.

In this chapter, the emphasis will be on examining the results and their implications from a broader perspective. The present chapter begins with discussions of research objectives that guided this dissertation. Then, a synopsis of this investigation, focusing on conceptual issue and results, is presented. The major findings of this dissertation are presented with corresponding hypotheses. Finally, directions for future research are discussed.

Research Objectives That Guided This Research

Given the prevalence of apparel assessment in the Clothing and Textile area, the need for improved understanding of the quality construct and its determinants have recently been recognized. Available research indicates that consumers generally are not able to assess perfectly a product's quality. Rather, consumers tend to make judgements of quality on the basis of surrogate or indirect indicators of quality, particularly

price. However, the research on the price-perceived quality is inconclusive and empirical results indicate no consistent relationship between price and quality perception. Despite the evidence that results based on this framework may be sensitive to the individual consumer behavior, the behavior of individual have not been adequately explored. Evidence from clothing research suggests that clothing interest, as individual's motivational factor, influences consumers' evaluation and purchase intention of clothing product. Individual's prior knowledge plays a central role in guiding the interpretation and evaluation of incoming information. The level of knowledge is likely to have a significant influence on consumers' processing. Therefore, the moderating effects of individual factors of clothing and knowledge on the price and perceived quality relationship were examined.

Research Synopsis: Results and Implications

The major findings of this dissertation are organized around the major hypotheses. When discussing the results in relation to the major hypotheses, the results of multiple regressions, ANOVAs, Duncan's Multiple Range Tests, and Path analysis are collectively accounted. The individual effect of price, intrinsic attributes, clothing interest, and knowledge on each dependent variable is discussed along with the differences in the effects of independent variables on the dependent variables in male and female subjects. Finally, the indirect effects among theoretical constructs are discussed based on the results of path analysis.

Effect of Price

Research indicates that consumers generally are not able to assess perfectly a product quality. In such imperfect situation, consumers tend to make judgment about products on the basis of price. By integrating price information with quality perception, consumers may assign a meaning of high quality to the high price. To examine the direct effect of price on the perceptions of quality, multiple regression analyses and analyses of variance were conducted with three levels of manipulated price.

The hypothesized effect of price on perceived quality was strongly supported in both multiple regression and analyses of variance. The largest estimate value of price among the estimates of independent variables indicates that the largest and most positive contribution to predict consumers' perceptions of quality. Yet for the marketing manager, price is a critical marketing mix variables affecting a firm's revenues and profitability. Therefore, given the highest effect of price on perceptions of quality, a marketer should carefully apply strategies and tactics of price to consumer marketing.

The significant t value of price in males indicates male subjects perceive the quality of the dress slacks higher based on the higher price. On the other hand, the significant t value of intrinsic attributes in females indicates female subjects perceive the quality of the dress slacks higher based on the higher intrinsic attributes (100% worsted wool with traditionally styled dress slacks). The results seem to coincide with the research in knowledge structure. Female subjects could have more expertise in evaluating clothing products than had male subjects, thereby look at the intrinsic attributes in the dress slacks. On the other hand, male subjects are less familiar with clothing products in general, thereby look at the price in the dress slacks.

According to classical economists, consumers view price as the

monetary sacrifice necessary to acquire a product. Therefore, the higher the price of the product, the greater are consumers' perceptions of the monetary sacrifice associated with acquiring the product. The hypothesized effect of price on perceptions of monetary sacrifice was strongly supported in both multiple regression and analysis of variance. This result is consistent with the results of Rao (1986), Chapman (1987), and Grewal (1989). The largest, positive estimate value of price among the estimates of independent variables indicates that the largest contribution of price to predict consumers' perceptions of monetary sacrifice.

As shown by Duncan's test, there were significant differences in perceptions of monetary sacrifice across levels of price. This result provides support for a positive price/monetary sacrifice as hypothesized and consistent with the results in other studies (Chapman, 1987; Dodds, 1985; Grewal, 1989; Krishnan and Monroe, 1985; Rao, 1986).

Though no significant interaction was found, Maximum R-square improvement technique found a significant interaction between price and clothing interest in a negative direction. In other words, perceptions of monetary sacrifice as a function of price cannot be considered independently of clothing interest level.

The largest estimate of price by males indicates male subjects' perceptions of monetary sacrifice are mostly affected by the price. On the other hand, the effect of price on female subjects' perceptions of monetary sacrifice was half of male's perceptions indicating female subjects perceived a lot less monetary sacrifice based on price than males did.

Consumers' perceptions of benefits encompass their perceptions of product quality, while the product and its quality provide consumers with perceived benefits. These benefits serve to make the product less price sensitive. Clothing products have been designed for both use functions and aesthetic appeal. The benefits of use functions and aesthetic appeal of apparel may influence its price sensitivity. The hypothesized effect of

price on perceptions of benefits was supported in multiple regression and not in the analysis of variance. Sometimes, a product may provide a unique benefits that consumers value. There was a positive relationship between price and perceptions of benefits. The magnitude of the effect of price is the greatest on male subjects' perceptions of benefits. Therefore, male subjects perceived higher benefits based on the high price of the dress slacks.

Perceptions of value are formed as results of trade-offs between perceptions of quality and benefits (the get component) and the perceptions of monetary sacrifice (the give component). It is, thus, conceptualized that as consumers perceptions of the products' quality and benefits increase, their perceptions of value also increases, but that as the perceptions of monetary sacrifice increase, their perceptions of value decrease. It was hypothesized that price would affect consumers' perceptions of value. The hypothesized direct effect of price was not supported both in multiple regression and analysis of variance. The effect of price was the greatest on male subjects' perceptions of values in a negative way. Therefore, the higher the price, the less the male subjects' perceptions of value.

Consumers' willingness to buy as behavioral intention is affected by positive perceptions of value. Monroe and Krishnan(1985) hypothesized that the higher the perceived value of the product, the greater would be consumers' willingness to buy the product. The proposed direct effect of price on willingness to buy was not supported both in multiple regression and in analysis of variance. The hypothesis suggesting the effect of price on subjects' willingness to buy was not supported as revealed by nonsignificant F value. Contrastingly, Grewal (1989) found a negative price/willingness to buy relationship. In Rao's (1986) study, partial support for this relationship was found. Therefore, this issue should be resolved in the future study.

Consumers' intention to search for information is contingent on the

trade-offs of the costs of the search behavior relative to the benefits of search (Stigler, 1961). Benefits of search included finding the lowest price inducing the savings for the consumer (Urbany, 1986). The hypothesized effect of price on search intention was strongly supported. And the relationship between price and search intention was positive indicating subjects' strong intention to search more as they see high price.

Attitude toward advertisements is formed based on many factors. The hypothesized effect of price on attitude toward ad was not supported in both multiple regression and analysis of variance. Therefore, it is concluded that price does not affect consumers' attitude toward advertisements.

A negative interaction between price and clothing interest indicates the relationship between perceptions of relevance and price is dependent upon the levels of clothing interest. In fact, the significant t value of price in males indicates male subjects perceive more relevance in the dress slacks based on high price.

The individual effect of price was significant in a positive direction in a regression model for perceptions of fashionability. There was a significant interaction between price and intrinsic attributes in a regression model for perceptions of fashionability in a negative direction.

The analysis of the interaction effects indicates the interaction between price and intrinsic attributes influences perceptions of fashionability. That is, perceptions of fashionability appear to increase with increasing price (low to middle price) when the intrinsic attributes are both low and high. However, as the level of price goes up from middle to high, perceptions of fashionability appear to decrease when the intrinsic attributes are high (100% worsted wool with traditional style), but perceptions of fashionability appear to increase with increasing price when the intrinsic attributes are low (82% wool/18% polyester blend with

fashionable design). Male subjects perceive the dress slacks with the higher price more fashionable. The results of ANOVA and Duncan's Test also indicate the significant effect of price on perceptions of fashionability.

Effect of Intrinsic Attribute

Overall effects of intrinsic attributes on several dependent variables were all significant. For clothing product, intrinsic attributes seem to have powerful effect on consumers' judgment and behavioral intention. Evidence from clothing research suggests that intrinsic attributes are more often used than extrinsic attributes for clothing evaluation. A number of research studies in marketing area found a significant effect of intrinsic attribute on product evaluations. Descriptions of the dress slacks were manipulated. Compositional features (including fiber content and construction) and aesthetic characteristics were manipulated to suggest either high quality with typical style or moderate quality with fashionable style.

It was argued that the higher level of intrinsic attributes, the more the perceptions of quality. To examine the effect of intrinsic attribute on perceptions of quality, multiple regression and analysis of variances were conducted with two levels of manipulated intrinsic attributes. The hypothesized effect of intrinsic attributes on perceived quality was strongly supported in both multiple regression and analysis of variance. The effect of intrinsic attribute on perceptions of quality was fairly large, followed by the effect of price. In Grewal's(1989) study, nonsignificant relationship was found between intrinsic attribute and perceptions of quality. It is recognized that the inclusion of intrinsic attributes meaningful to the subjects (or significant to the subjects) is

likely to produce such significant intrinsic attributes effect.

Interestingly, there was a significant interaction between intrinsic attributes and clothing interest in a regression model for perceptions of quality. In other words, perceptions of quality as a function of intrinsic attributes is dependent on the level of clothing interest. In particular, the negative estimate of the interaction effect suggests that the linear effect of price on perceptions of fashionability at low level of intrinsic attribute being positive and the linear effect of price on perceptions of fashionability at high level of intrinsic attributes being negative. In other words, when the price goes from low to medium, subjects' perceptions of fashionability increase in both low and high intrinsic attributes. However, when the price goes from medium to high, subjects' perceptions of fashionability increase in low intrinsic attributes but, decrease in high intrinsic attributes.

Perception of monetary sacrifice is the perceived cost associated with the price of a product. The results from multiple regression and analysis of variance indicate that intrinsic attributes negatively affect subjects' perceptions of monetary sacrifice. That is, dress slacks of 82% wool 18% polyester blend with fashionable style would be associated with higher monetary sacrifice. On the other hand, dress slacks of 100% wool with typical style would be related to lower monetary sacrifice.

The hypothesized effect of intrinsic attributes on perceptions of benefits was supported. The largest estimated value of the intrinsic attributes parameter among the estimates of independent variables indicated that intrinsic attributes made the largest contribution, followed by the price and clothing interest. The relationship between the perceptions of benefits and intrinsic attributes was positive as expected and consistent with the results of the previous research. Therefore, the higher the levels of intrinsic attributes, the higher the perceptions of benefits.

On the other hand, intrinsic attributes and clothing interest

affected female subjects' perceptions of benefits. Thus, female subjects perceive more benefits as their clothing interest increases. Intrinsic attributes with traditionally styled dress slacks are 100% wool fiber content, compared to 82% wool/18% polyester blend with fashionably styled dress slacks.

As the level of intrinsic attribute increases, subjects perceive higher benefits of use functions and aesthetic appeal. Many researchers also found that intrinsic attributes affected consumers' judgment and choice (Hatch & Roberts, 1985; Eckman, Damhorst & Kadolph, 1989; Zeithaml, 1988). Therefore, manufacturers and retailers of clothing products should focus on finding out intrinsic attributes enhancing consumers' perceptions of benefits because benefits delivered must be consistent with benefits desired by customers.

As conceptualized previously, consumers perceive value as a trade off between perceived quality and perceived benefits in the product on the one hand and perceived cost of acquiring and consuming the product on the other. Hence, it was hypothesized that intrinsic attribute would affect consumers' perceptions of value. As anticipated, intrinsic attributes significantly affected consumers' perceived value. This result is consistent with the results of other studies (Chapman, 1987; Grewal, 1989; Rao, 1986; Zeithaml, 1988). Zeithaml (1988) indicated that certain properties inherent to the fruit juice provided consumers with value perception. Therefore, improving the quality of intrinsic attributes valued by customers can be a key for successful marketing.

As anticipated, there was a significant effect of intrinsic attribute on consumers' willingness to buy. Consistent with results from many clothing studies, intrinsic attributes had a positive effect on consumers' intention to purchase the dress slacks. Intrinsic attributes especially contributed to female subjects' willingness to buy in a positive direction. Therefore, subjects would be more willing to buy the dress slacks in 100% wool with traditional style. Grewal (1989) didn't

find the support for this hypothesis. Given the fact that fiber content and compositional features (i.e., styling) were manipulated in this research, enhancing the recognition of these attributes may stir consumers' behavioral intention.

It was hypothesized that consumers' intention to search would be affected by intrinsic attributes. The hypothesis was supported though in negative direction. As long as the dress slacks have the desired attributes of fiber contents and compositional features, consumers intend to search less for the alternatives. Therefore, subjects who see a pair of fashionably styled dress slacks in 82% wool/18% polyester blend would like to continue to search and shop around, while subjects who see 100% worsted wool gabardine dress slacks of traditional style have less intention to search. However, Grewal (1989) reported mixed results about this relationship. Intrinsic attributes affected female subjects' search intentions in a negative direction. Therefore, female subjects want to search more when they have high clothing interest and when intrinsic attributes change in terms of wool percentage and style.

As hypothesized, attitude toward advertisements (as measured by overall evaluation) was affected by intrinsic attributes in positive direction. The result of Duncan's Test showed that the mean response for attitude toward advertisements increased from 4.06 to 4.60 as intrinsic attributes changed from a blend of 82% wool/18% polyester with fashionable style to 100% wool with traditional style. Therefore, subjects who see an advertisement for a pair of 82% wool/polyester blend dress slacks with fashionable style would have a less favorable attitude toward the product, while subjects who see an advertisements for the traditionally styled 100% wool dress slacks, would have a more favorable attitude toward the product. The result consistent with the studies in the clothing evaluation stating the fiber content and styling of clothing products have powerful effects on consumers' mind.

This result suggests that advertisers should carefully choose the

style and the fiber content favored by their target customers. This result indicates that marketers should carefully describe the product in the ad for favorable attitude formation at the side of consumers. If attitudes are the antecedent variable affecting behavior, it may be possible to alter behavior by selecting intrinsic attributes favorable to consumers.

The estimated value of the intrinsic attribute parameter indicated positive relationships between perceptions of typicality and intrinsic attributes. ANOVA's and the result of Duncan's Test indicate the mean typicality score of 100% wool traditionally styled dress slacks is higher than 82% wool/18% polyester fashionably styled dress slacks, resulting in a significant effect, as anticipated.

Effect of Clothing Interest

Overall, the hypothesized effect of clothing interest was supported on the relationships with monetary sacrifice, perceptions of benefits, perceptions of value, and willingness to buy.

Clothing interest has been found to influence consumers' choice of clothing products, as clothing products are purchased for both use functions and psychological desire. Therefore, it was hypothesized that clothing interest, somehow, would affect consumers' perceptions of monetary sacrifice. There was a significant effect of clothing interest on perceptions of monetary sacrifice in a negative direction. Therefore, subjects with high clothing interest would perceive less monetary sacrifice than subjects with lower clothing interest. The results are consistent with those of past clothing interest studies.

The hypothesized effect of clothing interest on perceptions of benefit was significant in a positive direction. As consumers have higher

clothing interest, their fashion or quality standards for intrinsic attribute of clothing products may become higher, resulting in higher benefit perceptions. As indicated by Duncan's test, subjects with high clothing interest perceived significantly higher benefits than subjects with low clothing interest.

It was hypothesized that clothing interest would affect perceptions of value. Remember that perception of value is a tradeoff between perceptions of quality and benefits in one side and perceived cost associated with the purchase the other side. There was a significant effect of clothing interest on perceptions of value in positive direction. Therefore, subjects with high clothing interest perceive more value out of purchasing the dress slacks. This result is consistent with the conceptualization presented.

The large negative estimate of clothing interest for females suggests that female subjects' perceptions of monetary sacrifice are affected by the level of clothing interest. In other words, female subjects with high clothing interest perceive less monetary sacrifice than did female subjects with less clothing interest.

The hypothesized effect of clothing interest on subjects' willingness to buy was supported as shown by a significant F value. The result of Duncan's test further indicated a difference in willingness to buy between the levels of clothing interest. Subjects who had high clothing interest showed more willingness to purchase the dress slacks, while subjects who had lower clothing interest showed less willingness to buy the dress slacks.

Effect of Clothing Knowledge

Overall, the hypothesized effects of knowledge were supported on the

relationships with perceptions of quality and search intention. Recent conceptual developments relating price and perceived quality include addition of consumers' knowledge about the product. Following Rao and Monroe's (1988) step, it was argued that knowledge would affect consumers' perceptions of product quality. As hypothesized, the effect of knowledge on perceptions of quality was significant in positive direction.

The significant effect of knowledge on search intention answers the question of whether differential knowledge result in similar information search patterns. As proposed in earlier chapter, expert consumers have prior knowledge about the attributes of various alternatives, and consequently do not need to acquire such information from external sources. A negative relationship between knowledge and search intention found in this investigation is consistent with previous research and proposed conceptualization. Levels of clothing knowledge affected subjects' search intentions significantly. As indicated by the result of Duncan's test, the mean response for search intention decreased when subjects had higher knowledge levels. Therefore, subjects who are knowledgeable about clothing in general would have less intention to search than subjects who are not knowledgeable about clothing. Moreover, clothing knowledge affected female subjects' search intentions in a negative direction. That is, female subjects want to search more when they have less knowledge about clothing products.

Summary of Multiple Regression

As indicated by overall tests, taken together, price, intrinsic attributes, knowledge and clothing interest significantly help to predict

perceptions of quality, monetary sacrifice, perceptions of benefits, perceptions of value, willingness to buy, search intention, and attitude toward advertisements.

Individual tests show that the largest contribution of price, followed by intrinsic attribute, knowledge, and an interaction of intrinsic attribute and clothing interest in predicting perceptions of quality in the model. Individual tests for monetary sacrifice show that the largest contribution of price, followed by clothing interest, and intrinsic attribute, in predicting perceptions of monetary sacrifice. For perceptions of benefits, individual tests show that the largest contribution of intrinsic attribute, followed by price and clothing interest. Contributions of intrinsic attributes and clothing interest were significant in predicting perceptions of value and willingness to buy. For search intention, the significant contributions were price, knowledge, and intrinsic attributes. Only contribution of intrinsic attributes was significant in predicting attitude toward advertisements.

For differences in gender, price was the significant contributor for the models of both sexes in predicting perceptions of quality, monetary sacrifice, and perceptions of benefits. There were overall significant sex differences in models of males and females for perceptions of quality, monetary sacrifice, benefits, willingness to buy, search intention, and attitude toward ad. There were significant intercept differences between models of males and females only in search intention. Clothing interest was the significant contributor, though negative, in predicting willingness to buy in males. Therefore, male consumers who have high clothing interest would not have willingness to purchase the dress slack. Intrinsic attributes were the significant contributors in predicting attitude toward the advertisements.

Based on this evidence, this chapter concludes with the argument that conceptualization tested in this research appears promising and future investigation is recommended.

Recommendations For Future Research

In this section, several directions for future research are discussed. The proposed model focuses on the effects of price, intrinsic attributes, knowledge, and clothing interest on various dependent variables. Results of multiple regression analyses indicate that subjects' evaluations and behavioral intentions are affected by intrinsic attributes and clothing interest on various dependent variables. Results of multiple regression analysis indicate that subjects' evaluations and behavioral intentions are affected by intrinsic attributes and clothing interest in addition to price information. Evidence from past research suggests that individual's perceptions and evaluations are based not only products but also upon individual factors. Especially, the social and symbolic characteristics of clothing products may affect subjects' view of intrinsic attributes and price information. Clothing interest and knowledge as individual characteristics were identified as good predictors for product evaluations. Therefore, a systematic investigation of different clothing products and other individual factors, such as perceived risk is necessary.

Intrinsic attributes used in this research are fiber content /fabric, and compositional/styling features which are found to influence consumers' evaluation of apparel products. However, no attempt was made to explain how individuals cognitively combine different intrinsic attributes at different levels. That is, which intrinsic attributes among garment characteristics consumers use to form the perceptions and behavioral intentions? Answers about process questions of this nature can provide further insights into the evaluation phenomenon.

Price information in this research was presented without reference price. Reference prices are prevalently used by manufacturers and retailers in the apparel market in an attempt to enhance consumers' value

perception. In that situation, will consumers trade-off less preferable intrinsic attribute to the cheaper price after comparing with reference price? Then, how much discount from reference price is enough to induce consumers' perceptions of value for money? Answers for these questions may be explored in the future investigations.

In this research, perceived benefits were significantly influenced by price, intrinsic attributes, and clothing interest. Consumers' perceptions of benefits encompass their perceptions of product quality as evidenced by this research. In the future research, relative contribution of different intrinsic attributes to the perceptions of benefits can be explored in relation to perceived quality. Incorporating other extrinsic attributes like brand and store names may be useful to assess these relationships. Furthermore, the benefit scale itself could be refined to produce a more clear measure.

Even though there are other sacrifices consumers have to make, monetary sacrifices were used to capture sacrifice construct. Hence, consumers face time constraint, psychological costs and efforts when evaluating and purchasing a garment. Operationalization of this construct may be challenging, but need to be made for future research.

The causal relationships between perceptions of value and perceptions of benefits, quality, and monetary sacrifice can be explored using other apparel products and services. Perceptions of value may be influenced by service factors other than product itself such as guarantees and stores' return policy, etc. Exploring these relationships seems to be promising. Having examined the models that are best for each dependent measures, one can assess the reliability of the chosen model by conducting a new study and test the fit of the chosen model to the new data.

The link between perceptions of value and willingness to buy is significantly influenced by the product itself (intrinsic attributes) and subjects' clothing interest. However, willingness to buy will likely depend on a need and want for the product. Furthermore, there are numerous

factors or situations which affect the link between behavioral intentions and actual purchase, and thus give a room for future research.

This study used seven-point scales to measure the constructs of interest. The utilization of wider scale (i.e., 20 point) might provide greater and more flexible response variation. Future research must carefully investigate the interval properties of the scales. Multiple items are preferred to capture a construct as they provide rather stable estimation of a construct.

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APPENDICES

APPENDIX A: Pilot-test Instrument

SURVEY RESPONSE BOOKLET

In this booklet you will be asked to respond to a product description of garments. We are seeking your true reaction to this situation presented to you. Please respond in a natural manner -- the way you would actually react. Take your time in responding, and if at any time you have any questions, please raise your hand. Take off the product descriptions for ease of reading.

The questionnaire is divided into four sections. The first section provides you with a product description of a specific garment and asks information about what prices you would consider acceptable to pay for this garment. The second section asks you to respond to questions based on the product description of the specific garment. The third section asks you to indicate your perceptions about the garment description. The fourth section asks you to respond to certain questions related to clothing and textiles in general. A final section asks questions that will be used to classify your answers with those of other respondents.

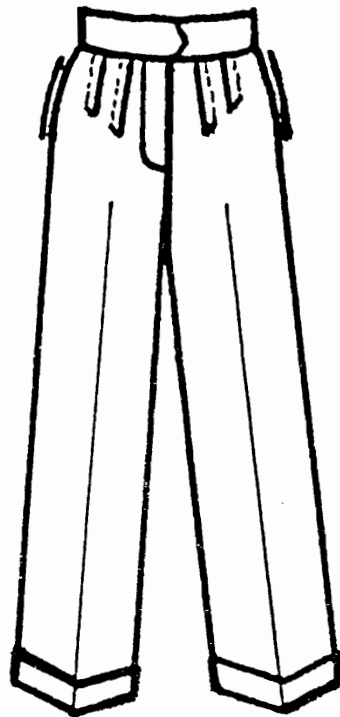
Please assume that you are truly interested in purchasing the product described. We are interested in reactions of both men and women. Further, please use your knowledge about and experience with other brands of this product as an aid in your evaluation.

Thank you for your time and cooperation.

Please read carefully the following product descriptions and answer the questions below.

Dress Slacks:

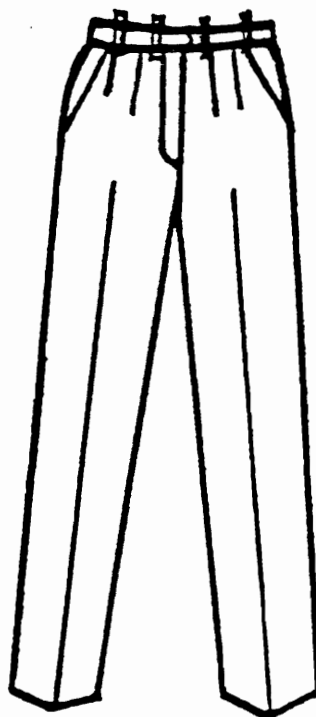
Our distinctive, exclusive trousers are constructed with a blend of 85% wool and 15% polyester for ultimate comfort. Finely constructed and carefully detailed with sharp, box pleats and two sideseam pockets. Neatly styled with a wide tab waistband. Straight legged with cuffed finish. Fully lined. Dry clean.



Please read carefully the following product descriptions and answer the questions below.

Dress Slacks:

Our 100% worsted wool gabardine trousers are finely tailored with crisp double darts for impeccable fit. Front zipper and two offset slanted pockets. Tab waistband with six belt loops. Slightly tapered legs. One back welt pockets with button tab. Dry Clean.



Assume you are considering purchasing the garment described above for your own use. Use the following set of prices to answer the questions below.

1. Please circle all the prices that you would consider acceptable to pay for this garment.

\$30, \$35, \$40, \$45, \$50, \$55, \$60, \$65, \$70, \$75,
\$80, \$85, \$90, \$95, \$100, \$105, \$110, \$115, \$120,
\$125, \$130, \$135.

2. Which one of the prices that you circled above would be the most acceptable price for you to pay?

price: \$_____

3. What is the highest price you would be willing to pay?

price: \$_____

Please give a reason or reasons why prices higher than this would be unacceptable to you.

4. What is the lowest price you would be willing to pay?

price: \$_____

Please give a reason or reasons why prices lower than this would be unacceptable to you.

This section asks you to respond to several questions based on the description of dress slacks. Please circle the corresponding number that best indicates your impression.

1. To what degree do you think you would find it beneficial to own these slacks?

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high nor low	slightly high	moderately high	very high

2. The monetary sacrifice that I would probably be making if I purchased the described slacks at this price is:

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high	slightly high	moderately high	very high

3. The probability that I would consider buying the described slacks at this price is:

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high	slightly high	moderately high	very high

4. The likelihood that these slacks would be durable is:

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high	slightly high	moderately high	very high

5. To what degree would these slacks be appropriate for your specific use occasions?

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high	slightly high	moderately high	very high

6. In relation to your budget, the amount of money that would probably be required to acquire these slacks is:

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high	slightly high	moderately high	very high

7. I would expect the aesthetic appeal of these slacks to be:

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high	slightly high	moderately high	very high

8. Overall, I think that purchasing the described slacks would provide:

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high	slightly high	moderately high	very high

9. If you had the money, how willing would you be to purchase the slacks described?

Not willing at all (1) (2) (3) (4) (5) (6) (7) Very willing

10. These slacks are likely to be:

1	2	3	4	5	6	7
very poor quality	moderately poor quality	slightly poor quality	neither poor nor good quality	slightly good quality	moderately good quality	very good quality

11. The price for this garment is:

1	2	3	4	5	6	7
much less than expected	somewhat less than expected	slightly less than expected	about as expected	slightly more than expected	somewhat more than expected	much more than expected

12. In terms of becomingness, how attractive would you expect these slacks to be on you?

1	2	3	4	5	6	7
very unattractive	moderately unattractive	slightly unattractive	neither unattractive nor attractive	slightly attractive	moderately attractive	very attractive

13. Given the description, the likelihood that I would consider purchasing these slacks is:

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high	slightly high	moderately high	very high

14. Before deciding whether to purchase the described slacks, I would shop around more.

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree	slightly agree	moderately agree	strongly agree

15. The workmanship (construction quality) of these slacks is likely to be:

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high	slightly high	moderately high	very high

16. How beneficial do you feel wearing of these slacks would be to you?

1	2	3	4	5	6	7
very unbeneficial	moderately	slightly	neither beneficial nor unbeneficial	slightly	moderately	very beneficial

How would you rate the described attributes of the slacks?
Please mark the corresponding number on the opscan sheet.

17. Irrelevant	1	2	3	4	5	6	7	Very relevant
18. Features I would not consider	1	2	3	4	5	6	7	Features I definitely consider
19. Not at all important	1	2	3	4	5	6	7	Very important
20. Unfashionable	1	2	3	4	5	6	7	Fashionable
21. Common	1	2	3	4	5	6	7	Unique
22. Not prestigious	1	2	3	4	5	6	7	Prestigious
23. Very atypical	1	2	3	4	5	6	7	Very typical
24. Very unrepresentative	1	2	3	4	5	6	7	Very representative

On the provided opscan sheet, please indicate your overall perception of the dress slacks as described on the previous page.

25. Unfavorable	1	2	3	4	5	6	7	Favorable
26. Bad	1	2	3	4	5	6	7	Good
27. Negative	1	2	3	4	5	6	7	Positive

On the provided opscan sheet, please indicate your evaluation of the description on the previous page.

28. Not informative	1	2	3	4	5	6	7	Very informative
29. Hard to understand	1	2	3	4	5	6	7	Easy to understand
30. Unbelievable	1	2	3	4	5	6	7	Believable

On the opscan sheet provided, please mark the number which best indicates how you feel about your knowledge of clothing products in general.

31. How knowledgeable are you about clothing?

Not at all Knowledgeable	1	2	3	4	5	6	7	Extremely Knowledgeable
-----------------------------	---	---	---	---	---	---	---	----------------------------

32. What is your experience in shopping for clothing?

Never have shopped before	1	2	3	4	5	6	7	Shop very often
------------------------------	---	---	---	---	---	---	---	--------------------

33. How confident do you feel recommending clothing to your friends?

Not at all confident	1	2	3	4	5	6	7	Extremely confident
-------------------------	---	---	---	---	---	---	---	------------------------

This section asks you to indicate the right answer for every question. Please answer all the questions (guess if you have to!).

Each line below contains three terms which are related. One term does not belong in the same line. Indicate which is the odd term by circling the correct number on the questionnaire.

EXAMPLE: (1) Red (2) Green (3) Blue (4) Flower
Red, green, and blue are the terms related to color. Flower, however, is not. To answer this, you would circle #4.

- 34. (1) Cotton (2) Wool (3) Silk (4) Rayon
- 35. (1) Dacron (2) Lycra (3) Fortrel (4) Trevira
- 36. (1) Dart (2) Gather (3) Inseam (4) Pleat
- 37. (1) Blind Stitch (2) Pinking (3) Cutting (4) Overlock
- 38. (1) Plaid (2) Printed (3) Striped (4) Spinned
- 39. (1) Salvage (2) Worsted (3) Filament (4) Combed
- 40. (1) Course (2) Bias (3) Warp (4) Filling
- 41. (1) Button (2) Gauge (3) Snap (4) Hook & Bar
- 42. (1) Spiral (2) Twill (3) Plain (3) Satin
- 43. (1) Facing (2) Binding (3) Hem (4) Gusset
- 44. (1) Box (2) Knife (3) Patch (4) Inverted
- 45. (1) Voile (2) Gabardine (3) Duck (4) Denim

For the True/False answers use only the 1 & 2 to mark your answer with #1 = True and #2 = False. For Multiple Choices use #'s 1 - 4 for your answers in the opscan sheet.

- 46. A split waistband allows for waistline and hip alteration if the seat seam has adequate seam allowances.
(1) True (2) False
- 47. For the care of a garment, a care label must provide washing and dry cleaning instructions.
(1) True (2) False

48. An important purpose of a lining is:

- (1) to increase the moisture absorbency of fabric
- (2) to provide support and improve shape retention
- (3) to improve and enhance colorfastness
- (4) to reduce the cost of the garment

Please read the following statements about clothing. Please rate each according to the extent to which you believe the statement is true or not true. Use the following guide, and circle the corresponding number.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

49. I enjoy clothes like some people do such things as books, records, and movies.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

50. Clothing is so attractive to me that I am tempted to spend more money on it than I should.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

51. I skip over the clothing ads in newspapers and magazines.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

52. I like to read and study fashion magazines.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

53. I have no interest in keeping up with the latest fashion trends.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

54. I would rather spend my money on clothes than buying on anything else.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

55. Mass media accounts of what women in the public eye are wearing are boring.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

56. I enjoy reading about current fashion trends.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

57. I don't attend fashion shows even when I have the opportunity.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

58. Planning and selecting my wardrobe can be included among my favorite activities.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

59. I enjoy window-shopping to see the clothes.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

60. I am not clothes-conscious.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

61. I would like to be considered one of the best-dressed students.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

62. The subject of clothing is uninteresting to me.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

63. It is tiresome keeping up with fashion.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

64. I don't enjoy shopping for clothing or fabrics.
- | | | | | |
|------------|-----------|-----------|-----------|------------|
| 1 | 2 | 3 | 4 | 5 |
| definitely | partially | uncertain | partially | definitely |
| true | true | | false | false |
65. I think clothes are important in expressing one's creativity.
- | | | | | |
|------------|-----------|-----------|-----------|------------|
| 1 | 2 | 3 | 4 | 5 |
| definitely | partially | uncertain | partially | definitely |
| true | true | | false | false |
66. I am not too concerned with clothes.
- | | | | | |
|------------|-----------|-----------|-----------|------------|
| 1 | 2 | 3 | 4 | 5 |
| definitely | partially | uncertain | partially | definitely |
| true | true | | false | false |
67. I keep my wardrobe in top condition at all times.
- | | | | | |
|------------|-----------|-----------|-----------|------------|
| 1 | 2 | 3 | 4 | 5 |
| definitely | partially | uncertain | partially | definitely |
| true | true | | false | false |
68. I stop to look at clothes only when I plan to buy.
- | | | | | |
|------------|-----------|-----------|-----------|------------|
| 1 | 2 | 3 | 4 | 5 |
| definitely | partially | uncertain | partially | definitely |
| true | true | | false | false |

To help us better understand your reactions, please answer the following questions directly on the questionnaire.

1. Do you presently own or have you previously owned a pair of dress slacks? If yes, please indicate the number of dress slacks that you owned.

1. Yes	2. No	3. Number:
--------	-------	------------

2. If yes, please answer the questions. Please indicate the brand of dress slacks that you own now, estimate price paid, and length of time you have owned them.

Brand

Price

Length of ownership

3. Where do you shop most frequently for your dress slacks?
- (1) Specialty clothing store
(2) Discount store
(3) Department store
(4) Clothing chain store
(5) Mail order
(6) Consignment store
(7) Other (Please specify) _____
4. How do you usually pay for your apparel?
- (1) Cash or check (2) Credit card (3) Both
5. Please list all the brands of dress slacks that you know of.
6. Your age: (years)
7. Your sex: 1. male 2. female
8. Your college and major:
- College Major
9. Class standing: _____ sophomore _____ junior _____ senior
 _____ graduate
10. Have you taken part in a research study similar to this before?
- _____ yes _____ no
- If yes, how recently? _____
11. What do you think the purpose of this research?

THANK YOU FOR PARTICIPATING!

Appendix B: Final Instrument

SURVEY RESPONSE BOOKLET

In this booklet you will be asked to respond to a product description of garments. We are seeking your true reaction to this situation presented to you. Please respond in a natural manner -- the way you would actually react. Take your time in responding.

The questionnaire is divided into four sections. The first section provides you with a description of a specific garment. The second section asks you to respond to questions based on the product description of the specific garment. The third section asks you to indicate your perceptions about the garment description. The fourth section asks you to respond to certain questions related to clothing and textiles in general. A final section asks questions that will be used to classify your answers with those of other respondents.

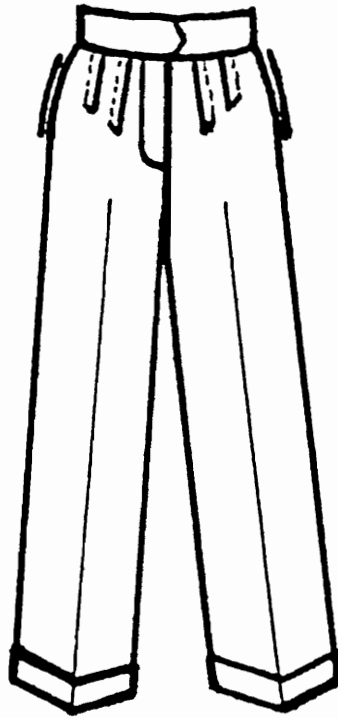
Please assume that you are truly interested in purchasing the product described. We are interested in reactions of both men and women. Further, please use your knowledge about and experience with other brands of this product as an aid in your evaluation.

Thank you for your time and cooperation.

Assume that the advertisement below came to your attention. After carefully reading the advertisement please turn to the next page to provide some information regarding your reaction to it.

Dress Slacks:

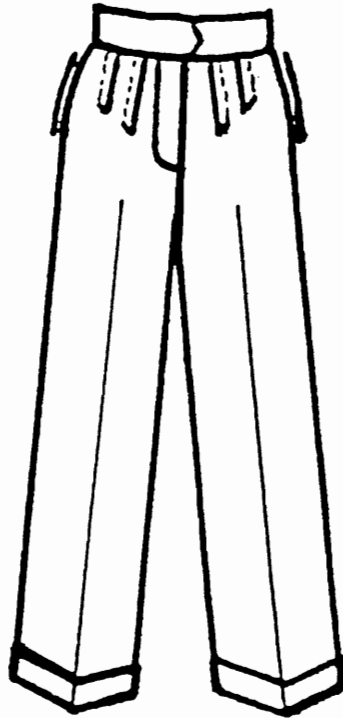
Our distinctive, exclusive trousers are constructed with a blend of 82% wool and 18% polyester for ultimate comfort. Finely constructed and carefully detailed with sharp, box pleats and two sideseam pockets. One back welt pocket with flap. One back welt pocket. Neatly styled with a wide tab waistband. Straight legged with cuffed finish. Fully lined. Dry clean. \$32.99



Assume that the advertisement below came to your attention. After carefully reading the advertisement please turn to the next page to provide some information regarding your reaction to it.

Dress Slacks:

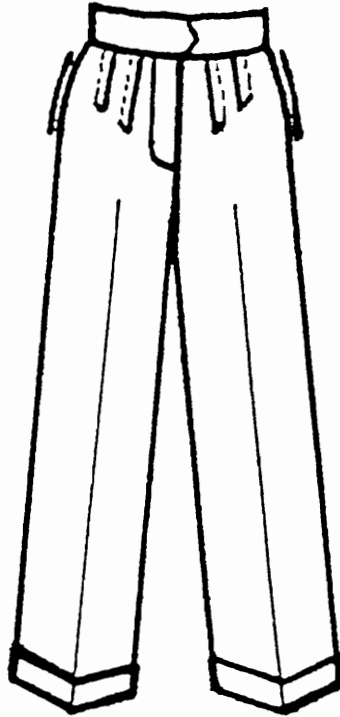
Our distinctive, exclusive trousers are constructed with a blend of 82% wool and 18% polyester for ultimate comfort. Finely constructed and carefully detailed with sharp, box pleats and two sideseam pockets. One back welt pocket with flap. One back welt pocket. Straight legged with cuffed finish. Fully lined. Dry clean. \$52.99



Assume that the advertisement below came to your attention. After carefully reading the advertisement please turn to the next page to provide some information regarding your reaction to it.

Dress Slacks:

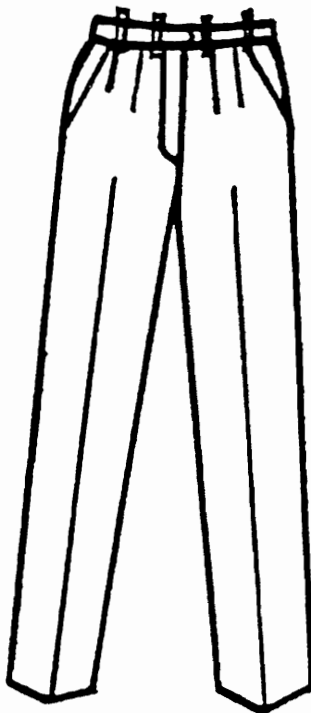
Our distinctive, exclusive trousers are constructed with a blend of 82% wool and 18% polyester for ultimate comfort. Finely constructed and carefully detailed with sharp, box pleats and two sideseam pockets. One back welt pocket with flap. One back welt pocket. Straight legged with cuffed finish. Fully lined. Dry clean. \$72.99



Assume that the advertisement below came to your attention. After carefully reading the advertisement please turn to the next page to provide some information regarding your reaction to it.

Dress Slacks:

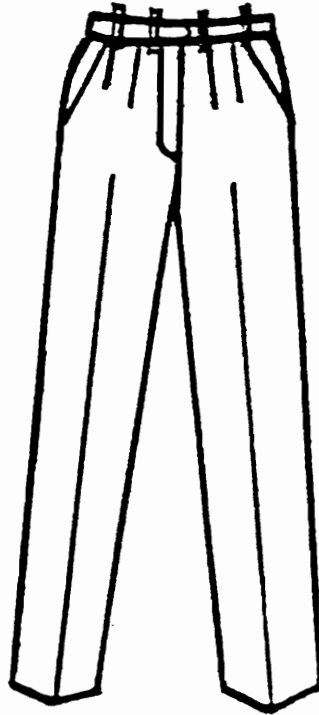
Our 100% worsted wool gabardine trousers are finely tailored with crisp double darts for impeccable fit. Front zipper and two offset slanted pockets. Tab waistband with six belt loops. Slightly tapered legs. Two back welt pockets with button tab. Fully lined. Dry clean. \$32.99



Assume that the advertisement below came to your attention. After carefully reading the advertisement please turn to the next page to provide some information regarding your reaction to it.

Dress Slacks:

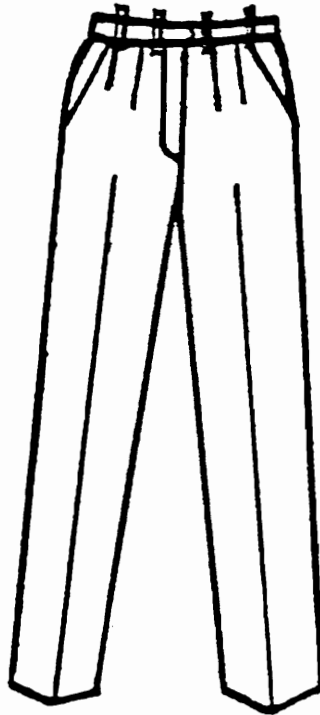
Our 100% worsted wool gabardine trousers are finely tailored with crisp double darts for impeccable fit. Front zipper and two offset slanted pockets. Tab waistband with six belt loops. Slightly tapered legs. Two back welt pockets with button tab. Fully lined. Dry clean. \$52.99



Assume that the advertisement below came to your attention. After carefully reading the advertisement please turn to the next page to provide some information regarding your reaction to it.

Dress Slacks:

Our 100% worsted wool gabardine trousers are finely tailored with crisp double darts for impeccable fit. Front zipper and two offset slanted pockets. Tab waistband with six belt loops. Slightly tapered legs. Two back welt pockets with button tab. Fully lined. Dry clean. \$72.99



This section asks you to respond to several questions based on the description of dress slacks. Please circle the corresponding number that best indicates your impression.

1. To what degree do you think you would find it beneficial to own these slacks?

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high nor low	slightly high	moderately high	very high

2. The monetary sacrifice that I would probably be making if I purchased the described slacks at this price is:

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high nor low	slightly high	moderately high	very high

3. The probability that I would consider buying the described slacks at this price is:

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high nor low	slightly high	moderately high	very high

4. The likelihood that these slacks would be durable is:

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high nor low	slightly high	moderately high	very high

5. To what degree would these slacks be appropriate for your specific use occasions?

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high nor low	slightly high	moderately high	very high

6. In relation to your budget, the amount of money that probably would be required to acquire these slacks is:

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high nor low	slightly high	moderately high	very high

7. I would expect the aesthetic appeal of these slacks to be:

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high nor low	slightly high	moderately high	very high

8. Overall, I think that purchasing the described slacks would provide:

1	2	3	4	5	6	7
very poor value	moderately poor value	slightly poor value	neither good nor poor value	slightly good value	moderately good value	very good value

9. If you had the money, how willing would you be to purchase the slacks described?

Not willing at all	(1)	(2)	(3)	(4)	(5)	(6)	(7)	Very willing
-----------------------	-----	-----	-----	-----	-----	-----	-----	-----------------

10. These slacks are likely to be:

1	2	3	4	5	6	7
very poor quality	moderately poor quality	slightly poor quality	neither poor nor good quality	slightly good quality	moderately good quality	very good quality

11. The price for this garment is:

1	2	3	4	5	6	7
much less than	somewhat less than expected	slightly less than expected	about as expected	slightly more than expected	somewhat more than expected	much more than expected

12. In terms of becomingness, how attractive would you expect these slacks to be on you?

1	2	3	4	5	6	7
very unattrac- tive	moderately	slightly	neither unattractive nor attractive	slightly	moderately	very attrac- tive

13. Given the description, the likelihood that I would consider purchasing these slacks is:

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high nor low	slightly high	moderately high	very high

14. Before deciding whether to purchase the described slacks, I would shop around more.

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree	slightly agree	moderately agree	strongly agree

15. The workmanship (construction quality) of these slacks is likely to be:

1	2	3	4	5	6	7
very low	moderately low	slightly low	neither high nor low	slightly high	moderately high	very high

16. How beneficial do you feel wearing of these slacks would be to you?

1	2	3	4	5	6	7
very unbeneficial	moderately unbeneficial	slightly unbeneficial	neither beneficial nor unbeneficial	slightly beneficial	moderately beneficial	very beneficial

How would you rate the described attributes of the slacks?
Please circle the corresponding number on the questionnaire.

- | | | | | | | | | | |
|-----|-------------------------------|---|---|---|---|---|---|---|--------------------------------------|
| 17. | Irrelevant | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very relevant |
| 18. | Features I would not consider | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Features I would definitely consider |
| 19. | Not at all important | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very important |
| 20. | Unfashionable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Fashionable |
| 21. | Common | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Unique |
| 22. | Not prestigious | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Prestigious |

23. Very atypical 1 2 3 4 5 6 7 Very typical
24. Very unrepresentative 1 2 3 4 5 6 7 Very representative

Please indicate your overall perception of the dress slacks as described on the previous page.

25. Unfavorable 1 2 3 4 5 6 7 Favorable
26. Bad 1 2 3 4 5 6 7 Good
27. Negative 1 2 3 4 5 6 7 Positive

Please indicate your evaluation of the description on the previous page.

28. Not informative 1 2 3 4 5 6 7 Very informative
29. Hard to understand 1 2 3 4 5 6 7 Easy to understand
30. Unbelievable 1 2 3 4 5 6 7 Believable

Please circle the number which best indicates how you feel about your knowledge of clothing products in general.

31. How knowledgeable are you about clothing?
Not at all 1 2 3 4 5 6 7 Extremely Knowledgeable
32. What is your experience in shopping for clothing?
Never have shopped before 1 2 3 4 5 6 7 Shop very often

33. How confident do you feel recommending clothing to your friends?

Not at all confident	1	2	3	4	5	6	7	Extremely confident
-------------------------	---	---	---	---	---	---	---	------------------------

This section asks you to indicate the right answer for every question. Please answer all the questions (guess if you have to!).

Each line below contains three terms which are related. One term does not belong in the same line. Indicate which is the odd term by circling the correct number on the questionnaire.

EXAMPLE: (1) Red (2) Green (3) Blue (4) Flower
Red, green, and blue are the terms related to color. Flower, however, is not. To answer this, you would circle #4.

- 34. (1) Cotton (2) Wool (3) Silk (4) Rayon
- 35. (1) Dacron (2) Lycra (3) Fortrel (4) Trevira
- 36. (1) Gathering (2) Shirring (3) Balancing (4) Smocking
- 37. (1) Blind Stitch (2) Pinking (3) Trueing (4) Overlock
- 38. (1) Plaid (2) Striped (3) Printed (4) Spinned
- 39. (1) Salvage (2) Staple (3) Filament (4) Combed
- 40. (1) Course (2) Bias (3) Warp (4) Filling
- 41. (1) Clasp (2) Gauge (3) Snap (4) Hook & Bar
- 42. (1) Spiral (2) Twill (3) Plain (3) Satin
- 43. (1) Facing (2) Binding (3) Hem (4) Flocking
- 44. (1) Box (2) Knife (3) Patch (4) Inverted
- 45. (1) Voile (2) Gabardine (3) Brocade (4) Denim
- 46. (1) Sloper (2) Block (3) Ruler (4) Basic pattern

Please read the following statements about clothing. Please rate each according to the extent to which you believe the statement is true or not true. Use the following guide, and circle the corresponding number.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

47. I enjoy clothes like some people do such things as books, records, and movies.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

48. Clothing is so attractive to me that I am tempted to spend more money on it than I should.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

49. I skip over the clothing ads in newspapers and magazines.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

50. I like to read and study fashion magazines.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

51. I have no interest in keeping up with the latest fashion trends.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

52. I would rather spend my money on clothes than buying on anything else.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

53. Mass media accounts of what women in the public eye are wearing are boring.

1	2	3	4	5
definitely true	partially true	uncertain	partially false	definitely false

54. I enjoy reading about current fashion trends.
- | | | | | |
|--------------------|-------------------|-----------|--------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |
| definitely
true | partially
true | uncertain | partially
false | definitely
false |
55. I don't attend fashion shows even when I have the opportunity.
- | | | | | |
|--------------------|-------------------|-----------|--------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |
| definitely
true | partially
true | uncertain | partially
false | definitely
false |
56. Planning and selecting my wardrobe can be included among my favorite activities.
- | | | | | |
|--------------------|-------------------|-----------|--------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |
| definitely
true | partially
true | uncertain | partially
false | definitely
false |
57. I enjoy window-shopping to see the clothes.
- | | | | | |
|--------------------|-------------------|-----------|--------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |
| definitely
true | partially
true | uncertain | partially
false | definitely
false |
58. I am not clothes-conscious.
- | | | | | |
|--------------------|-------------------|-----------|--------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |
| definitely
true | partially
true | uncertain | partially
false | definitely
false |
59. I would like to be considered one of the best-dressed students.
- | | | | | |
|--------------------|-------------------|-----------|--------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |
| definitely
true | partially
true | uncertain | partially
false | definitely
false |
60. The subject of clothing is uninteresting to me.
- | | | | | |
|--------------------|-------------------|-----------|--------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |
| definitely
true | partially
true | uncertain | partially
false | definitely
false |
61. It is tiresome keeping up with fashion.
- | | | | | |
|--------------------|-------------------|-----------|--------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |
| definitely
true | partially
true | uncertain | partially
false | definitely
false |
62. I don't enjoy shopping for clothing or fabrics.
- | | | | | |
|--------------------|-------------------|-----------|--------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |
| definitely
true | partially
true | uncertain | partially
false | definitely
false |

63. I think clothes are important in expressing one's creativity.

1	2	3	4	5
definitely	partially	uncertain	partially	definitely
true	true		false	false

64. I am not too concerned with clothes.

1	2	3	4	5
definitely	partially	uncertain	partially	definitely
true	true		false	false

65. I keep my wardrobe in top condition at all times.

1	2	3	4	5
definitely	partially	uncertain	partially	definitely
true	true		false	false

66. I stop to look at clothes only when I plan to buy.

1	2	3	4	5
definitely	partially	uncertain	partially	definitely
true	true		false	false

To help us better understand your reactions, please answer the following questions directly on the questionnaire.

1. Do you presently own or have you previously owned a pair of dress slacks? If yes, please indicate the number of dress slacks that you owned.

1. Yes 2. No 3. Number:

2. If yes, please answer the questions. Please indicate the brand of dress slacks that you own now, estimate price paid, and length of time you have owned them.

Brand

Price

Length of ownership

APPENDIX C: CORRELATIONAL ANALYSIS

TABLE C-1: CORRELATIONAL ANALYSIS 1

Correlation Analysis										
Pearson Correlation Coefficients / Prob > R under Ho: Rho=0 / Number of Observations										
	FASHION	TYPICAL	OVERALL	SUBJECTV	KNOWLEDG	INTEREST				
INTEREST	0.00608 0.9013 419	-0.07551 0.1228 419	-0.07842 0.1090 419	-0.67971 0.0001 420	-0.49047 0.0001 420	1.00000 0.0 420				
PB	0.51100 0.0001 419	0.37732 0.0001 419	0.69055 0.0001 419	0.10651 0.0291 420	0.10557 0.0305 420	-0.13299 0.0063 420				
MS	0.02168 0.6581 419	-0.00812 0.8683 419	-0.09467 0.0528 419	-0.16531 0.0007 420	-0.01614 0.7416 420	0.11416 0.0193 420				
NB	0.43479 0.0001 419	0.34685 0.0001 419	0.67822 0.0001 419	0.20592 0.0001 420	0.10928 0.0251 420	-0.20369 0.0001 420				
PQ	0.24090 0.0001 419	0.21808 0.0001 419	0.33709 0.0001 419	0.14677 0.0026 420	0.14391 0.0031 420	-0.09670 0.0476 420				
PV	0.25601 0.0001 419	0.21868 0.0001 419	0.54753 0.0001 419	0.12187 0.0124 420	0.05220 0.2859 420	-0.11784 0.0157 420				
SI	-0.11279 0.0209 419	-0.03744 0.4447 419	-0.22976 0.0001 419	-0.12616 0.0096 420	-0.18860 0.0001 420	0.10461 0.0321 420				
ATTRIBUT	0.37621 0.0001 419	0.38501 0.0001 419	0.35713 0.0001 419	0.10265 0.0357 419	0.01307 0.7896 419	-0.05964 0.2231 419				
FASHION	1.00000 0.0 419	0.31645 0.0001 419	0.50251 0.0001 419	-0.01121 0.8191 419	-0.02790 0.5691 419	0.00608 0.9013 419				
TYPICAL	0.31645 0.0001 419	1.00000 0.0 419	0.40221 0.0001 419	0.09864 0.0436 419	0.07425 0.1292 419	-0.07551 0.1228 419				
OVERALL	0.50251 0.0001 419	0.40221 0.0001 419	1.00000 0.0 419	0.10143 0.0380 419	0.02736 0.5765 419	-0.07842 0.1090 419				
KNOWLEDG	-0.02790 0.5691 419	0.07425 0.1292 419	0.02736 0.5765 419	0.39259 0.0001 420	1.00000 0.0 421	-0.49047 0.0001 420				
SUBJECTV	-0.01121 0.8191 419	0.09864 0.0436 419	0.10143 0.0380 419	1.00000 0.0 420	0.39259 0.0001 420	-0.67971 0.0001 420				

TABLE C-2: CORRELATIONAL ANALYSIS 2

Correlation Analysis							
Pearson Correlation Coefficients / Prob > R under Ho: Rho=0 / Number of Observations	PB	MS	HB	PQ	PV	SI	ATTRIBUT
INTEREST	-0.13299 0.0063 420	0.11416 0.0193 420	-0.20369 0.0001 420	-0.09670 0.0476 420	-0.11784 0.0157 420	0.10461 0.0321 420	-0.05964 0.2231 419
PB	1.00000 0.0 420	0.01907 0.6968 420	0.70897 0.0001 420	0.32958 0.0001 420	0.56662 0.0001 420	-0.15067 0.0020 420	0.35104 0.0001 419
MS	0.01907 0.6968 420	1.00000 0.0 420	-0.29444 0.0001 420	0.20124 0.0001 420	-0.12336 0.0121 420	0.26637 0.0001 420	0.01740 0.7224 419
HB	0.70897 0.0001 420	-0.29444 0.0001 420	1.00000 0.0 420	0.23229 0.0001 420	0.61271 0.0001 420	-0.28229 0.0001 420	0.28665 0.0001 419
PQ	0.32958 0.0001 420	0.20124 0.0001 420	0.23229 0.0001 420	1.00000 0.0 420	0.29413 0.0001 420	-0.02426 0.6200 420	0.32994 0.0001 419
PV	0.56662 0.0001 420	-0.12336 0.0121 420	0.61271 0.0001 420	0.29413 0.0001 420	1.00000 0.0 420	-0.17215 0.0004 420	0.17727 0.0003 419
SI	-0.15067 0.0020 420	0.26637 0.0001 420	-0.28229 0.0001 420	-0.02426 0.6200 420	-0.17215 0.0004 420	1.00000 0.0 420	-0.05541 0.2578 419
ATTRIBUT	0.35104 0.0001 419	0.01740 0.7224 419	0.28665 0.0001 419	0.32994 0.0001 419	0.17727 0.0003 419	-0.05541 0.2578 419	1.00000 0.0 419
FASHION	0.51100 0.0001 419	0.02168 0.6581 419	0.43479 0.0001 419	0.24090 0.0001 419	0.25601 0.0001 419	-0.11279 0.0209 419	0.37621 0.0001 419
TYPICAL	0.37732 0.0001 419	-0.00812 0.8683 419	0.34685 0.0001 419	0.21808 0.0001 419	0.21868 0.0001 419	-0.03744 0.4447 419	0.38501 0.0001 419
OVERALL	0.69055 0.0001 419	-0.09667 0.0528 419	0.67822 0.0001 419	0.33709 0.0001 419	0.54753 0.0001 419	-0.22976 0.0001 419	0.35713 0.0001 419
KNOWLEDG	0.10557 0.0305 420	-0.01614 0.7416 420	0.10928 0.0251 420	0.14391 0.0031 420	0.05220 0.2859 420	-0.18860 0.0001 420	0.01307 0.7896 419
SUBJECTV	0.10651 0.0291 420	-0.16531 0.0007 420	0.20592 0.0001 420	0.14677 0.0026 420	0.12187 0.0124 420	-0.12616 0.0096 420	0.10265 0.0357 419

APPENDIX D: DESCRIPTIVE STATISTICS

TABLE D-1: KNOWLEDGE BY INTEREST

KNOWLCAT	INTERCAT		Total
	HIGH	LOW	
Frequency			
Row Pct			
HIGH	183 89.27	22 10.73	205
LOW	102 47.44	113 52.56	215
Total	285	135	420

Frequency Missing = 1

STATISTICS FOR TABLE OF KNOWLCAT BY INTERCAT

Statistic	DF	Value	Prob
Chi-Square	1	84.171	0.000
Likelihood Ratio Chi-Square	1	90.224	0.000
Continuity Adj. Chi-Square	1	82.265	0.000
Mantel-Haenszel Chi-Square	1	83.971	0.000
Fisher's Exact Test (Left)			1.000
(Right)			3.35E-21
(2-Tail)			3.80E-21
Phi Coefficient		0.448	
Contingency Coefficient		0.409	
Cramer's V		0.448	

Effective Sample Size = 420

Frequency Missing = 1

TABLE D-2: KNOWLEDGE BY MAJOR

KNOWLCAT	MAJOR		Total
	CT	OTHER	
HIGH	182 88.78	23 11.22	205
LOW	41 18.98	175 81.02	216
Total	223	198	421

STATISTICS FOR TABLE OF KNOWLCAT BY MAJOR

Statistic	DF	Value	Prob
Chi-Square	1	205.692	0.000
Likelihood Ratio Chi-Square	1	228.269	0.000
Continuity Adj. Chi-Square	1	202.900	0.000
Mantel-Haenszel Chi-Square	1	205.204	0.000
Fisher's Exact Test (Left)			1.000
(Right)			4.35E-51
(2-Tail)			4.48E-51
Phi Coefficient		0.699	
Contingency Coefficient		0.573	
Cramer's V		0.699	

Sample Size = 421

TABLE D-3: KNOWLEDGE BY SEX

KNOWLCAT	SEX		Total
	FEMALE	MALE	
HIGH	191 93.17	14 6.83	205
LOW	116 54.46	97 45.54	213
Total	307	111	418

Frequency Missing = 3

STATISTICS FOR TABLE OF KNOWLCAT BY SEX

Statistic	DF	Value	Prob
Chi-Square	1	80.262	0.000
Likelihood Ratio Chi-Square	1	88.107	0.000
Continuity Adj. Chi-Square	1	78.289	0.000
Mantel-Haenszel Chi-Square	1	80.070	0.000
Fisher's Exact Test (Left)			1.000
(Right)			1.10E-20
(2-Tail)			1.26E-20
Phi Coefficient		0.438	
Contingency Coefficient		0.401	
Cramer's V		0.438	
Effective Sample Size = 418			
Frequency Missing = 3			

TABLE D-4: SEX BY INTEREST

SEX	INTERCAT		Total
	HIGH	LOW	
Frequency			
Row Pct			
FEMALE	259 84.36	48 15.64	307
MALE	26 23.42	85 76.58	111
Total	285	133	418

Frequency Missing = 3

STATISTICS FOR TABLE OF SEX BY INTERCAT

Statistic	DF	Value	Prob
Chi-Square	1	139.562	0.000
Likelihood Ratio Chi-Square	1	135.855	0.000
Continuity Adj. Chi-Square	1	136.767	0.000
Mantel-Haenszel Chi-Square	1	139.228	0.000
Fisher's Exact Test (Left)			1.000
(Right)			4.46E-31
(2-Tail)			4.46E-31
Phi Coefficient		0.578	
Contingency Coefficient		0.500	
Cramer's V		0.578	

Effective Sample Size = 418

Frequency Missing = 3

APPENDIX E: PRELIMINARY ANALYSIS

TABLE E-1: ANALYSIS OF COVARIANCE OF MANIPULATION

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	12.62278430	2.10379738	1.75	0.1080
Error	411	493.99709874	1.20193941		
Corrected Total	417	506.61988304			
		C.V.	Root MSE	MANIPUL Mean	
		20.76107	1.0963300	5.2807018	
Source	DF	Type III SS	Mean Square	F Value	Pr > F
PRICECAT	2	5.17987884	2.58993942	2.15	0.1172
WOOLCAT	1	1.14401686	1.14401686	0.95	0.3298
KNOWLEDG	1	0.76504368	0.76504368	0.64	0.4254
INTEREST	1	2.42618370	2.42618370	2.02	0.1561
SEX	1	0.07581363	0.07581363	0.06	0.8018

TABLE E-2: REGRESSION ANALYSIS OF MANIPULATION

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	5	10.11649	2.02330	1.674	0.1396
Error	414	500.36261	1.20861		
C Total	419	510.47910			
Root MSE		1.09937	R-square	0.0198	
Dep Mean		5.27540	Adj R-sq	0.0080	
C.V.		20.83949			
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	5.704412	0.65848996	8.663	0.0001
PRICECAT	1	0.004398	0.00334387	1.315	0.1892
WOOLCAT	1	-0.005157	0.00601574	-0.857	0.3918
KNOWLEDG	1	0.019581	0.02474055	0.791	0.4291
INTEREST	1	-0.135298	0.08957634	-1.510	0.1317
SEXDUMMY	1	-0.037527	0.15975457	-0.235	0.8144

TABLE E-3: COMPARISON OF MEAN AND STANDARD DEVIATION OF STANDARDIZED AND UNSTANDARDIZED INDEPENDENT VARIABLES.

REGRESSION ANALYSES USING STANDARDIZED INDEPENDENT VARIABLES

EACH OF PR, WL, KN, & IN HAS MEAN = 0 & SD = 1.

Variable	N	Mean	Std Dev	Minimum	Maximum
PR	421	1.224885E-14	1.0000000	-1.1758534	1.3055215
WL	421	-7.00416E-16	1.0000000	-1.0599941	0.9411606
KN	421	1.625218E-15	1.0000000	-2.9022072	2.1595455
IN	420	2.124544E-14	1.0000000	-1.5272979	3.1847631
PR_WL	421	-0.0433270	0.9991363	-1.3838450	1.2463976
PR_KN	421	-0.0206761	0.9803437	-2.7722435	2.8193330
PR_IN	420	0.0380507	1.0116434	-3.3850293	4.1577765
WL_KN	421	0.0848196	0.9931190	-2.3649877	3.0763224
WL_IN	420	0.0171026	1.0033753	-3.3758300	2.6518044
KN_IN	420	-0.4849415	0.7963334	-4.0370519	1.6423637

REGRESSION ANALYSES USING NONSTANDARDIZED INDEPENDENT VARIABLES

EACH OF PR, WL, KN, & IN IS THE SAME AS THE ORIGINAL VARIABLE.

Variable	N	Mean	Std Dev	Minimum	Maximum
PR	421	51.9448694	16.1200956	32.9900000	72.9900000
WL	421	91.5344418	8.9948068	82.0000000	100.0000000
KN	421	7.4536817	2.5682803	0	13.0000000
IN	420	2.2478822	0.8170522	1.0000000	4.8500000
PR_WL	421	4748.46	1532.39	2705.18	7299.00
PR_KN	421	386.3245131	183.6538595	0	948.8700000
PR_IN	420	117.2615187	57.6589278	32.9900000	354.0015000
WL_KN	421	684.2280285	251.6204725	0	1300.00
WL_IN	420	205.9353634	77.5910586	86.1000000	455.0000000
KN_IN	420	15.7772807	5.6892055	0	33.9500000

TABLE E-4: COMPARISON OF VARIANCE INFLATION OF STANDARDIZED
AND UNSTANDARDIZED INDEPENDENT VARIABLES

Dependent Variable: PQ

REGRESSION ANALYSES USING STANDARDIZED INDEPENDENT VARIABLES

EACH OF PR, WL, KN, & IN HAS MEAN = 0 & SD = 1.

Parameter Estimates

Variable	DF	Parameter Estimate	Variance Inflation	T for H0: Parameter=0	Prob > T
INTERCEP	1	5.420118	0.00000000	119.388	0.0001
PR	1	0.154356	1.01162328	4.086	0.0001
WL	1	0.102718	1.01650192	2.709	0.0070
KN	1	0.090769	1.41154746	2.013	0.0447
IN	1	-0.044341	1.48195299	-0.969	0.3333
PR_WL	1	0.035365	1.01528611	0.934	0.3511
PR_KN	1	-0.001809	1.38748522	-0.040	0.9680
PR_IN	1	0.030243	1.40863629	0.685	0.4934
WL_KN	1	-0.042589	1.35577094	-0.957	0.3393
WL_IN	1	-0.091556	1.37372964	-2.084	0.0378
KN_IN	1	0.014502	1.14369943	0.287	0.7741

REGRESSION ANALYSES USING NONSTANDARDIZED INDEPENDENT VARIABLES

EACH OF PR, WL, KN, & IN IS THE SAME AS THE ORIGINAL VARIABLE.

Parameter Estimates

Variable	DF	Parameter Estimate	Variance Inflation	T for H0: Parameter=0	Prob > T
INTERCEP	1	1.441521	0.00000000	0.541	0.5891
PR	1	-0.017586	131.25246638	-0.659	0.5104
WL	1	0.040496	43.43996726	1.469	0.1425
KN	1	0.190829	168.42565868	0.995	0.3202
IN	1	0.915272	162.23922727	1.561	0.1192
PR_WL	1	0.000244	113.57678230	0.934	0.3511
PR_KN	1	-0.000043704	28.11066679	-0.040	0.9680
PR_IN	1	0.002296	26.37801964	0.685	0.4934
WL_KN	1	-0.001844	163.75039441	-0.957	0.3393
WL_IN	1	-0.012458	152.09485195	-2.084	0.0378
KN_IN	1	0.006911	13.25686357	0.287	0.7741

APPENDIX F: TESTS FOR INTERACTION

TABLE F-1: MODEL CONTAINING TWO-WAY INTERACTION TERMS FOR
PERCEPTION OF MONETARY SACRIFICE

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	10	238.81431	23.88143	24.587	0.0001
Error	407	395.32605	0.97132		
C Total	417	634.14035			
Root MSE		0.98555	R-square	0.3766	
Dep Mean		4.45614	Adj R-sq	0.3613	
C.V.		22.11677			
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.420918	0.05833450	75.786	0.0001
PR	1	0.711895	0.04853797	14.667	0.0001
WL	1	-0.135540	0.04861405	-2.788	0.0056
KN	1	0.074770	0.05750671	1.300	0.1943
IN	1	-0.154445	0.05916626	-2.610	0.0094
PR_WL	1	0.003905	0.04866930	0.080	0.9361
PR_KN	1	-0.055693	0.05691415	-0.979	0.3284
PR_IN	1	-0.092307	0.05669285	-1.628	0.1043
WL_KN	1	-0.026959	0.05700783	-0.473	0.6365
WL_IN	1	-0.012468	0.05659002	-0.220	0.8257
KN_IN	1	0.060995	0.06369624	0.958	0.3388

TABLE F-2: MODEL CONTAINING TWO-WAY INTERACTION TERMS
FOR PERCEPTION OF RELEVANCE

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	10	21.12120	2.11212	1.460	0.1519
Error	407	588.71937	1.44648		
C Total	417	609.84058			
Root MSE	1.20270	R-square	0.0346		
Dep Mean	4.80662	Adj R-sq	0.0109		
C.V.	25.02173				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.820268	0.07118720	67.713	0.0001
PR	1	0.080183	0.05923223	1.354	0.1766
WL	1	0.032091	0.05932507	0.541	0.5888
KN	1	-0.003134	0.07017703	-0.045	0.9644
IN	1	0.067373	0.07220222	0.933	0.3513
PR_WL	1	-0.090915	0.05939249	-1.531	0.1266
PR_KN	1	-0.058564	0.06945391	-0.843	0.3996
PR_IN	1	-0.087896	0.06918385	-1.270	0.2046
WL_KN	1	-0.092425	0.06956823	-1.329	0.1847
WL_IN	1	0.128005	0.06905837	1.854	0.0645
KN_IN	1	-0.025669	0.07773029	-0.330	0.7414

TABLE F-3: MAXIMUM R-SQUARE IMPROVEMENT TECHNIQUE FOR PERCEPTION OF QUALITY

Step	0	The First	4 Vars Entered	R-square = 0.07245931	C(p) = 5.34146834	
DF		Sum of Squares	Mean Square	F	Prob>F	
Regression	4	19.19328175	4.79832044	8.07	0.0001	
Error	413	245.69029082	0.59489175			
Total	417	264.88357257				
Variable	Parameter Estimate	Standard Error	Sum of Squares	Type II	F	Prob>F
INTERCEP	5.41001406	0.03772549	12233.90081324		20564.9	0.0001
PR	0.14877475	0.03784433	9.19379204		15.45	0.0001
IA	0.10593810	0.03796104	4.63303993		7.79	0.0055
KN	0.09199345	0.04374012	2.63143020		4.42	0.0361
IN	0.03957423	0.04365662	0.48883543		0.82	0.3652
Bounds on condition number:		1.341111,	18.7641			

All variables left in the model are required or significant at the 0.0500 level.
 No other variable met the 0.0500 significance level for entry into the model.

TABLE F-4: MAXIMUM R-SQUARE IMPROVEMENT TECHNIQUE
FOR PERCEPTION OF VALUE

Step 0 The First 4 Vars Entered R-square = 0.02682175 C(p) = 2.33887970

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	4	21.13637321	5.28409330	2.85	0.0238
Error	413	766.89472727	1.85688796		
Total	417	788.03110048			

Variable	Parameter Estimate	Standard Error	Sum of Squares	Type II	F	Prob>F
INTERCEP	4.53427218	0.06665132	8593.76236528		4628.05	0.0001
PR	-0.03489738	0.06686129	0.50585008		0.27	0.6020
IA	0.15398207	0.06706748	9.78818051		5.27	0.0222
KN	-0.01288591	0.07727763	0.05163072		0.03	0.8676
IN	0.16762247	0.07713012	8.77005258		4.72	0.0303

Bounds on condition number: 1.341111, 18.7641

All variables left in the model are required or significant at the 0.0500 level.
No other variable met the 0.0500 significance level for entry into the model.

TABLE F-5: MAXIMUM R-SQUARE IMPROVEMENT TECHNIQUE
FOR WILLINGNESS TO BUY

Step 0		The First 4 Vars Entered	R-square = 0.08000606	C(p) = 3.09077732		
	DF	Sum of Squares	Mean Square	F Prob>F		
Regression	4	67.89465557	16.97366389	8.98 0.0001		
Error	413	780.72423066	1.89037344			
Total	417	848.61888623				
Variable	Parameter Estimate	Standard Error	Sum of Squares	Type II Sum of Squares	F	Prob>F
INTERCEP	3.40132920	0.06724960	4835.76851522	2558.10	0.0001	0.0001
PR	-0.05402095	0.06746145	1.21216191	0.64	0.4237	0.4237
IA	0.26939939	0.06766950	29.96090168	15.85	0.0001	0.0001
KN	0.00419612	0.07797130	0.00547488	0.00	0.9571	0.9571
IN	0.29393363	0.07782246	26.96722663	14.27	0.0002	0.0002
Bounds on condition number:		1.341111,	18.7641			

All variables left in the model are required or significant at the 0.0500 level.
No other variable met the 0.0500 significance level for entry into the model.

TABLE F-6: MAXIMUM R-SQUARE IMPROVEMENT TECHNIQUE
FOR SEARCH INTENTION

Step 0		The First	4 Vars Entered	R-square = 0.07706701	C(p) = 3.67057915	
	DF	Sum of Squares	Mean Square	F	Prob>F	
Regression	4	69.49527104	17.37381776	8.62	0.0001	
Error	413	832.25592513	2.01514752			
Total	417	901.75119617				
Variable	Parameter Estimate	Standard Error	Sum of Squares	Type II	F	Prob>F
INTERCEP	5.77820290	0.06943354	13955.76808519		6925.43	0.0001
PR	0.25401522	0.06965227	26.80129137		13.30	0.0003
IA	-0.15128544	0.06986708	9.44834937		4.69	0.0309
KN	-0.24546258	0.08050343	18.73478297		9.30	0.0024
IN	-0.02977348	0.08034976	0.27669213		0.14	0.7112
Bounds on condition number:		1.341111,	18.7641			

All variables left in the model are required or significant at the 0.0500 level.
No other variable met the 0.0500 significance level for entry into the model.

TABLE F-7: MAXIMUM R-SQUARE IMPROVEMENT TECHNIQUE
FOR ATTITUDE TOWARD ADVERTISEMENTS

Step 0		The First	4 Vars Entered	R-square = 0.05325398	C(p) = 4.22933441	
Variable	DF	Sum of Squares	Mean Square	F	Prob>F	
Regression	4	40.60150983	10.10037746	5.81	0.0001	
Error	413	718.25558746	1.73911765			
Total	417	758.65709729				
Variable	Parameter Estimate	Standard Error	Sum of Squares	Type II	F	Prob>F
INTERCEP	4.33869477	0.06450307	7868.39882805		4524.36	0.0001
PR	0.09310443	0.06470627	3.60061684		2.07	0.1509
IA	0.28328465	0.06490582	33.12895584		19.05	0.0001
KN	-0.03329813	0.07478688	0.34476073		0.20	0.6564
IN	0.12903607	0.07464412	5.19708681		2.99	0.0846
Bounds on condition number:		1.341111,	18.7641			

All variables left in the model are required or significant at the 0.0500 level.

No other variable met the 0.0500 significance level for entry into the model.

TABLE F-8: MAXIMUM R-SQUARE IMPROVEMENT TECHNIQUE FOR PERCEPTION OF TYPICALITY

Step 0		The First 4 Vars Entered	R-square = 0.01816925	C(p) = 2.00681894
Variable	DF	Sum of Squares	Mean Square	F Prob>F
Regression	4	9.58506128	2.39626532	1.91 0.1078
Error	413	517.95800092	1.25413560	
Total	417	527.54306220		
Variable	Parameter Estimate	Standard Error	Sum of Squares	Type II F Prob>F
INTERCEP	4.67989392	0.05477573	9154.61711570	7299.54 0.0001
PR	0.01581056	0.05494828	0.10383191	0.08 0.7737
IA	0.11121312	0.05511774	5.10591632	4.07 0.0443
KN	0.05786852	0.06350870	1.04126880	0.83 0.3627
IN	0.05728011	0.06338747	1.02410728	0.82 0.3667
Bounds on condition number:		1.341111,	18.7641	

All variables left in the model are required or significant at the 0.0500 level.
 No other variable met the 0.0500 significance level for entry into the model.

APPENDIX G: PATH ANALYSIS

TABLE G-1: PATH ANALYSIS OF MODEL 1

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	2	13.56596	6.78298	11.220	0.0001
Error	416	251.48522	0.60453		
C Total	418	265.05118			
Root MSE	0.77752	R-square	0.0512		
Dep Mean	5.40891	Adj R-sq	0.0466		
C.V.	14.37473				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	5.411311	0.03813684	141.892	0.0001
PR	1	0.181837	0.04711483	3.859	0.0001
IA	1	0.110909	0.03809887	2.911	0.0038
Standardized					
Variable	DF	Estimate			
INTERCEP	1	0.00000000			
PR	1	0.18449117			
IA	1	0.13915650			

TABLE G-2: PATH ANALYSIS OF MODEL 2

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	3	91.28029	30.42676	23.083	0.0001
Error	415	547.02137	1.31812		
C Total	418	638.30166			
Root MSE	1.14810	R-square	0.1430		
Dep Mean	4.18103	Adj R-sq	0.1368		
C.V.	27.45966				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	1.721931	0.39579051	4.351	0.0001
PR	1	0.131984	0.07080524	1.864	0.0630
IA	1	0.211875	0.05682765	3.728	0.0002
PQ	1	0.453395	0.07239722	6.263	0.0001
Standardized Estimate					
Variable	DF	Standardized Estimate			
INTERCEP	1	0.00000000			
PR	1	0.08629091			
IA	1	0.17130521			
PQ	1	0.29216523			

TABLE G-3: PATH ANALYSIS OF MODEL 3

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	3	282.87869	94.29290	77.432	0.0001
Error	415	505.36952	1.21776		
C Total	418	788.24821			
Root MSE	1.10352	R-square	0.3589		
Dep Mean	4.53461	Adj R-sq	0.3542		
C.V.	24.33553				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	1.480955	0.39730442	3.728	0.0002
PB	1	0.574594	0.04633139	12.402	0.0001
PQ	1	0.270914	0.07338678	3.692	0.0003
MS	1	-0.182636	0.04478440	-4.078	0.0001
Standardized					
Variable	DF	Estimate			
INTERCEP	1	0.0000000			
PB	1	0.51706196			
PQ	1	0.15709563			
MS	1	-0.16385078			

TABLE G-4: PATH ANALYSIS OF MODEL 4

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	1	318.42838	318.42838	249.527	0.0001
Error	417	532.14560	1.27613		
C Total	418	850.57399			
Root MSE	1.12966	R-square	0.3744		
Dep Mean	3.39658	Adj R-sq	0.3729		
C.V.	33.25872				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	0.514447	0.19061849	2.699	0.0072
PV	1	0.635586	0.04023608	15.796	0.0001
Standardized					
Variable	DF	Estimate			
INTERCEP	1	0.00000000			
PV	1	0.61185686			

TABLE G-5: PATH ANALYSIS OF MODEL 5

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	1	27.54496	27.54496	13.117	0.0003
Error	417	875.69131	2.09998		
C Total	418	903.23628			
Root MSE	1.44913	R-square	0.0305		
Dep Mean	5.78282	Adj R-sq	0.0282		
C.V.	25.05925				
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	6.630491	0.24452614	27.116	0.0001
PV	1	-0.186935	0.05161501	-3.622	0.0003
Variable	DF	Standardized Estimate			
INTERCEP	1	0.00000000			
PV	1	-0.17463063			

TABLE G-6: PATH ANALYSIS OF MODEL 6

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	1	214.75503	214.75503	213.383	0.0001
Error	417	419.68040	1.00643		
C Total	418	634.43543			
Root MSE		1.00321	R-square	0.3385	
Dep Mean		4.45744	Adj R-sq	0.3369	
C.V.		22.50640			
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > T
INTERCEP	1	4.504021	0.04911359	91.706	0.0001
PR	1	0.887184	0.06073421	14.608	0.0001
Standardized					
Variable	DF	Estimate			
INTERCEP	1	0.00000000			
PR	1	0.58180568			

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- 1980-1983 Korean Society of Home Economics, member
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- ACPTC Proceedings: Combined Central, Eastern, and Western Meetings,
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Effects of Various Clothing Attributes on Consumers' Evaluation and Buying Intention

Advertising Effects of Clothing Products on Consumers' Decision-Making

International Trade and Marketing of Clothing and Textiles

Development of Research Methodology in Clothing and Textiles

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1987, Nov. 4-7. Mergers and Acquisitions
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1991, May 16. Fiber Textile Apparel Complex Facing Challenges:
Policy Impacts of the GATT and the 1990 Farm Bill
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