

The Impact of Discounts on Subjective Product Evaluations

by

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(ABSTRACT)

This dissertation investigated the effects of price and various forms of discounts on buyers' subjective evaluations of products. The role that price plays in product evaluations was examined from both the economic and behavioral perspectives, and a conceptualization derived from these two perspectives was reviewed. This original price-perceived quality conceptualization was extended using transaction utility theory. Based on the extended price-perceived quality model, hypotheses were developed to posit the relationships that the extrinsic cues of price and forms of discounts have with the constructs of perceived quality, perceived sacrifice, perceived value, willingness to buy, acquisition value, transaction value, and redemption effort. Also, the relationship among these constructs as posited by the extended conceptualization was examined.

The research was conducted in three phases. The first phase determined the product and price levels to be used in the final stage of the research; the second phase checked the reliability of the indicators to be used in the final stage of the research; and, in the final phase, a 4 x 4 between subjects design was used to test the research hypotheses. PACKAGE was used to test the reliability of the indicators for each construct in both the pretest and final data collection stages. The analysis for the experiment incorporated ANOVA, Duncan's multiple comparisons, trend analysis, and LISREL to test the significance of the proposed relationships.

In general, the analysis provided good support for the hypothesized effects. The principal exceptions being the posited relationships of perceived quality and perceived value with the independent variable forms of discounts. Also, the relationships of several of the dependent variables with transaction value were weak leading to speculation of the role that transaction value has in buyers' subjective product evaluations. Finally, the major findings of the research were discussed

with respect to the theoretical, methodological, and managerial significance. Limitations and directions for future research were also discussed.

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Chapter I

Introduction

This dissertation investigated the impact of discounts on buyers' subjective evaluations of products. More specifically, the impact of discounts on buyers' perceptions of quality, sacrifice, and value as well as buyers' willingness to buy was measured.

This first chapter begins with an overview of the research problem that is being investigated, the conceptualization, the design, and the methodology incorporated in the research. This is followed by a brief section that highlights the results of the pretests as well as the actual experiment. The significance of the research is discussed, and the chapter concludes with a brief overview of each chapter to follow.

The Problem

For years, economists have assumed that buyers viewed price as only an index of sacrifice, that is, higher prices would mean greater sacrifice or disutility. However, there are numerous ex-

amples in the marketplace of retailers experiencing an increase in unit sales when they increased the price of a product. Also, when introducing a new product, some sellers intentionally set prices high for their products so as to enhance the perceived level of quality attributed to the product by buyers. Thus, a higher price may not only indicate greater sacrifice, but also greater quality. While practitioners appear to assume that buyers do associate better quality with higher prices, researchers have not been able to agree on the relationship between price and perceived quality.

This problem has attracted a substantial amount of research interest. Scitovszky (1945) was the first to suggest that buyers not only use price as an index of sacrifice, but also as an index of product quality. Since then, 48 research studies have empirically investigated this proposed price-perceived quality relationship. Although these research results tend to support a positive price-perceived quality relationship, it has also been posited that extrinsic cues other than price will affect buyers' perceptions of quality. The effects of brand name and store name on perceived quality have been studied and the findings seem to indicate that brand name and store name interact with price to enhance perceptions of quality. Also, brand name and store name independently have been shown to be indicators of perceived product quality.

However, while buyers may often use price, brand name, or store name when evaluating products, there has been little research conducted to investigate the effect of other extrinsic cues on buyers' subjective product evaluations. One type of extrinsic cue that has not been investigated is the effect of a price promotion on buyers' product evaluations. This lack of research is very surprising considering the vast amounts of sales promotions used by both manufacturers and retailers.

Thaler (1985) has suggested that deal proneness affects subjective product evaluations. Price discounts are extrinsic cues used by sellers to enhance buyers' perceptions of a deal. Promotional cues such as forms of discounts (coupons, rebates, regular price/sale price) are examples of extrinsic cues that have received little attention in the price-perceived quality research area. These forms of discounts may be perceived as offering a deal because of the reference prices presented with each discount, i.e., buyers may compare the reduced price of the offer (the actual price paid) with a higher reference price (e.g. regular price or manufacturer's suggested retail price) and perceive the offer as a "deal." Previous research has shown that consumers do not evaluate prices singly, but

judge prices in reference to standards that may be objective or subjective (Monroe 1973). Thus, sellers who present both the offered (actual) price and a higher comparative price are attempting to impose a reference or standard price for the consumer so that there will be a perceived deal. The following section explains how discounts may affect the price-perceived quality relationship.

Overview of the Conceptualization

The conceptual model (Figure 1; Chapter II) proposed by Monroe and Krishnan (1985) defines the influence of price on buyers' perceptions of product quality, sacrifice, value, and willingness to buy. In essence, the model suggests that buyers use price as an index of perceived product quality as well as an index of the perceived sacrifice that is made when purchasing a product. Perceived value represents a tradeoff between buyers' perceptions of quality and sacrifice. Perceptions of value are positive when perceptions of quality are greater than the perceptions of sacrifice. Willingness to buy is positively related to perceived value.

The model was extended by Dodds (1985) to include the effect of brand name and store name on perceptions of quality, value, and buyers' willingness to buy. This research extends the price-perceived quality conceptualization by examining the effects of discounts on perceptions of quality, value, and buyers' willingness to buy as well as on buyers' perceptions of sacrifice. The relationship between perceived sacrifice and the other three constructs has been empirically investigated only once in past research in this area (Rao 1986). Rao (1986) found tentative support for the perceived sacrifice relationships. These perceived sacrifice relationships were also tested in this research.

Thaler's (1985) transaction utility theory based on Kahneman and Tversky's (1979) prospect theory provides a mechanism for incorporating discounts within the above conceptualization. Tversky and Kahneman (1981) have shown that often the choices that people make depend not only on the objective features of a decision problem, but also on the way the problem is posed. These authors define how a choice is presented to an individual as "framing the choice." In con-

sidering the framing effects, Kahneman and Tversky (1979) developed "prospect theory" as an alternative to economic utility theory. In prospect theory, the objective probabilities of economic utility theory are replaced with subjective decision weights and the utility function is replaced by a value function that is defined over changes in wealth rather than final asset position.

The prospect theory value function proposed by Kahneman and Tversky (1979) is defined over single, unidimensional outcomes, i.e., a single gain or a single loss. Thaler's (1985) transaction utility theory extends prospect theory to incorporate compound outcomes that are measured along the same dimension (e.g., dollars). A purchase is defined as a compound outcome in that the buyer gains a product but loses the money paid for the product. Thaler proposes that buyers evaluate a purchase by first judging the value of the offer and then deciding whether to make a purchase. The overall value of the offer is conceived to be the sum of acquisition value and transaction value. The acquisition value of the product is the perceived benefits of the product compared to the outlay (or price). Thus, acquisition value is conceptually equivalent to the concept of perceived value in the price-perceived quality conceptualization. However, perceived value is not just the perceived benefits of the product compared to the outlay, but must also include the perceived merits of the offer.

Transaction value is the perceived merits of the offer. Thaler argues that buyers have a notion of what is a "fair" or "usual" price for a product. This fair or usual price serves as a reference price to compare to the actual price. The perceived merits of the offer is the contrast between the actual price and the buyers' reference prices. For any buyer, transaction value is positive if the actual price is less than the reference price and negative if the actual price is more than the reference price. Therefore, in relation to the price-perceived quality conceptualization, perceived value is equivalent to acquisition value plus transaction value. Thus, the concept of transaction value, by using the notion of reference prices, provides a mechanism to incorporate discounts into the price-perceived quality model. Methods of communicating transaction value to a buyer include offering discounts such as a regular price/sale price offer, coupons, or rebates. This research examined the effect of these forms of discounts on the price-perceived quality conceptualization.

Briefly, it was hypothesized that, given financially equivalent offers, perceived product quality would be the same for offers that included a coupon, a rebate, or both regular and sale prices if the same reference price is presented for each situation. Also, given the same situation as above, perceived sacrifice (actual or regular) would not differ for offers that included a coupon, a rebate, or both regular and sale prices. However, perceived value, as hypothesized, would be greater for an offer with both a regular price and a sale price than for an offer with a coupon which, in turn, would be greater than an offer with a rebate because of the extra effort involved in obtaining the coupon and rebate discounts. The specific hypotheses are presented in Chapter III.

Overview of the Research

The research was conducted using a 4 x 4 design with four levels of price and four levels of forms of discounts. The forms of discount levels used were: no discount, regular price/sale price, coupons, and rebates. The no discount level served as a control or comparison for the results of the other three forms of discount levels. Also, a fifth price x no discount cell was incorporated as a control or comparison for the other forms of discount levels. The price for this fifth level was the same price as the reference price used in each of the other three forms of discount levels.

All of the price levels were selected to fall within the buyers' acceptable price ranges for the product. Also, prices were selected to ensure that they were perceived as being different by the subjects thereby enhancing the chances of finding a price-perceived quality relationship. The same reference price was used across all conditions for the regular price/sale price, coupon, and rebate form of discount levels.

Multiple indicators were used to measure the dependent variables using seven-point category scales. ANOVA, multiple comparisons, and trend analysis were used to analyze the data in the proposed design, and LISREL was used to determine the strengths of the relationships proposed in the model and the goodness of fit for the model as a whole.

Pretest and Experimental Results

Two pretests were conducted prior to the actual experiment. The first pretest was conducted to determine the product that would be used in the research and to select an acceptable range of prices for that product. The product selected based on the pretest was a dual cassette recorder (or "boom box" or "box" as it is often referred to). The first pretest also resulted in a selection of prices for the product. The prices selected ranged from a high price of \$144.95 to a low price of \$84.95 with prices set at \$15 intervals between these end point prices.

The second pretest was conducted to test the reliability of the indicators used to measure the dependent variables. PACKAGE was the statistical method used to test the measures. This pretest resulted in the restructuring of indicators for some of the constructs to improve the clarity before conducting the actual study. The data was collected from marketing management students, a population assumed to be similar to the groups of marketing management students used for the final data collection.

The results were very encouraging even though some of the hypothesis were not statistically supported. Overall, the model fit the data well. The goodness of fit index was .901, the adjusted goodness of fit index was .831, and the root mean square residual was .110. These three indices test how the data fit the overall model. The goodness of fit index and the adjusted goodness of fit index should have "large" values while the root mean square residual should be "small". The results also supported a positive price-perceived quality relationship with an effect size $\eta^2 = .123$. This is a moderate price-perceived quality effect size (Cohen 1977) and is statistically significant at $p < .07$. Also, a positive price-perceived sacrifice main effect $\eta^2 = .080$ was found.

Significance of the Research

This research should aid in the understanding of buyers' subjective evaluations of products. From a theoretical perspective, the research tested the conceptualization of the price-perceived quality relationship as presented in Chapter II, and it also extended this conceptualization by examining the effect of discounts on the perceptions of quality, sacrifice, value, and willingness to buy. As previously mentioned, one contribution of this research was the development of scales to measure perceived sacrifice. Since the objective of this research was to test propositions derived from a theory, the principle concern was to maintain precision in controlling and measuring the behavioral perceptions of interest. Therefore, a laboratory experiment was incorporated. LISREL (Linear Structural Relationships) was used to analyze the proposed relationships in the model. Although it provides basically the same information as obtained from the other statistical analyses, it is a relatively new analytical technique, and its use to evaluate the proposed model adds a contribution to the price-perceived quality research area.

It is also hoped that this research will benefit the practitioner as well as the academician. In today's marketplace, management has to make good, fast, and frequent decisions regarding marketing mix variables for each of their products. The price decision is crucial for any company because it directly affects revenue. Since the objective of a price discount is to enhance unit sales, whether there is a positive impact on revenues depends on this trade-off between lower unit margin and increased sales volume. However, if buyers do not perceive that there is a "deal" or that there is an enhancement in value, then the discount strategy may not have the desired impact on revenues. Thus, an incorrect price discount decision can be detrimental in terms of lost sales and profits. This research provided information on buyers' perceptions of product purchase offers and how discounts may affect these perceptions.

A marketing mix variable that is crucial for management is the promotional aspect of marketing. The promotion variable is related to the pricing variable when offering discounts for product purchases. Discounts are becoming more and more important in the marketplace today because

they are viewed as a more acceptable method (in consumers' eyes) of reducing price. In every store there seems to be shelf fliers advertising discounted products. Newspapers and magazines are offering more and more discounted products to the consumer in the form of coupons and rebates. In fact, Sunday newspapers include booklets of such promotional techniques. This research enhanced our knowledge of how consumers view both the size of discounts and the form of discounts when evaluating product offers.

It should be realized that a number of psychological and other contextual factors may lead to a buyer's perception that is different than the perception assumed by the seller. It may be that buyers evaluate the worth of an offer based on their perception of how good a deal they are getting, and they may evaluate deals differently depending on whether coupons or rebates are offered. This type of information would be vital for management when deciding on various promotional techniques. It is also vital for management to know how buyers react to reductions in price. It is possible that coupons and other sales promotions may have a greater sales impact than simply reducing prices. Management will want to use this type of information when deciding how to reduce prices.

Overview of Chapter II

Chapter II reviews the literature related to buyers' subjective evaluations of product quality. The economic and behavioral viewpoints are presented as well as an approach blending the two perspectives. Both qualitative and quantitative reviews of price-perceived quality research are presented along with a review of literature on the use of discounts. Transaction utility theory is introduced to show how discounts relate to the price-perceived quality conceptualization, and the chapter concludes with the derivation of theoretical propositions based on the conceptualization and the reviewed literature.

Overview of Chapter III

The third chapter presents the details of the methodological procedures for the proposed research. This includes a discussion of the research design, independent variables, sample selection, stimulus presentation, dependent variables, and data collection techniques. The operational hypotheses are also presented in this chapter.

Overview of Chapter IV

The fourth chapter presents the results of the two pretests that were conducted for this research. As previously mentioned, the first pretest was conducted to determine the product that would be used in the research and to select an acceptable range of prices for that product, and the second pretest was conducted to test the reliability of the indicators used to measure the dependent variables. The results of these two pretests were overviewed earlier in this chapter.

Overview of Chapter V

The fifth chapter begins with a description of the research instrument and how the experiment was conducted. Preliminary procedures that occurred prior to the data analysis are explained. The analysis of the data is described along with a discussion of the results.

Overview of Chapter VI

The concluding chapter summarizes the research with a discussion of the major findings and how these findings make a significant contribution to the price-perceived quality research area and to the marketing practice in general. A discussion of the limitations in the research is included followed by recommendations for future research.

Summary

This chapter has introduced the need from both a knowledge standpoint and a practitioner's standpoint to understand the relationship of price as well as other extrinsic cues on the perception of product quality, sacrifice, value, and willingness to buy. A general overview of the conceptual model and its extension were presented along with the research plan used to test this conceptualization. The significance of the research to theory testing and to practitioners was discussed, and the chapter concluded with a brief overview of each of the chapters to follow.

Chapter II

Review of Literature

Overview of the Chapter

This chapter reviews literature relating to buyers' subjective evaluations of products. One item buyers use to evaluate product quality is price; however, the role that price plays in the buyers' evaluations of product quality has not been clearly established by past research. In particular, economists have assumed that price serves only as a measure of purchase cost (sacrifice) to the buyer; whereas, in more recent research, behavioral researchers have attempted to show that price plays a more complex role than simply indicating purchase cost to buyers. Also, it has been suggested that buyers use other indices besides price to evaluate products, e.g., it has been posited that the manner in which a product offer is presented affects buyers' evaluations of products. Since discounts are often used as a method of reducing the price of a product, this research investigates the role of discounts in buyers' subjective product evaluations.

The first part of this chapter examines the economists' and the behavioralists' viewpoints of the function of price in buyers' subjective evaluations of product quality. The limitations of the economic theory are presented as well as an approach for overcoming these limitations.

The second section of this chapter describes the conceptual model used in this research that blends the behavioral and economic perspectives. The constructs, perceived quality, perceived value, and willingness to buy, presented by the model are defined and there is a discussion of how these constructs have been implemented in past research efforts. A review of past empirical research on the concept of acceptable price ranges presents a logical explanation for the relationship of these constructs within the conceptual model.

The third section of this chapter reviews the price-perceived quality research paradigm. Conceptual and methodological issues are discussed and a quantitative assessment of selected price-perceived quality research findings is reported.

Finally, the last section of this chapter discusses how price discounts may influence buyers' product evaluations and choices. The concepts of acquisition and transaction value are introduced to expand the conceptual model. Transaction value is used to explain how discounts may influence buyers' evaluations of an offer. The chapter concludes with a presentation of the theoretical propositions derived from the conceptual model.

Economic and Behavioral Perspectives

The economic and behavioral paradigms that explain the role of price in buyers' product evaluations offer different explanations for the price-product evaluation relationship. These economic and behavioral perspectives are presented below.

Economic Perspective

Buyers have essentially two decisions to make in a purchase situation: 1) what product should be purchased, and 2) how much of each product should be purchased (Monroe and Petroschius 1981). The traditional economic model of buyer behavior is based on the assumption that the behavior underlying the decisions of what product to buy is encompassed in a downward sloping demand curve. That is, as the price of a product increases, fewer buyers would decide to purchase the product and/or buyers still purchasing the product would purchase fewer units. The economic model of buyer behavior also assumes that the decision of what and how much to buy depends on:

1. the price of the product,
2. the price of all other products,
3. the income of the buyers,
4. the buyers' tastes and preferences.

There are several other behavioral assumptions made that are needed to justify the downward sloping demand curve as reviewed by Monroe (1979):

1. the buyer calculates deliberately and chooses consistently, i.e., the buyer will behave in a rational manner;
2. the buyer makes choices so as to maximize utility;
3. the buyer possesses perfect information about prices and is capable of perfectly processing information;

4. the buyers' perfect knowledge ensures that the satisfaction expected by the buyer from a purchase is equal to the actual satisfaction obtained from that purchase;
5. want and subjective utilities are not influenced by prices;
6. the buyer has perfect information about his/her own tastes and preferences and prices.

Therefore, by assuming perfect information about prices, a given level of income, and knowledge about tastes and preferences, the buyer will attempt to maximize satisfaction from a purchase by minimizing the price paid for each good. This economic perspective of a purchase situation is weakened when the underlying assumptions of the model are examined closely. The major criticisms of this model are the unrealistic assumptions of: 1) perfect information about prices, tastes, and preferences, and 2) perfect information processing. As is pointed out in the next section, these assumptions generally do not reflect reality in today's marketplace behavior.

Behavioral Perspectives

The behavioral model of buyer behavior suggests that the change in quantity demanded by the buyer is not only a function of the cost effect of price, but also a function of buyers' perceptions of price information. In other words, the price cue is viewed as having multiple meanings for the consumer and is not simply an index of sacrifice. This insightful perspective was suggested as early as 1945 by Tibor Scitovszky arguing that not only could price be viewed as an index of sacrifice, but also as an index of product quality. Scitovszky (1945) stated that the assumptions of the economic model of buyer behavior were probably reasonable when modern economic theory began. In the early days of modern economic theory development, the type of consumer goods available for purchase were mainly staple commodities, and there was a very limited selection in each product category available to the buyer. With this very limited selection of goods, it is remotely possible that a buyer could possess nearly perfect information on all purchase alternatives; however, in to-

day's complex society where the rise in the standard of living and the increase in technology has created a wide range of more technically complex products, it is impossible for a buyer to possess perfect information about all possible purchase alternatives, i.e., the assumption of perfect information for the economic perspective is no longer feasible.

Scitovszky (1945) concluded that given this limited information, buyers will use selected information to evaluate attributes such as quality. One such indicator that may be used to evaluate quality is price. He states that using price as an indicator of quality simply implies that a higher price may be viewed as an indicator of more expensive production techniques which suggests a higher quality finished product. Therefore, it is reasonable for buyers to use price as an indicator of product quality.

Not only is the assumption of perfect information unrealistic, but research by Jacoby, Speller, and Kohn (1974), Wilkie (1974), and Summers (1974) on consumer information processing indicates that given the vast amount of information available to the consumer, it is not possible for the consumer to accurately process all available information. This concept is defined as "information overload." In essence, the perfect information assumption made by economists suggests both the availability of all information and the ability of all information to be accurately processed; however, as indicated above, buyers are unlikely to possess the information needed to make the "right choice" as suggested by economic theory. Also, even if they have access to all the information necessary for a particular purchase, it is very unlikely that they can process the vast amount of information available to them. The behavioral and economic perspectives discussed above are used to develop the following conceptualization.

The Price-Perceived Quality Conceptualization

To obtain a better understanding of the role price plays in buyers' subjective evaluations of products, Monroe and Krishnan (1985) attempted to blend the economic and behavioral perspec-

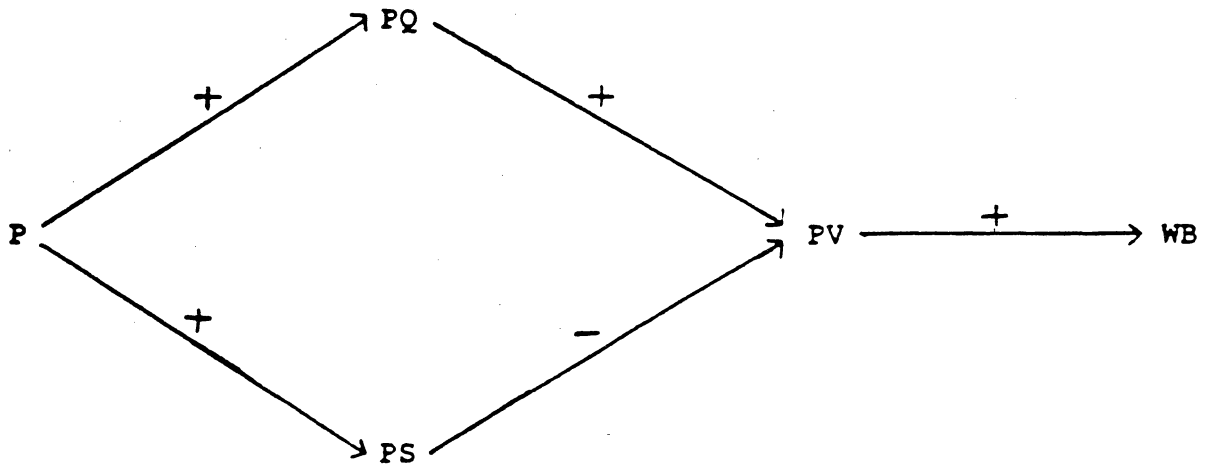
tives discussed above. They extended the above perspectives of the relationship between price and perceived quality by adding the constructs of perceived value and willingness to buy (Figure 1).

In this model, price is viewed in two ways: 1) as an index of purchase cost (sacrifice), and 2) as an index of quality. As shown in Figure 1, the perception of product value can be viewed as an input-process-output operation where the price cue relates a positive perception of quality as well as a negative perception of sacrifice. A tradeoff occurs between these two perceptions resulting in a perception of value. For example, as price increases perceived product quality will increase. At the same time, the increase in price will result in greater perceived sacrifice. Thus, the conceptualization proposed by Monroe and Krishnan (1985) posits a positive relationship between price and perceived quality and price and perceived sacrifice.

The perception of value depends on buyers cognitively trading off the increase in perceived quality against the increase in perceived sacrifice as price increases. The greater the perception of quality the greater the perceived value, and the greater the perception of sacrifice the less the perceived value, i.e., perceived quality is positively related to perceived value; whereas, perceived sacrifice is negatively related to perceived value. These two opposite perceptions of quality and sacrifice based upon price are cognitively compared through mental processing and a tradeoff is made between the two inputs resulting in perceived value. If the perception of quality is greater than the perception of sacrifice, then there will be a positive perception of value. These relationships will be discussed further in the section that describes the acceptable price range concept. For now, perceived value is defined as:

$$\text{Perceived Value} = f(\text{Perceived Quality/Perceived Sacrifice}) \quad (1)$$

Also as shown by the model in Figure 1, it is assumed that there is a positive relationship between perceived value and willingness to buy, i.e., as perceived value increases, a buyers' willingness to buy increases. The remainder of this section discusses the constructs presented above. The linkages among the constructs perceived quality, perceived value, and willingness to buy are examined through the concept of an acceptable price range. The price-perceived quality concep-



Where:

P is Price
PQ is Perceived Quality
PS is Perceived Sacrifice
PV is Perceived Value
WB is Willingness to Buy

Figure 1. A Conceptual Model

tualization is the basis for this research, and its extension, which includes the effects of discounts on buyers' subjective product evaluations, is discussed in another section.

Definition of Constructs

There has been little done in past research to arrive at a consensus on defining perceived quality. The constructs perceived quality, perceived value, and willingness to buy have often been used interchangeably in past research efforts; however, as suggested by the conceptualization in Figure 1, these three constructs are distinct and should not be used interchangeably. There is a need for consensus on the definition of perceived quality in the price-perceived quality research stream so that a more precise and complete statement can be made about the nature of the relationship between price and perceived quality. One possible explanation for the lack of consensus is suggested by Olson (1977). He states that researchers have concentrated on specific cues and products that were of interest to them or which were readily available, but few researchers have attempted to synthesize past efforts so that knowledge about the price-perceived quality relationship can grow. To show the distinction between perceived quality, perceived sacrifice, perceived value, and willingness to buy, these constructs are defined below.

Perceived Quality

Quality is defined as the relative level of goodness or excellence of anything (Chaplin 1971); however, perceived quality is not an objective measure of the relative level of goodness or excellence as this definition suggests. It is the "perception" of excellence. The perception of product quality is defined as the evaluation of the degree of excellence that a buyer attaches to a product based on the interpretation of sensory information available such as price (Dodds 1985). That is, since

buyers are not capable of perfectly processing all the information available to them, they select a subset of information cues (such as price) to evaluate product quality. For example, as price increases, a higher level of perceived quality may be attributed to the product offer because of the perceived improvement in production techniques (Scitovszky 1945). Thus, the operationalization of the construct perceived quality incorporates the buyers' *perception* of the product and not simply some objective measure of product quality.

Perceived Sacrifice

Perceived sacrifice is defined as the buyers' perception of the utility of the monetary loss associated with the purchase of the product. In many purchase situations, there is a positive relationship between price and perceived sacrifice, i.e., as price increases, the perception of sacrifice for the offer grows. Perceived sacrifice has not been measured in past price-perceived quality research. To properly test the conceptualization presented in Figure 1, it is essential that perceived sacrifice be measured to ensure that the relationship between price, perceived quality, and perceived sacrifice exists as proposed by Monroe and Krishnan (1985).

Perceived Value

Perceptions of value are formed from a buyer's assessment of perceived quality and perceived sacrifice. As previously suggested, perceived value may be a result of a buyer's cognitive tradeoff between perceived quality and perceived sacrifice, i.e., a product that is relatively high in price may be judged as being relatively high in quality by the buyer. Therefore, since perceived quality and perceived value are posited to be positively related, the product is high in perceived value. However, since perceived sacrifice and perceived value are posited to be negatively related, this high price may also be judged by the buyer as a large sacrifice, thereby reducing the perceived value of the offer.

For example, a painting by a famous artist would be high priced and looked upon as a high quality product; however, for many buyers that high price would also be perceived as a large sacrifice for the product thereby reducing the perceived value of the offer. Several researchers have used indicators that represent this construct, e.g., Della Bitta, Monroe, and McGinnis (1981) used perceived value, Petroschius (1983) used value of offer, Berkowitz and Walton (1980) and Rexeisen (1982) used value for the money.

Willingness to Buy

Willingness to buy is defined as an attitude toward purchase behavior (Monroe and Krishnan 1985), i.e., it is a behavioral tendency which indicates the likelihood of the buyer to follow through on the perception of value. Monroe and Venkatesan (1969), Berkowitz and Walton (1980), Petroschius (1983), and Gardner (1971) have all measured this construct. The results from these studies will be discussed in a following section. The model to be tested suggests a positive relationship between perceived value and willingness to buy, i.e., a buyer that has a positive perception of value should also have a positive willingness to buy. The relationships between the constructs defined above are discussed in the next section.

Acceptable Price Range

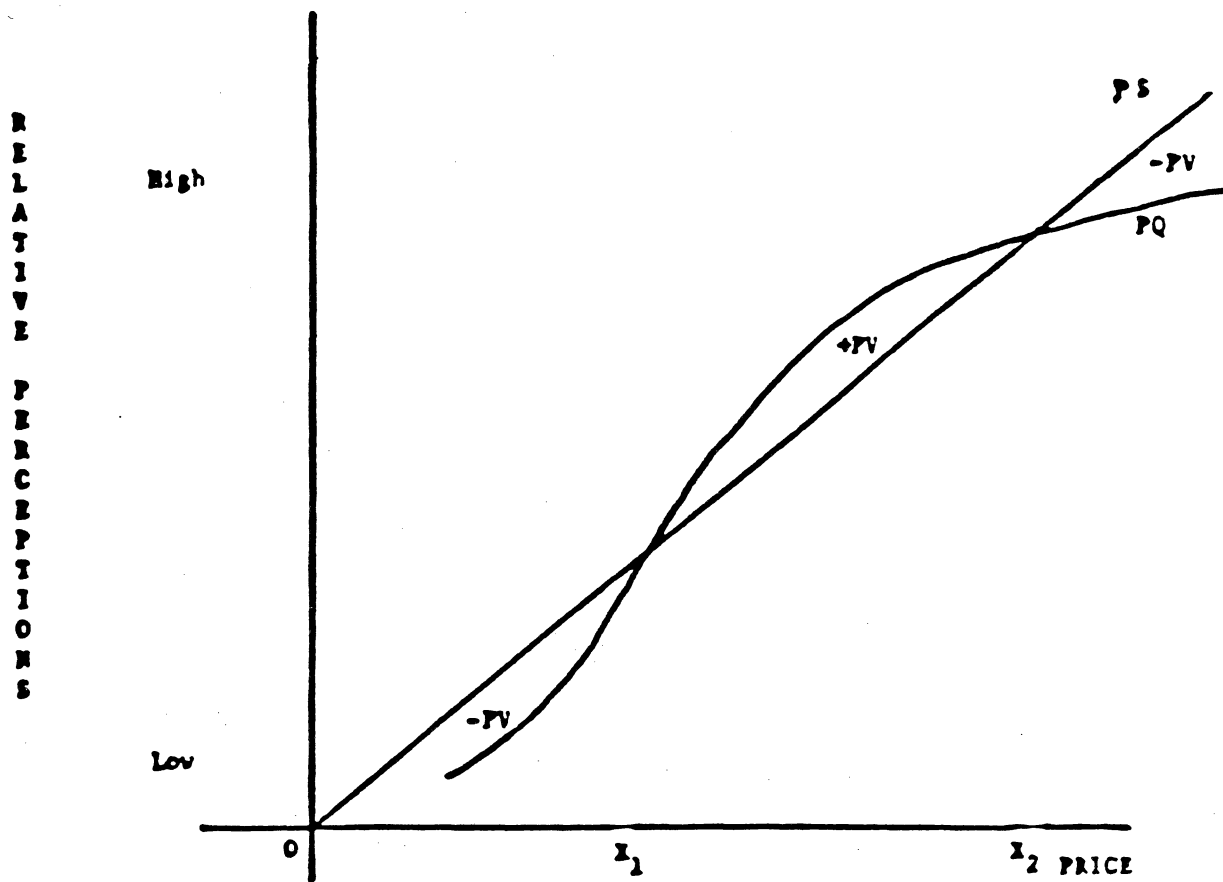
The linkages between the constructs perceived quality, perceived sacrifice, perceived value, and willingness to buy may be explained by the concept of the acceptable price range. This concept suggests that there is a set of prices that are acceptable for a buyer to pay instead of a single price and that a price may be unacceptable if it is either too high or too low. The notion that a buyer has a lower and upper price limit is derived from psychophysics (the study of quantitative relationships between physical objects and corresponding psychological events), which posits that

human beings have upper and lower limits of response to physical stimuli such as sound where some sounds are either too high or too low to hear. These low and high limits constitute absolute thresholds that can be changed by a variety of environmental stimuli (Dodds 1985). The concept of thresholds suggests that buyers may also have lower and upper price limits, implying that there is a range of acceptable prices for any particular purchase (reviewed by Monroe 1973). The concept of the acceptable price range is presented in Figure 2. The following are the assumptions associated with this concept:

1. at a zero price, there is no perceived sacrifice.
2. no other indicators of quality are present, e.g., brand name.

The first assumption indicates that at a zero price there will be no perceived sacrifice and the concept of an acceptable price range does not exist because of the absence of a price for the product. From this point perceived sacrifice is positively and linearly related to price. The second assumption deals directly with the shape of the perceived quality curve. The shape of the perceived quality curve indicates the price-perceived quality relationship only. Other indicators of quality such as brand name and store name would alter the shape of the perceived quality curve depending on their relative effects on perceived quality.

Monroe and Venkatesan (1969) and Monroe and Petroschius (1981) are among several authors who have provided support for the concept of an acceptable price range. Empirical support for the concept has been reviewed by Monroe (1973). As shown in Figure 2, the acceptable price range for an offer falls between a high threshold price (X_2) and a low threshold price (X_1). This is the range where perceived quality outweighs perceived sacrifice enhancing the perceived value of an offer. While a price above the X_2 price implies high quality for a product, it also implies a large perceived sacrifice that must be made to acquire the product. This is due to the positive relationship between price and perceived quality and price and perceived sacrifice. When the sacrifice (price) of acquiring the product is unacceptable (above X_2), i.e., the product is perceived as being too expensive relative to the perceived quality, there will be no positive perceived value for the offer



WHERE P IS PRICE
 PQ IS PERCEIVED QUALITY
 PV IS PERCEIVED VALUE
 PS IS PERCEIVED SACRIFICE

Figure 2. Conceptual Relationship Between Perceptions of Quality, Value, Sacrifice and Price

because the perceived sacrifice for the offer will outweigh the perceived quality at prices above the X2 threshold price. For example, if a buyer's acceptable price range for personal computers lies between \$1000 and \$2000, an IBM personal computer priced at \$3000 is above the upper price threshold and, therefore, perceived not to be a good value because perceived sacrifice will be greater than perceived quality.

On the other hand, while a price below the lower threshold price (X1) infers a smaller perceived sacrifice, it also implies a lower perceived quality. This perception again is due to the positive relationship between price and perceived quality and price and perceived sacrifice. At prices below the X1 price level, the low price may infer poor product quality making the cost (price) of acquiring the product unacceptable. That is, the low price indicates a small sacrifice and may imply, at the same time, poor product quality due to the positive price-perceived quality relationship. In other words, the perceived sacrifice of the offer outweighs the perceived quality resulting in no positive perceived value. An excellent example of this was dramatized by Jeff Millar and Bill Hinds in a Tank McNamara cartoon. The following passage is the dialogue presented in the cartoon:

Spokesman: "Our marketing survey tells us that runners think there is a direct relationship between the complexity of a shoe and its value. Thus, the footloose ZX-783 Alpha," (as the spokesman unveils a new shoe). "Four separate lacing systems, including one across the heel. Three interdependent strip fasteners, two inflation chambers, interchangeable tread designs, and a digital timer. When we sold it at \$39.95, the shoe was a dismal failure. When we sold it at \$400, we couldn't make'em fast enough."

The cartoon implies that the \$39.95 price was set too low (out of the acceptable price range) for the shoe. The price was set so low for the shoe that it essentially made the product's quality unbelievable. That is, at the low price with all the added features, a buyer may infer that the shoe was constructed poorly. In other words, at this low price of \$39.95, the perceived sacrifice of the offer outweighed the perceived quality resulting in no positive perceived value. When the fictitious company raised the price, the product offer became believable because the perceived quality outweighed the perceived sacrifice making the price acceptable to the buyer. This notion of a buyer's

refusal to buy if the price is too low is not considered in the economic theory of buyer behavior but is considered by the price-perceived quality model that is the basis for this study.

The concept of the acceptable price range is directly applicable to the model presented in Figure 1. The price-perceived quality relationship will be greater than the price-perceived sacrifice relationship for all acceptable prices resulting in a positive perceived value for the offer. However, the price-perceived quality relationship will be weaker than the price-perceived sacrifice relationship for all unacceptable prices resulting in no positive perceived value. Since willingness to buy is posited as being positively related to perceived value, the price-perceived value relationship will be similar to the price-willingness to buy relationship, i.e., as price increases from an unacceptable point to an acceptable point, the buyer may at first be unwilling to buy, but will become more willing to buy when the price reaches the acceptable range. This was exemplified by the jogging shoe discussion above. Further, the buyer will be unwilling to buy at unacceptable high prices.

Qualitative Review of Related Pricing Research

The following is a qualitative review of selected studies in the price-perceived quality research stream. The review begins with an explanation of the search process used to obtain the reviewed studies followed by a brief historical look at research in this area. It concludes with a discussion some of the conceptual and methodological issues in price-perceived quality research.

Search Process

There were three main avenues taken when trying to locate studies for this review. One method of obtaining needed studies was by social contacts at Virginia Tech. Colleagues who are currently working in this same research stream either had the studies or obtained access to them. This is part of what Cooper (1984) refers to as an informal invisible college. A second source for collecting the data was by reviewing both the psychological and business abstracts. Key words such as pricing, quality perception, price perception, and product evaluation were used. The most effective method for collecting studies was the ancestry method. This is a primary channel where the reviewer tracks down research that is cited in already collected relevant research. This method was very effective due to the extensive price-perceived quality reviews that have already been conducted; e.g., Dodds (1985), Monroe and Krishnan (1985), Monroe and Petroschius (1981), Olson (1977), and Monroe (1973). These were all excellent sources. In all, the search process identified 48 empirical studies of which 44 were located.

Since the main objective of the search process was to obtain studies so that the results could be quantitatively integrated (see quantitative review section), 10 of the 44 studies are not included in the review. Bennett and Wilkinson (1974), Gabor and Granger (1966), Lambert (1970), Levin, Johnson, and Farone (1984), Levin and Johnson (1984), Monroe (1971), Monroe and Venkatesan (1969), Pincus and Waters (1975), and Wainstein and Sichel (1976) are not included because of the use of survey methodology, inappropriate hypotheses, or unreported statistics. The Shapiro (1973) study was used in place of the Shapiro (1970) study since the Shapiro (1973) study reported the same experiment in more detail. The resulting 34 studies used for both the qualitative and quantitative reviews are listed and summarized in Table 1.

TABLE 1: OVERVIEW OF SELECTED PRICE-RELATED RESEARCH

Study	Product(s) Used	Independent Variables			Dependent Variables		
		P	B	S	PQ	PV	WB
1.	Andrews and Valenzi (1971)						
2.	Berkowitz and Walton (1980)	x	x	x	x		
3.	Cimbalo and Webdale (1973)	x		x		x	x
4.	Della Bitta (1972)	x				x	x
5.	Della Bitta et al (1981)	x				x	
6.	Dodds (1985)	x	x	x	x	x	x
7.	Dodds and Monroe (1985)	x	x		x	x	x
8.	Enis and Stafford (1969)	x		x	x		
9.	Gardner (1970)	x			x		
10.	Gardner (1971)	x	x		x		x
11.	Gardner (1974)	x	x	x	x		x
12.	Jacoby et al (1971)	x	x		x		
13.	Krishnan (1984)	x			x		
14.	Lambert (1981)	x			x		
15.	Landon and Shafer (1974)	x		x	x		
16.	McConnell (1968)	x			x		
17.	Monroe (1976)	x	x				x
18.	Monroe et al (1977)	x				x	
19.	Peterson (1970)	x			x		
20.	Peterson and Jolibert (1976)	x			x		
21.	Petroshius (1983)	x			x	x	x
22.	Raju (1977)	x	x		x		
23.	Rao (1971)	x			x		
24.	Render and O'Connor (1976)	x	x	x	x		
25.	Rexiesen (1982)	x		x	x	x	
26.	Shapiro (1973)	x			x		
27.	Stokes (1985)	x			x		x
28.	Szybillo and Jacoby (1972)	x		x	x	x	x
29.	Valenzi and Eldridge (1973)	x			x		
30.	Venkataraman (1981)	x			x		
31.	Wheatley et al (1977)	x	x		x		
32.	Wheatley et al (1981)	x			x		
33.	White and Cundiff (1978)	x			x		
34.	Woodside (1974)	x			x		

Where P is Price
B is Brand Name
S is Store Name

PQ is Perceived Quality
PV is Perceived Value
WB is Willingness to Buy

Historical Summary

As previously noted, interest in the price-perceived quality relationship can be traced back to an essay written by Scitovszky (1945) stating that price is used not only as an index of sacrifice, but also as an index of product quality. Empirical work in the price-perceived quality research stream can be traced back to Leavitt (1954). He asked subjects to choose between two differently priced hypothetical brands for each of four products and to indicate their degree of satisfaction with their choice. It was found that subjects tended to be less satisfied when choosing lower priced brands. Leavitt (1954) concluded that higher prices may sometimes increase a person's satisfaction with a purchase because a higher quality is imputed by the higher price.

Tull, Boring, and Gonsoir (1964), Gabor and Granger (1966), and McConnell (1968), also used price as their only independent variable to test the price-perceived quality relationship. They also concluded that there seems to be a positive price-perceived quality relationship. More specifically, McConnell (1968) found a positive relationship between price and choice of beer using married students as subjects and concluded that there was an implied price-perceived quality relationship because as price increased so did the perceptions of quality.

While single cue studies (price as the only indicator) were useful in establishing the existence between price and perceived quality, a criticism was that when price was the only cue available subjects would obviously use it to infer quality. Therefore, the use of a single cue (price) by consumers to make quality judgments lends serious doubts to the generalizability of the results. Following these single-cue studies, several studies were conducted that manipulated not only price, but other variables. As indicated in Table 1, brand and store name or store image have also been used in price-perceived quality studies. Andrews and Valenzi (1971) used price, brand name, and store name as independent variables as did Gardner (1974), Render and O'Conner (1976), and Dodds (1985). In general, these studies found that sometimes the brand effect is larger than the price effect; however, the presence of a brand name seemed to enhance the price effect (Monroe and Krishnan 1984). That is, when price and brand name are both present, there tends to be a greater price-

perceived quality effect than when price is the only cue available. Brand name tends to be a stronger indicator of perceived quality than price. Five studies manipulated price and brand, e.g., Gardner (1971), Jacoby et. al. (1971), Raju (1977), Wheatley et. al. (1977), and Dodds and Monroe (1985) whereas four studies manipulated both price and store name or image. In general, these studies also found a positive price-perceived quality relationship. (This will be further shown in the quantitative review section).

There have been several reviews conducted in the price-perceived quality area. Monroe (1973) reviewed several research efforts in the price-perceived quality area and concluded that the findings were mixed, i.e., not all studies found a significant price-perceived quality relationship. He did state, however, that there were indications of a positive relationship between price and perceived quality over some price ranges for certain product categories. A review by Olson (1977) also supported the notion of a positive price-perceived quality relationship and pointed out the need for better theoretical justification in most empirical work. Monroe (1977) also states the need for the use of contextual variables in price-perceived quality research stating that other product and situational factors besides price may often play a dominant role in a purchase decision. Monroe and Petroschius (1981) contend that even though the results in the price-perceived quality literature are mixed, there does seem to be a positive price-perceived quality relationship.

Finally, Monroe and Krishnan (1985) conducted a quantitative review of the price-perceived quality area and concluded that most of the past price-perceived quality research could be categorized as exploratory in nature and has contributed very little toward resolving the question of when price is used to infer quality. They state that even though the findings in general support the idea of a positive price-perceived quality relationship, the interactive role that price may play with other information cues to enhance quality perceptions needs more research effort.

In general, there seems to be a consensus that research in this area has been exploratory in nature. There has been little systematic attempt to analyze the price-perceived quality relationship and what factors may affect this relationship. The proposed conceptualization is an attempt to establish a systematic method for studying the price-perceived quality relationship. These and other issues in the price-perceived quality area will be examined in the following sections.

Conceptual Issues

As stated above, although much research has been done on the price-perceived quality relationship, the role that price plays in regard to the perception of quality is still not fully understood. Some of the conceptual and methodological issues are summarized in Table 2 and discussed in the following sections.

Dependent Variables

As previously discussed, the constructs, perceived quality, perceived value, and willingness to buy, have often been used interchangeably. As suggested by the conceptualization in Figure 1, these three constructs are related constructs, but they should not be used interchangeably because each construct has a unique meaning. Lambert (1981) used durability, workmanship, and reliability as dependent variables which seem to tap the construct perceived quality. The indicator ease of use (Valenzi and Eldridge 1973) appeared to tap the construct perceived value, and indicators like purchase intentions (Stokes 1985) seem to tap the construct willingness to buy.

As shown in Table 1, 29 of the studies reviewed used perceived quality as a dependent variable, 9 studies used perceived value as a dependent variable, and 10 studies used willingness to buy as a dependent variable. Only 4 studies (Dodds 1985; Dodds and Monroe 1985; Petroschius 1983; and Szybillo and Jacoby 1974) used all three dependent variables. None of the studies reviewed attempted to measure perceived sacrifice. There is a need for consensus in defining these constructs and efforts should be made, as in this study, to examine each dependent variable as described in the price-perceived quality model.

Table 2. Conceptual and Methodological Issues

Conceptual Issues

1. **Dependent Variables:** There is a need for consensus in defining the constructs perceived quality, perceived value, and willingness to buy since they have often been used interchangeably. An effort should be made to study each variable in the proposed conceptualization by Monroe and Krishnan (1984).
2. **Stimulus presentation:** Observed variance in an experiment will be due to not only manipulations of the independent variable, but also to sensory variability. Sensory variability needs to be controlled.
3. **Independent variable manipulations:** Findings of the relationship of other extrinsic cues (besides price) with the perceived quality conceptualization have been mixed. There is a need to study these relationships further.
 - a. **Price levels:** Much of the past research has focused on relatively inexpensive products. To better understand the relationship between price and perceived quality, a range of price and product combinations needs to be studied.
 - b. **Price differentials:** If prices are not perceived as different, then not finding a significant price-perceived quality relationship is inconclusive. Prices must be pretested for perceptual differences.
 - c. **Acceptable price range:** Few researchers have attempted to select prices within and outside of the acceptable range and selection of prices from only within the acceptable range could result in narrow price differentials hurting the chances of finding a price-perceived quality relationship. An entire range of prices should be studied.
4. **Products used:** Many studies have used relatively inexpensive products. Research needs to expand to include higher priced products.

Methodological Issues

1. **Design:** Studies using within designs have reported larger main effects than between designs, but this could be the result of learning on part of the subject. The researcher should try to select the design that best fits the situation being tested.
2. **Scales:** A plausible explanation for the variation in results is the variation in scales used. Multiple measurement procedures with the same instrument are needed.
3. **Samples:** Research in psychology and social psychology have been criticized for their overuse of students as subjects. A good balance between the use of student subjects and other types of consumer subjects (such as housewives and purchasing agents) which are appropriate for the product used in the study will enhance the scope of the price-perceived quality research.

Stimulus Presentation

The method of presenting the stimulus in the price-perceived quality area has varied from having subjects physically examine the product (Della Bitta 1972) to evaluating photos of products (Stokes 1985) to viewing advertisements (Woodside 1974) to evaluating product descriptions (Dodds 1985) to tasting and using the product (McConnell 1968 and Jacoby, Olson, and Haddock 1971). As stated by Monroe and Krishnan (1985), perceptions are formed from information received through the senses as well as through the manipulation of other independent variables in the experiment. Thus, the observed variance in any experiment will be due to sensory variability as well as manipulations of the independent variables (Sandusky 1974). For example, a product such as soft drinks can be evaluated by subjects' visual, smell, and taste senses to determine product quality. Individual variations due to visual, smell, and/or taste differences may contribute to the variations in quality perceptions of the soft drink. Thus, all studies that do not control for sensory variability run the risk of having larger error variances and an alternative methodological explanation for the findings.

Independent Variable Manipulations

Olson and Jacoby (1972) have defined an intrinsic cue as any informational stimulus or cue that is derived from the actual physical product, and an extrinsic cue as any informational stimulus or cue that is derived from attributes not part of the physical product. Olson (1977) suggests that products may be evaluated on objective knowledge about them or may substitute indicators to judge product dimensions. For example, Coca-Cola taste cues are intrinsic, whereas price is extrinsic. Thus, Coca-Cola can be evaluated according to taste (intrinsic cue) or price (extrinsic cue). Other types of extrinsic cues are such stimuli as brand names, store names, sale information, and forms of discounts. Other types of intrinsic cues are the smell, sound, appearance, and feel of the product. Since it is difficult to manipulate intrinsic cues when studying quality perceptions

(Monroe and Krishnan 1985), recent research in this area has seemed to concentrate on the effect that extrinsic cues have on quality perceptions. One type of extrinsic cue is forms of discounts which will be discussed in detail in a following section.

As shown in Table 1, besides price, 10 studies have manipulated brand name and 9 have manipulated store name or image. It appears, therefore, that researchers have developed a consensus that buyers' subjective evaluations of products are not only influenced by price, but also by other extrinsic cues such as brand name, and store name. According to Dodds (1985), the variables price, brand name, and store name have been studied with inconsistent results in relation to perceived quality. The relationship between perceived quality and other extrinsic cues (such as brand name, store name, and the form of discounts) that may affect the buyer's subjective evaluation of products needs further investigation.

Also, most researchers have not provided any theoretical justification for their selection of prices and there are several important factors to consider when using price as an independent variable. These factors are: 1) price level, 2) price differentials, and 3) acceptable price range.

Price Level. Leavitt (1954) and Gardner (1970, 1971) concluded that price level does influence the perception of quality. Price level refers to the amount of money needed to obtain something of value. Gardner (1970) examined the overall perception of quality for men's suits, shirts, and toothpaste. He found that quality perceptions were highest for men's suits and lowest for toothpaste, i.e., the main effects were largest for suits and smallest for toothpaste. These findings suggest that choosing more expensive products for evaluating price-perceived quality may improve the chances of finding a price-perceived quality effect. The price level and product represents a confound which suggests that price-perceived quality is a function of the price level of the product chosen. Therefore, since the majority of studies have used relatively inexpensive products, future research needs to broaden the price/product combinations studied to see if the price-perceived quality relationship will hold for all combinations.

Price Differentials. Most price perceived quality studies appear to have manipulated prices without closely examining price differentials. Leavitt (1954) concluded that when price is the only differential cue available, buyers may use price differences as a cue to infer quality differences. The issue then becomes, how much of a difference in price is necessary to induce a perceived difference in quality. If prices are not perceived as being different, then finding a statistically insignificant price-perceived quality relationship is inconclusive. For example, a price for a particular camera may be set at \$29.95 in one experiment and at \$28.95 in another experiment. Most likely these two prices would not be perceived as different for the camera and a significant price-perceived quality relationship would not be found. This is not evidence that a price-perceived quality relationship does not exist since the prices were not viewed as different. It is important that future research in this area ensure that manipulated prices are perceived as being different so that the price-perceived quality relationship can be adequately assessed.

Acceptable Price Range. The acceptable price range (Monroe and Venkatesan 1969) suggests that buyers have a certain range of acceptable prices and that prices become unacceptable if they are either too high or too low. Few researchers have attempted to select prices within and outside the acceptable range when using price as an independent variable. Gardner (1970) argued that it is essential to select prices only from the acceptable price range because the elimination of extremely low and extremely high prices removes a bias in favor of finding a price-perceived quality relationship. However, Monroe and Krishnan (1985) argue that selecting prices only from the acceptable price range may result in a narrow price differential condition eliminating a condition where price may have a significant positive effect on perceived quality. Thus, to systematically study the price-perceived quality relationship, a wide range of prices which include those inside and outside the acceptable price range or which include a broad range of prices within the acceptable price range should be examined.

Products Used

A variety of product types have been used in past price-perceived quality research. The products have ranged from expensive goods such as dictation systems (Lambert 1981) and industrial lift trucks (White and Cundiff 1978) to relatively inexpensive goods such as toothpaste (Gardner 1970, 1971) and panty hose (Szybillo and Jacoby 1972). Products have also ranged from consumer durables such as appliances (Venkataraman 1981) to consumer nondurables such as butter (Cimbalo and Webdale 1973) and beer (Valenzi and Eldridge 1973). Olson (1977) states that choice of products has often been based on researcher convenience and, as a consequence, relatively inexpensive products have been utilized. However, many products have been chosen to ensure that the subjects were potential users of the product, e.g., Dodds (1985), Krishnan (1984), and White and Cundiff (1978). As mentioned in the "price level" discussion, since most studies have used relatively inexpensive products, future research needs to include more expensive products. There also appears to be a consensus that it is often best to choose a product of which subjects are potential users.

Methodological Issues

There are several methodological issues of significance in this research area. These issues are summarized in Table 2 and discussed below.

Design

Monroe and Krishnan (1985) found that studies using within designs obtained larger main effects than studies using between designs. Deering and Jacoby(1972) suggest that demand characteristics are particularly likely when within-subject manipulations are used. Olson (1977) states that in a within-subject design there may be tendency on the part of the subject to assign different

ratings to different product samples. These different ratings may actually be caused by the subject learning the true intent of the experiment. Sawyer (1975) suggests that it is important to use between designs to eliminate learning as a threat to internal validity. Olson (1977), on the other hand, states that it must be recognized that certain factors have inherently within-subject effects. When testing the effect of product experience, it may be useful to use a within-subject design.

The main determinant in choosing an experimental design is the research question. If the researcher is interested in how a subject will respond after having been exposed to several treatment conditions, then a within-subjects design would be appropriate. If the researcher is interested in subjects being exposed to just one treatment, then a between design should be incorporated. The researcher should try to choose the design that best fits the situation being tested.

Scales

There has been wide variation in the rating scales used in the price-perceived quality area. Scales ranged from 5 points (Enis and Stafford 1969; McConnell 1968; and Wheatley et. al. 1977) to seven points (Dodds 1985; Peterson 1970; and Petroschius 1983) to 25 points (Andrews and Valenzi 1971), to 100 points (Jacoby et al 1971 and Syzbillo and Jacoby 1972). This variation in scale categories (5-100) enhances the opportunity of finding differences in responses between studies. An effort should be made to reduce the large variation in scales used.

Also, categorical scales tend to group responses into a relatively small number of categories and, according to Lodge (1981), responses may either be constrained or expanded depending upon how few or many fixed categories are offered. For example, a subject may feel that a response should fall somewhere between moderately agree and strongly agree on a categorical scale, but if there is no category between these then the subject is forced to choose one of the categories presented. This narrow scale constrains the response. However, Churchill (1979) states that multi-item measures allow combining of items so that relatively fine distinctions among subjects can be made. Despite these problems with categorical scales, they are still accepted in the price-perceived

quality literature as evidenced by their widespread use, i.e., all the studies reviewed except one (Krishnan 1984) used categorical scales.

Further, many studies have measured perceived quality using a single item. For example, McConnell (1968) used only "taste quality" as the dependent measure of quality. Since most constructs are multidimensional in nature, it is difficult to measure a construct using a single item or scale. Therefore, not only is it important to use multiple measures of a dependent variable, but it is also important that the researcher employ multiple indicators for each dependent variable. The issue of multiple indicators will be discussed further in Chapter III.

Samples

Research in psychology and social psychology has often been criticized for its overuse of students as subjects. In past pricing research, several studies have been conducted using samples other than student samples. Stokes (1985) used female heads of households, Lambert (1981) used purchasing agents, Venkataraman (1981) used females between ages 20 and 50, and Woodside (1974) used construction workers. In studies where students have been chosen as subjects, many researchers attempted to select products for the experiment that the students were familiar with to make the experiment more realistic in terms of purchasing behavior. Dodds (1985), Valenzi and Eldridge (1973), and Petroschius (1983) selected products familiar to the students (Table 1).

The general conclusion of this qualitative review is that there are both conceptual and methodological problems in the price-perceived quality research area. These are summarized in Table 2. Although the results tend to support a positive relationship between price and perceived quality, there is a need to examine each of the dependent variables (perceived quality, perceived sacrifice, perceived value, and willingness to buy) so that the price-perceived quality conceptualization can be accurately tested. It was also found that other extrinsic cues besides price affect the price-perceived quality relationship. For example, the extrinsic cue, brand name, was found at times to enhance the price-perceived quality relationship. Therefore, not only does the relationship

between price and perceived quality warrant further study, but how this relationship is affected by other extrinsic cues also needs to be examined.

Quantitative Review of Selected Research

The review thus far has examined some of the methodological and conceptual concerns of past price-perceived quality literature on an individual study basis. Monroe and Krishnan (1984) suggest that by quantitatively integrating the results of previous studies, we can begin to assess why the results of past research have not been consistent. Monroe and Krishnan (1985) performed an integrated quantitative analysis of 22 studies in the price-perceived quality area. This section will attempt to build on their work and present an integrated quantitative analysis of 34 studies. The results of this integration will then be used to direct the efforts of this study.

Computations

An effect size indicator was calculated for all main effects for each of the 34 studies listed in Table 1. An effect size is defined as an index of the strength of response to an experimental manipulation (Rosenthal 1984). In essence, an effect size is the magnitude of the effect of the independent variable (price) upon the response variable (perceived quality, perceived value, or willingness to buy). The following effect size indicators were used for this quantitative analysis and are based on Cohen (1977) or Rosenthal (1984).

$$\eta^2 = F \cdot df_b / (F \cdot df_b + df_{error}) \quad (2)$$

$$r^2 = F / (F + df_{error}) \quad (3)$$

or

$$r^2 = d^2(d^2 + 1/p.q) \quad (4)$$

where

F is the F ratio from ANOVA Tables,

df_b is the degrees of freedom of the main effect,

df_{error} is the degrees of freedom of the variance due to error,

p and q are proportions of the sample each mean represents.

There were 42 effect size calculations for the price-perceived quality relationship, 13 effect size calculations for the brand name-perceived quality relationship, and 13 effect size calculations for the store name-perceived quality relationship. The effect size calculations for the dependent variable perceived quality are listed in Table 3. Effect sizes were also calculated for all studies measuring the effect of price, brand name, and store name on both of the dependent variables perceived value and willingness to buy. These effect size calculations are presented in Tables 4 and 5 respectively. It should be noted that the " r^2 " is a specific case of " η^2 " when the F ratio has one degree of freedom in the numerator. Both of these effect size indicators range from 0 to 1 with zero indicating no effect and one indicating the largest possible effect. Also, the "d" statistic was used for the Peterson (1970) study and was converted to an " r^2 " using equation (4). All the effect sizes reported are " η^2 " except the McConnell (1968), Peterson (1970), and Shapiro (1973) which are all " r^2 ".

It is difficult to make any definitive statements about the relationships among the independent variables price, brand name, and store name with the dependent variables perceived quality, perceived value, and willingness to buy simply by looking at the effect sizes in Tables 3, 4, and 5; therefore, two methods were used to synthesize the results in each table to arrive at a better understanding of the above relationships. First, simple averages of the effect sizes were computed, i.e., all effect sizes were weighted the same. Second, Rosenthal (1984) suggests that effect sizes from studies using larger samples be weighted heavier than studies with smaller samples. Therefore, the second method weighted each study according to sample size. Caution should be used when weighting by sample size because the increase in the variance due to the weights increases the vari-

Table 3. Dependent Variable: Perceived Quality

Study #	Sample Size	Price	Brand	Store
1	50	.86	.70	.43
3	70	.38		
6	208	.06	.25	.01
	208	.004	.34	.03
7	368	.05	.34	
8	178	.17		.01
	135	.06		.001
	55	.03		.004
9	88	.07		
10	120	.01	.21	
11	324	.05	.10	.05
12	136	.01	.01	
13	84	.002		
	84	.0004		
	84	.09		
	96	.02		
	96	.02		
	96	.03		
14	108	.002		
15	69	.09		.44
16	60	.22		
19	235	.08		
20	345	.003	.03	
21	284	.05		
22	44	.69	.12	
23	144	.06		
	144	.07		
24	60	.60	.06	.07
	60	.26	.03	.02
	60	.25	.01	.08
25	113	.01		.01
26	616	.19		
27	130	.05		
28	90	.003		.12
29	82	.28		
30	54	.23		
31	206	.51	.11	
32	171	.15		
33	196	.01		
	194	.01		
	190	.002		
34	72	.10		

Note: All effect sizes are η^2 except 16, 19, and 26 which are r^2

Table 4. Dependent Variable: Perceived Value

Study #	Sample Size	Price	Brand	Store
5	800	.25		
6	208	.18	.11	.003
	208	.21	.07	.02
7	368	.18	.16	
18	136	.45		
21	284	.06		
25	113	.002		.004

Note:

1. All effect sizes are η^2
2. Study #2 and #28 did not report results that allowed for effect size computation.

Table 5. Dependent Variable: Willingness to Buy

Study #	Sample Size	Price	Brand	Store
4	112	.10		
6	208	.06	.14	.0004
	208	.16	.13	.03
7	368	.07	.12	
10	120	.10	.04	
11	324	.05	.02	.01
17	462	.59		
	462	.35		
	462	.77		
21	284	.02		
27	130	.002		

Note:

1. All effect sizes are η^2 .
2. Study #2 and #28 did not report results that allowed for effect size computation.

ability of the findings. The simple average effect size computations as well as the weighted average effect size computations are presented in Table 6.

Results

According to Cohen (1977), " η^2 " effect sizes higher than .14 are large, effect sizes between .14 and .06 are moderate, and effect sizes lower than .06 are small. As shown in Table 6, the price-perceived quality main effect is moderate to large (.14) based on the simple average and moderate (.11) for the weighted average. Therefore, these studies do support a price-perceived quality relationship. However, it should be noted that the simple average and weighted average effect sizes for both price-perceived value (.19 and .20 respectively) and price-willingness to buy (.21 and .28 respectively) are larger than those for price-perceived quality.

These findings at first glance appear to be contradictory to the conceptualization proposed in Figure 1 by Monroe and Krishnan (1985) which suggests that price-perceived quality should be greater than price-perceived value. Since perceived value is a tradeoff between price-perceived quality and price-perceived sacrifice, it would seem logical that perceived quality would be greater than perceived value. However, this logic does not take into consideration that other factors beside price such as brand name are influencing perceived quality. Thus, if brand name was used to assess product quality, this could possibly reduce the impact of price on perceived quality resulting in price being used more as an index of perceived sacrifice. The large brand-perceived quality effect size (.18 for both the simple average and weighted average methods) lends support to this logic.

There are several other possible explanations for the findings in Table 6. First, even though the model presented in Figure 1 seems logical, it may be incorrect. Second, as previously discussed, the fact that many studies in past price-perceived quality research used products of relatively low price may have caused weaker price-perceived quality effects. Third, the difference in the number of studies used to compute effect sizes for the three dependent variables may account for these results, i.e., 42 effect sizes were used to compute the price-perceived quality relationship while only

Table 6: Effect Sizes
Simple Average/Weighted Average

Dependent Variable	Simple Average			Weighted Average		
	Price	Brand	Store	Price	Brand	Store
Perceived Quality	.14 (42)	.18 (13)	.10 (13)	.11 (42)	.18 (13)	.06 (13)
Perceived Value	.19 (7)	.11 (3)	.01 (3)	.20 (7)	.15 (3)	.01 (3)
Willingness to Buy	.21 (11)	.09 (5)	.01 (3)	.28 (11)	.09 (5)	.01 (3)

Note:

1. Simple average effect sizes are $\sum_{i=1}^k \eta_i^2 / k$ where k is the number of cases.
2. The weighted average effect sizes are $\sum_{i=1}^k n_i \eta_i^2 / \sum_{i=1}^k n_i$ where k is the number of cases and n_i is the sample size.
3. The numbers in parentheses are number of cases.
4. The weighted average is weighted by sample size.

13 effect sizes were used for both the price-perceived value and the price-willingness to buy relationships (Table 6). This difference suggests the need for further research on the price-perceived value and price-willingness to buy relationships.

To determine if the variation in the number of effect sizes had any bearing on the results, it was helpful to examine only those studies that measured the effect of price on all three dependent variables. Only 2 studies (Dodds and Monroe 1985; Dodds 1985) measured the effect of price on all three dependent variables. The results of these two studies were the same as the aggregate results, i.e., the price-perceived value relationship was greater than the price-perceived quality relationship. Caution should be taken, however, on making any definitive statements based on the results of just two studies. This also shows the need for further study of the entire conceptualization proposed by Monroe and Krishnan (1985).

In sum, the quantitative review, like the qualitative review, shows the need for further research on the price-perceived quality conceptualization and its relationship to both the related constructs perceived value and willingness to buy. Also, the price-perceived sacrifice relationship needs to be measured to accurately test the price-perceived quality model.

Discounts in Buyers Subjective Evaluations of Products

To obtain more knowledge of the price-perceived quality relationship and to find possible boundaries on the effects of extrinsic cues in the price-perceived quality conceptualization (Figure 1), this study will examine the effect that discounts have on the above relationships. There has been very little empirical research on the effect of discounts on buyers' subjective evaluations of products. This is very surprising because of the vast use of various types of promotional discounts used by both manufacturers and retailers. Two types of promotions that have increased dramatically in use by manufacturers, retailers, and consumers are coupons and rebates; yet, there is very little known about how these forms of discounts affect purchase behavior. This section begins by reviewing

some of the research that has been done on how discounts affect buyers' product evaluations and concludes with a discussion of the importance of coupons and rebates.

Barnes (1975) varied comparison price cues and semantic cues for retail advertisements. A comparison price cue is provided when an explicit comparison (reference) price is paired with the actual price in an advertisement. Semantic cues are specific words or phrases that are paired with the price cues, e.g., regular price, sale price, special, or x% off. Barnes (1975) tested three semantic cues that differed by information content. He found that product advertisements using semantic cues such as "regular/sale" were perceived as more believable and as offering a better value for the money than cues such as "special". He concluded that the more information given in the cue the better.

Fry and McDougall (1974) studied consumer perceptions of advertisements that contained discounts of varied sizes. They found that there was a positive relationship between acceptance of price as the lowest in the area and the magnitude of the discount. Blair and Landon (1981) found that advertisements with comparison (reference) prices produced larger perceptions of savings than advertisements without reference prices given. They also concluded that the greater the percentage difference between the "sale price" and the "reference price," the less believable was the reference price.

Keiser and Krum (1976) studied reactions to advertisements for deoderants using "1/2 price sale" and "regular price/sale price" semantic cues. Their findings supported those of Barnes (1975), that is, the advertisement using the regular price/sale price cue was found to be more likely to create a perception of a true reduction in price. Berkowitz and Walton (1980) studied the effect of varied discount levels between the reference price and actual price on price-related responses and the effect of semantic cues on price related responses. They studied three product categories (aspirin, fans, and cameras) using five dependent variables (perceived worth, price acceptability, perceived savings, value for money, and willingness to buy) and found significant differences for comparison cues for all products, but significant semantic cues for cameras only.

The findings from the above studies suggest that the acceptance of an advertised regular (reference) price depends on the size of the sales discount and whether or not a regular price is quoted.

Also, there seems to be greater acceptance of a regular price if it is provided in the advertisement regardless of its veracity.

Della Bitta, Monroe, and McGinnis (1981) expanded on the above research and studied the effect of product/price combinations, discount levels, and methods of presenting comparative price information (using various semantic cues) on three dependent variables, perceived value, interest in the product/brand, and information search. There were several conclusions of interest from this study. First, it was found that the differences in magnitude of price discounts did produce greater perceptions of value. Second, the method of presenting sale information (various semantic cues) produced differences in subjects' responses. Third, behavioral responses did differ because of the product/price combination, that is, there was a stronger interest in buying the \$50 calculator than the \$120 calculator. They concluded that perceptual responses are more likely to be related to the overall references provided than to specific price levels per se. Finally, a willingness to purchase the product was not necessarily induced despite a perception of value. Therefore, they concluded that a perception of value may be necessary to induce willingness to buy, but it is not sufficient to produce this effect.

Liefeld and Heslop (1985) studied the effects of reference prices and advertising contexts on consumer perceptions of the ordinary price of products. The two types of reference prices used were "regular price" and "Manufacturer's Suggested List Price" (MSLP) and the two types of advertising contexts were "sale" and "no sale." They concluded that the presence of a MSLP did not significantly affect perceptions of ordinary prices, but that the presence of a sale price condition lowered respondents' estimates of the ordinary price. The latter result could be due to the fact that no reference price was presented with the sale price and, therefore, consumers based their perception of what the reference (ordinary) price should be solely on the sale price.

In general, it has been found that responses to price statements are affected by both the price level and the size of discount implied by a price comparison. Also, it was concluded that semantic cues affect price related responses and that the acceptability or believability of a regular price is enhanced by its mere presence in an advertisement regardless of its veracity.

It should be noted that none of the above studies on discounts examined the use of coupons and rebates on price-related responses. The importance of coupons and rebates in the marketplace will be discussed in the next two sections followed by a discussion of how these promotional tools might affect the relationships presented in the price-perceived quality model.

Coupons

For years, coupons have played a substantial role in the promotion and purchasing of products. As Hisrich and Peters (1984 p. 9) state, "The coupon is epidemic, omnipresent, and suddenly a controversial marketing tool, alternatively commanding our respect through the sheer volume of its use and inciting our suspicion over its effectiveness." In 1982, 119.5 billion coupons were distributed worth \$25 billion in savings to consumers of which \$1.5 billion were redeemed by shoppers. Coupons are issued by 2000 of the nation's largest manufacturing concerns and are redeemed by about 76% of U.S. households at least once a year. There are several reasons why coupons are important to manufacturing concerns (Hisrich and Peters 1984, p. 9):

1. the costs of coupon advertising are minimal in comparison with other forms of advertising. The costs of coupons are only about .6% of overall sales of manufacturers. This is an attractive alternative in light of the increasing costs of advertising and considering the amount of people that are actually redeeming coupons (\$1.5 billion dollars worth).
2. coupons give manufacturers promotional control over products without having to rely on retailers alone to generate consumer interest.
3. coupons give manufacturers control in selecting their target markets, i.e., the companies can select where the coupons will be issued.

4. coupons can help arrest a slipping market share and rejuvenate sales which have lagged for a particular reason, e.g., after the Tylenol poisonings, 200 million coupons were distributed which helped reestablish Tylenol's sales position and overcome the negative public image.
5. coupons can function as a positive form of price control, i.e., across the board price cuts to stimulate interest can result in negative consumer reaction when raised again. Coupons are seen as a more benevolent method of accomplishing this same objective.
6. coupons (and other sales promotions) can cause a greater sales response than simply reducing prices. A study by Cotton and Babb (1978) supports this notion. Cotton and Babb (1978) studied the response of consumers to promotional deals for dairy products. The types of promotional deals analyzed were store specials, coupons, multiple-item discounts, and free gifts. They concluded that promotional deals substantially increase purchase levels and this increase is greater than the increase obtained by simply reducing price, i.e., the increase in purchases for a simple price reduction of 15% was approximately 3% to 25% whereas the increase in purchases associated with a promotional deal with a 15% reduction was approximately 20% to 70% for households purchasing on a regular basis.

Rebates

According to Hough (1980, p.68), "if cents-off coupons were the hot promotion of the 1970s, cash refunds give every indication of being the growth event of the 1980s." The big boost for rebates came when they were offered by auto companies. Since that time (late 1970s), the use of rebates has grown substantially. According to an article in *Progressive Grocer* (1981), the percentage of households taking advantage of rebates more than doubled from 17% in 1977 to 36% toward the end of 1981. The article also states "there is no question that there is a dramatic increase in the level of refund participation. It appears to parallel the interest in cents-off coupons. It is a reflection

of more and more consumers feeling the pinch" (p. 76). One factor that has contributed to manufacturer's increased use of rebates is the desire to build product loyalty and to save both the retailer and clearinghouse fees connected with coupons.

So, as shown, coupons and rebates are beginning to play a very significant role in our economy, and it would be useful to examine how such promotional tools actually affect a buyer's subjective evaluation of products. The price-perceived quality model explains how a buyer might evaluate a price and a product; however, the conceptualization does not address buyers' evaluations of offers with coupons or discounts or rebates. Since short-term deals such as coupons, rebates, or discount prices are prevalent forms of selling, the next section will extend the price-perceived quality conceptualization to explicitly handle these situations.

Transaction Value

Many retail promotions offer merchandise at a "special price." Often this special price is compared with a usual or regular price, a manufacturer's suggested price, or some other reference price. The general implication of these promotions is that the consumer can pay a lower than normal price or get a "deal" on certain merchandise. The seller seems to promote this "deal" in the belief that more consumers will purchase the item if they believe the price is comparatively lower. It is known that consumers do not evaluate prices singly, but rather judge prices in reference to standards that may be objective or subjective (Monroe 1973). Thus, a comparative price promotion featuring both the "deal" price and a higher comparative price is an attempt to impose a reference or standard price for the consumer.

This section illustrates how the use of comparative prices or "deals" affect buyers' subjective evaluations of products. The first part of this section discusses how consumers make different choices depending on how a situation is posed or "framed." A discussion of "prospect theory" is used to help explain these framing effects. This section concludes by introducing "transaction utility

theory" and showing how transaction value can be used to extend the price-perceived quality conceptualization to include the effects of "deals" or discounts on buyers' subjective evaluations of products.

Framing

Economists claim that not only does the economic model of buyer behavior describe what rational consumers should do, but the model also can be used to predict what consumers will do. Thaler (1980) suggests that in certain situations many consumers act in a manner inconsistent with economic theory. In fact, he states that "exclusive reliance on the normative theory leads economists to make systematic, predictable errors in describing or forecasting consumer choices" (p. 39). Tversky and Kahneman (1981) have shown that in many instances the choices that individuals make depend not only on the objective features of a problem, but also on the way the problem is posed. These authors define how a choice is presented to the consumer as "framing the choice." That is, given a particular choice situation, consumers may make different choices depending on how the situation was posed (framed). "Framing" is not considered by the economic model of buyer behavior. In considering the framing effects, Kahneman and Tversky (1979) developed "prospect theory" as an alternative to economic utility theory.

In prospect theory, the objective probabilities of economic utility theory are replaced with subjective decision weights and the utility function is replaced by a value function that is defined over changes in wealth rather than final asset position. A hypothetical value function is presented in Figure 3. The assumed shape of the value function incorporates three important behavioral principles (Thaler 1980):

1. the value function is based on perceived gains and losses relative to some natural reference point rather than wealth or consumption as in the economic utility theory. (Since the framing

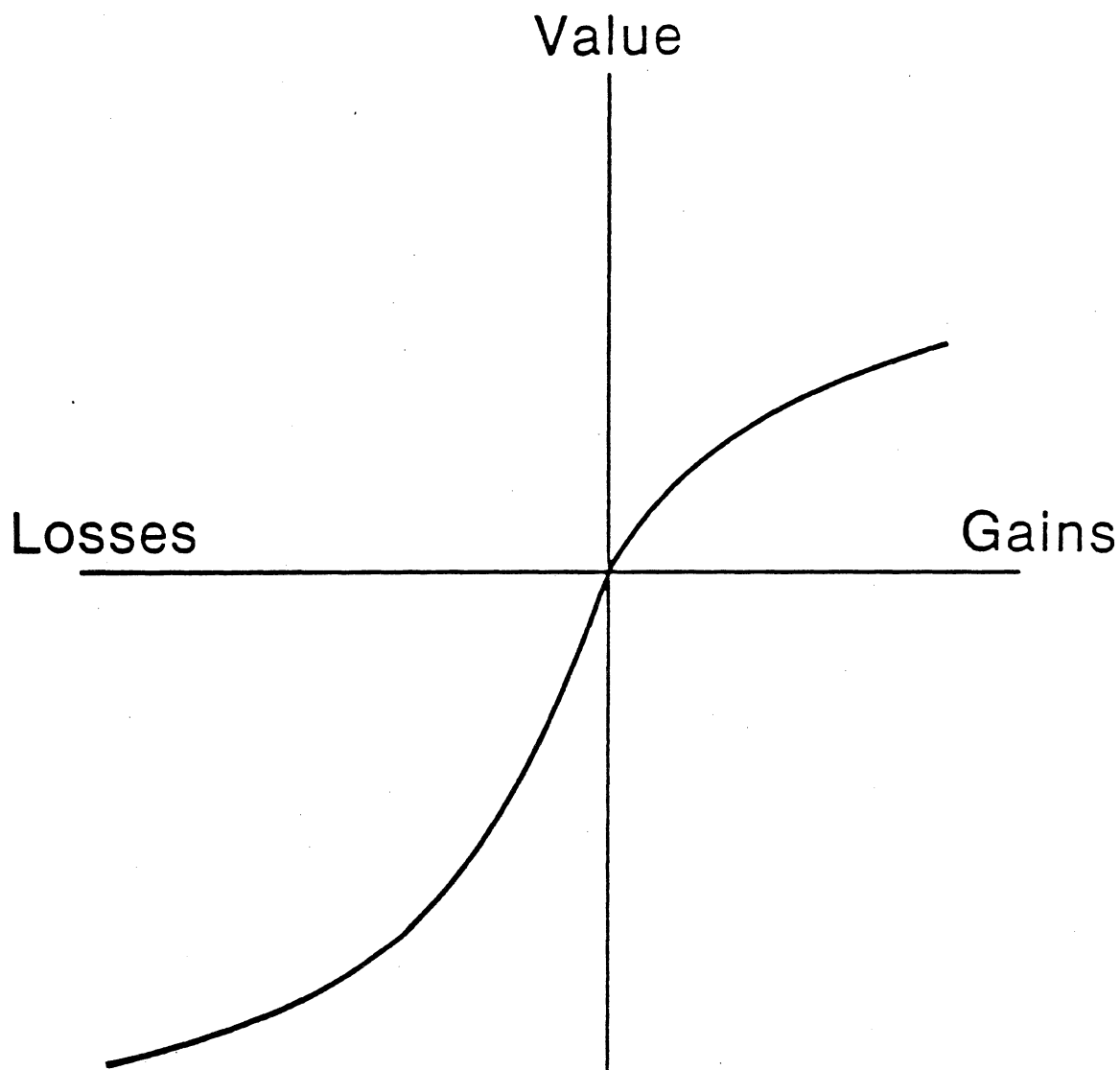


Figure 3. A Hypothetical Value Function

of a problem often involves the suggestion of a reference point, prospect theory permits framing effects to affect choices);

2. the value function is assumed to be concave for gains and convex for losses, e.g., the difference between \$20 and \$30 seems greater than the distance between \$120 and \$130 (regardless of the signs of the amounts);
3. the loss function is steeper than the gains function, e.g., people generally charge more to sell an item than they would be willing to pay to acquire that same item.

The prospect theory value function proposed by Kahneman and Tversky (1979) is defined over single, unidimensional outcomes, i.e., a single gain or loss. Thaler (1985) extends the theory to incorporate compound outcomes that are measured along the same dimension (say dollars). According to Thaler (1985), for joint outcomes there are four possible combinations to consider: 1) multiple gains, 2) multiple losses, 3) mixed gain, and 4) mixed loss.

Multiple Gains

A multiple gain is receiving more than one positive outcome. For example, receiving a pay raise and a bonus check at relatively the same time is a multiple gain. Since the prospect theory value function is concave for multiple gains (see Figure 4), segregation of the outcomes is preferred, i.e., there is more utility received by presenting gains separately rather than in one lump sum. Thaler (1985) conducted an experiment using 87 students in an undergraduate statistics class at Cornell University. The objective of the experiment was to present the students pairs of outcomes that were either segregated or integrated to determine which frame was preferable. Four different scenarios were used in the experiment. The first scenario's results provided support for the separation of multiple gains and was presented to the students as follows:

Mr. A was given tickets to lotteries involving the World Series. He won \$50 in one lottery and \$25 in the other.

Mr. B was given a ticket to a single, larger World Series lottery. He won \$75.

The students were asked to evaluate whether they thought Mr. A or Mr. B would be happier. It should be noted that the two situations are financially equivalent. The difference in the two situations is how they are framed. According to economic theory, there should be no difference in the utility received by Mr. A and Mr. B. However, according to the prospect theory extended by Thaler (1985), there should be a difference in the utility received because of the framing of the situations. Fifty-six students indicated that they felt Mr. A would be happier, sixteen students indicated that Mr. B would be happier, and fifteen students indicated that there would be no difference between the happiness gained by Mr. A or Mr. B. These results are illustrated in Figure 4 and lend support to the idea of separating gains for multiple outcomes. Thus, the results also support prospect theory. As Thaler (1985, p. 204) so aptly puts it: "Don't wrap all the Christmas presents in one box."

Multiple Losses

A multiple loss is receiving more than one negative outcome. For example, receiving a cut in pay and being fined for arriving late to work is a multiple loss. The prospect theory value function is convex for losses (see Figure 5); therefore, unlike the multiple gains situation, multiple losses should not be segregated. For example, this suggests that consumers will be less upset when several losses are combined into a lump sum loss instead of having several individual smaller losses even if the total loss in each case were the same. This is one of the desirable features of the credit card used by many consumers today. Evidence supporting this notion was presented by Thaler (1985) in the second scenario of the experiment discussed above. Students were asked to evaluate which would be less upset, A or B. The scenario was as follows:

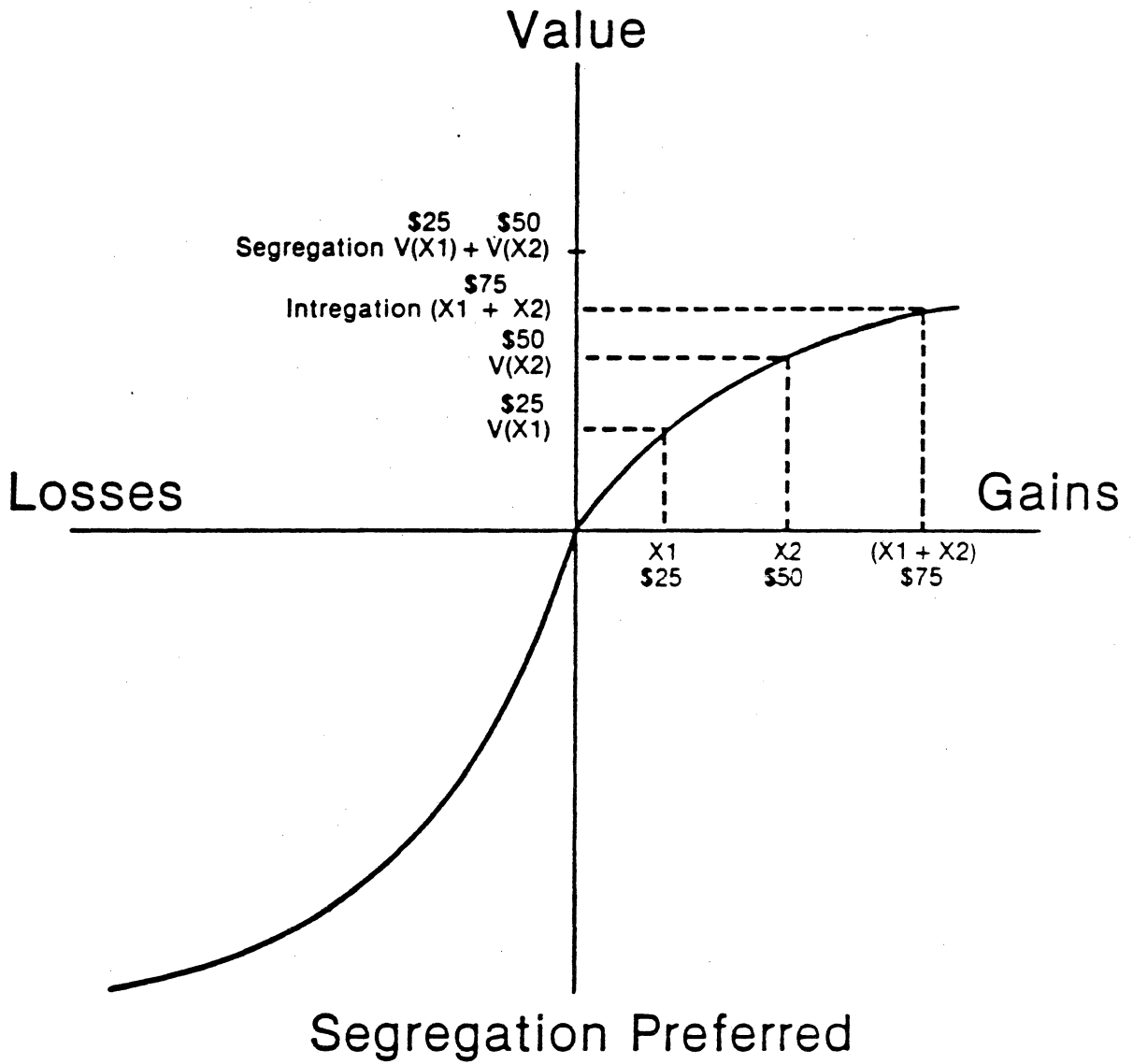


Figure 4. Multiple Gains

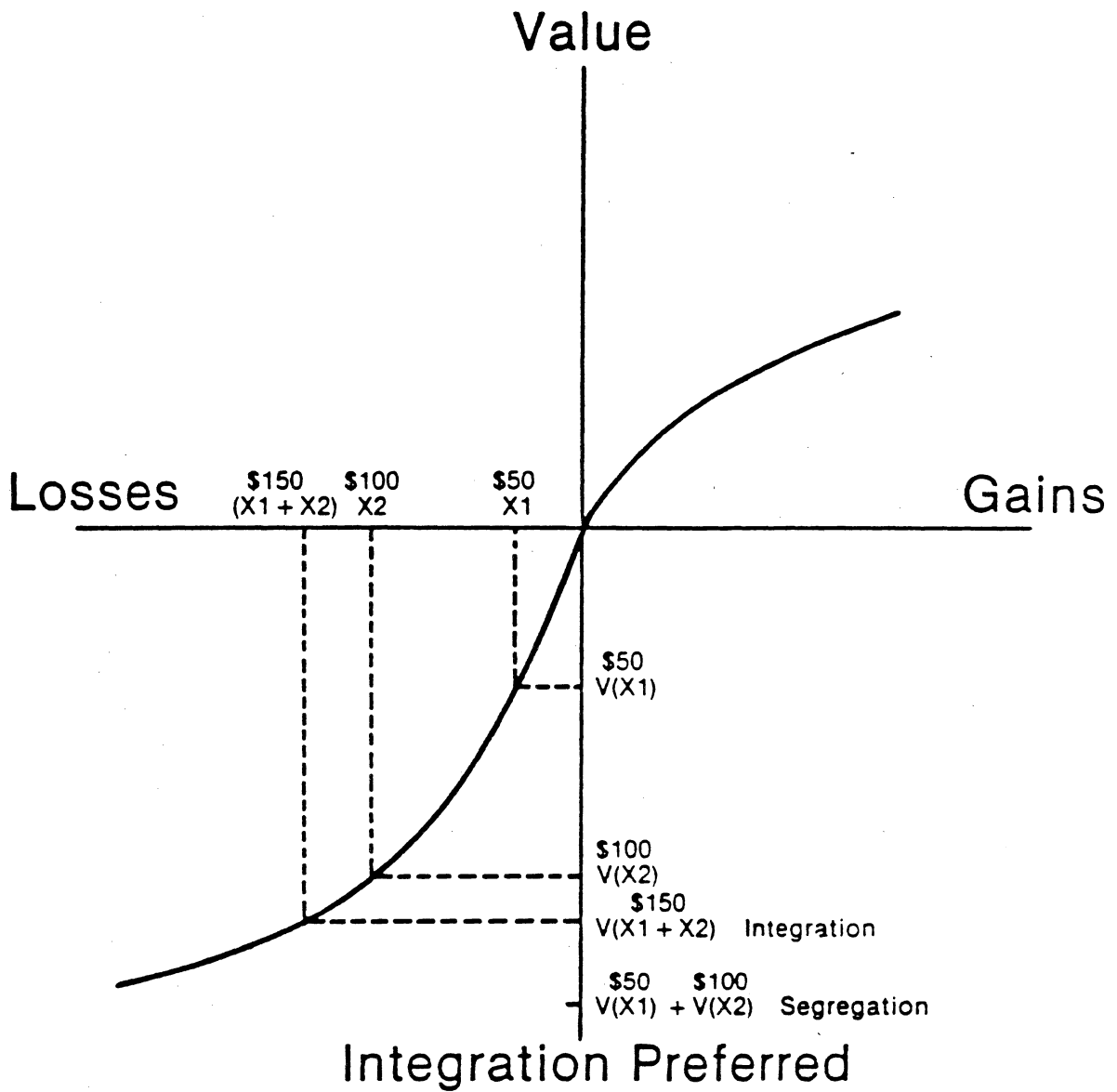


Figure 5. Multiple Losses

Mr. A received a letter from the IRS saying that he made a minor arithmetical mistake on his tax return and owed \$100. He received a similar letter the same day from his state income tax authority saying he owed \$50. There were no other repercussions from either mistake.

Mr. B received a letter from the IRS saying that he made a minor arithmetical mistake on his tax return and owed \$150. There were no other repercussions from his mistake.

Sixty-six students indicated that Mr. A would be more upset, fourteen students indicated that Mr. B would be more upset, and seven students said there would be no difference; therefore, it was concluded that multiple losses should be integrated. These results are illustrated in Figure 5 and again lend support to the idea that framing affects consumer choices.

Mixed Gain

A mixed gain is receiving both positive and negative outcomes with the positive outcome outweighing the negative outcome. For example, winning a new car and paying for a tire to replace the flat on an old car is a mixed gain. Since the loss function is steeper than the gain function on the prospect theory value function (see Figure 6), it is possible that the consumer may express dissatisfaction with the total mixed outcome if the outcomes are framed separately. In any case, integration is preferred over segregation for mixed gain situations due to the steeper sloping loss function. It should be noted that a mixed gain situation is similar to acquiring a product (positive gain), while giving up money (loss). The third scenario in Thaler's (1985) experiment lends support to the mixed gains proposition. The scenario was presented to students as follows:

Mr. A bought his first New York State lottery ticket and won \$100. Also, in a freak accident, he damaged the rug in his apartment and had to pay the landlord \$80.

Mr. B bought his first New York State lottery ticket and won \$20.

When the students were asked who was happier, twenty-two indicated Mr. A was happier, sixty-one indicated Mr. B was happier, and four indicated no difference. These results are illustrated in Figure 6 and again show how framing may affect a consumer's choice evaluation.

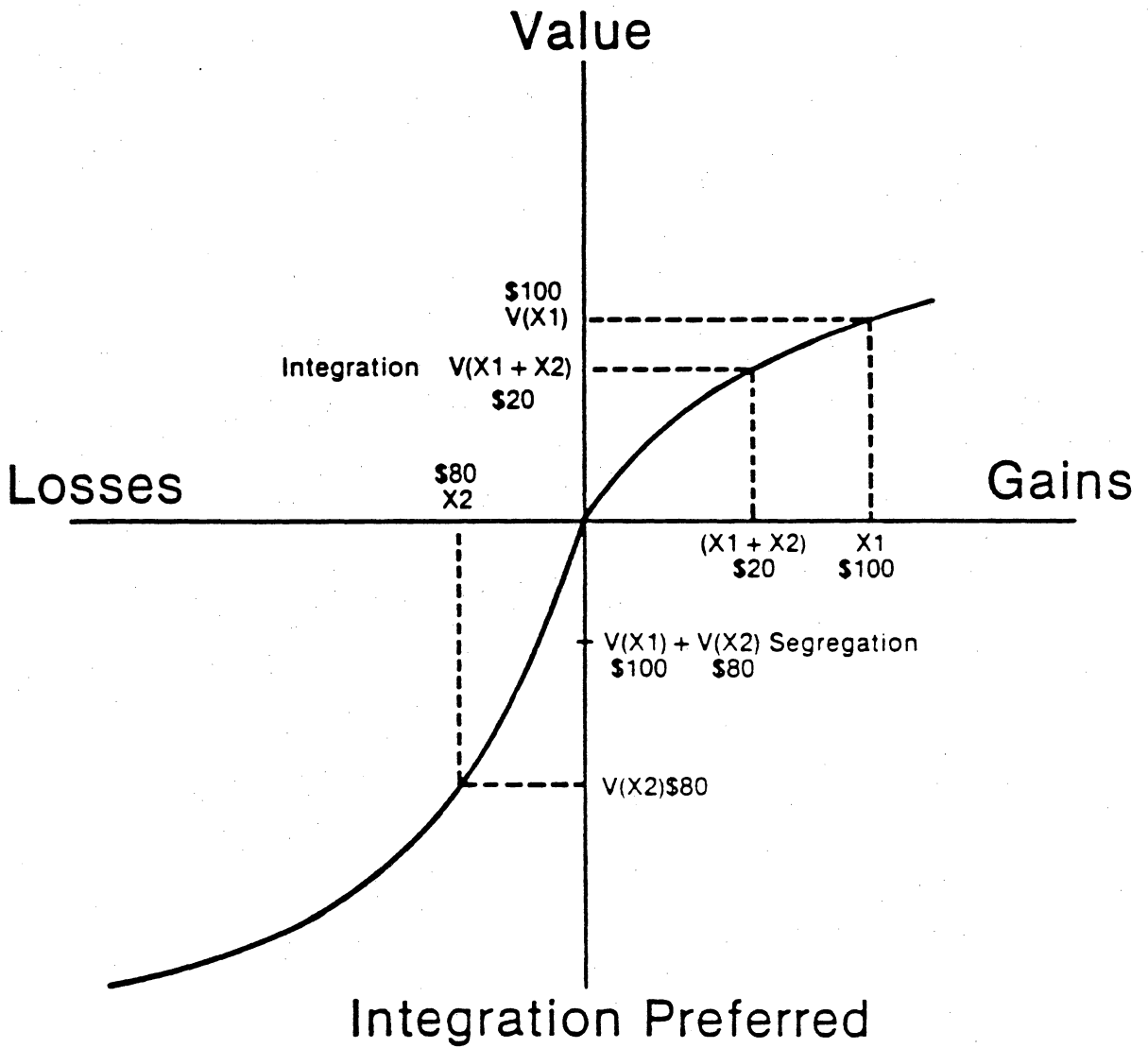


Figure 6. Mixed Gain

Mixed Loss

If, in a multiple outcome situation, the combined outcome is a loss, it cannot be determined without further information how best to frame the choice situation, i.e., it cannot be determined whether it is best to integrate or segregate the outcomes without further information (see Figure 7). For example, if there were a large loss (\$1000) and a small gain (\$25), it is best to segregate the outcomes since the value function is relatively flat at the \$1000 loss. However, if the gain (\$25) greatly reduces the loss (\$30) integration would probably be preferred since the gain of \$25 is likely to be valued less than the reduction of loss from \$30 to \$5. Thaler (1985) refers to segregating a large loss and a small gain as the "silver lining" principle. The fourth scenario in Thaler's (1985) experiment provides support for the silver lining principle. The scenario was presented to the students as follows:

Mr. A's car was damaged in a parking lot. He had to spend \$200 to repair the damage. The same day the car was damaged, he won \$25 in the office football pool.

Mr. B's car was damaged in a parking lot. He had to spend \$175 to repair the damage.

When the students were asked who was more upset, nineteen answered Mr. A, sixty-three indicated Mr. B, and five indicated no difference. In this particular framing, with a large loss relative to the gain, the segregation of outcomes was preferred. This is the same principle used by manufacturers when they offer rebates and coupons. They are segregating a small gain (the value of the coupon or rebate) relative to a larger loss (the price of the product). In each of the four scenarios presented above, the events for Mr. A and Mr. B are financially equivalent, i.e., the monetary sacrifices or gains are the same. Therefore, according to economic utility theory, the utility should be the same for Mr. A and Mr. B in each scenario. However, as evidenced by the results of the experiment conducted by Thaler (1985), the utility is not perceived equivalent for Mr. A and Mr. B in any of the scenarios. This inconsistency is due to the way the problems were posed to Mr. A and Mr. B., i.e., the framing effect. Prospect theory accounts for framing effects whereas economic utility theory does not.

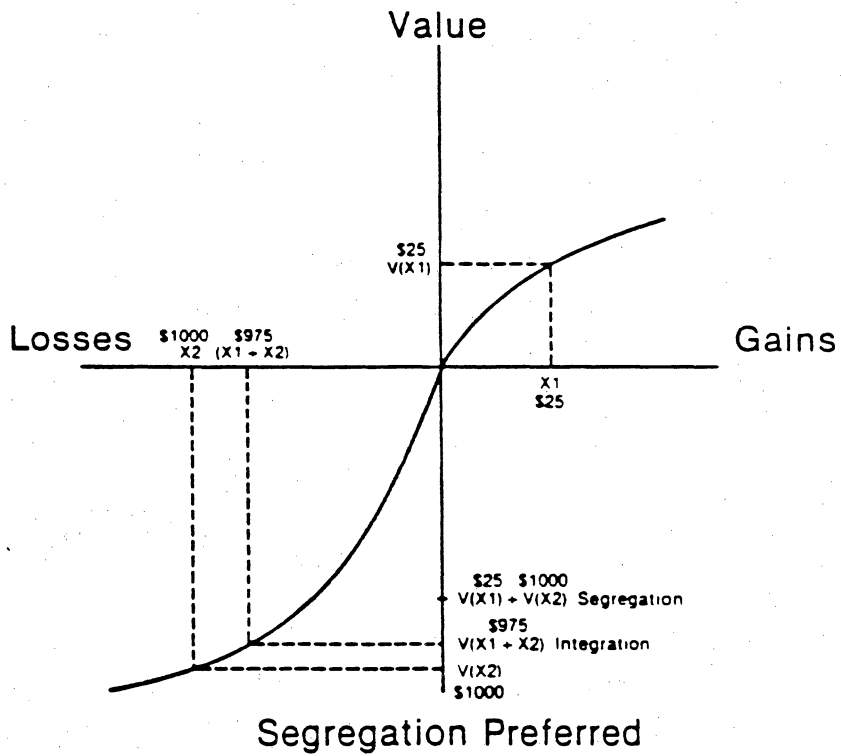
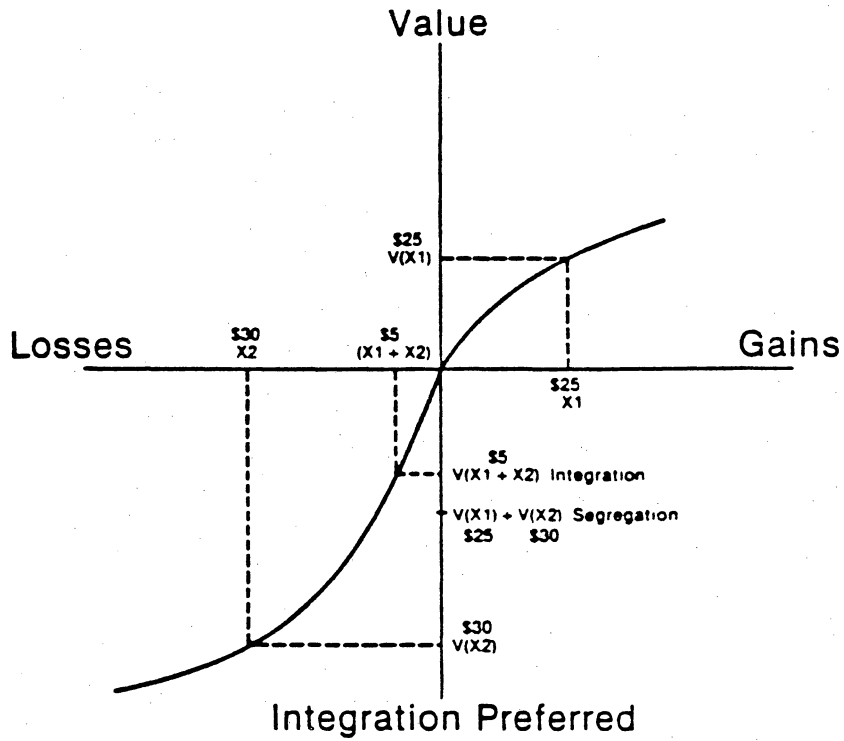


Figure 7. Mixed Loss

Now, suppose instead of multiple outcomes, an individual is expecting one particular outcome, but obtains a different outcome than the one expected. How should this situation be framed? The following section on reference outcomes addresses this issue.

Reference Outcomes

An individual opening a monthly paycheck and finding it to be the usual amount, receives what was expected (define this as the reference outcome). However, suppose that an individual opens a monthly paycheck and does not find it to be the usual amount expected (reference outcome). There is a choice of ways to frame the change in the outcome corresponding to the framing of multiple outcomes discussed above. With reference outcomes the choice is whether to value the unexpected variation apart from the reference outcome (segregation) or in conjunction with the reference outcome (integration). Thaler (1985) provides a good example that illustrates the difference:

Mr. A expected a Christmas bonus of \$300. He received his check and the amount was indeed \$300. A week later he received a note saying that there had been an error in his bonus check. The check was \$50 too high. He must return the \$50.

Mr. B expected a Christmas bonus of \$300. He received his check and found it was for \$250.

It is likely that Mr. A would be more upset in the above situation. His loss was segregated and would be viewed as a \$50 loss, whereas Mr. B's outcomes were integrated resulting in a reduction of a gain. With changes in reference outcomes, when the situation is structured in a neutral or ambiguous manner (as above), then the same four principles determine the framing preference (Thaler 1985):

1. An increase in a gain should be segregated.
2. An increase in a loss should be integrated.

3. A decrease in a gain should be integrated.
4. A small reduction in a loss should be segregated (silver lining principle).

Transaction Utility Theory

A purchase or transaction is defined as a mixed outcome in that the buyer gains a product, but loses the money paid for the product. Of concern for this study is how buyers code or evaluate this mixed outcome. Thaler's transaction utility theory suggests that buyers evaluate an offer by first judging the value of the offer and then deciding whether to make the purchase. This proposition is identical to the price-perceived quality conceptualization presented earlier. Transaction utility theory involves three price concepts: (1) the actual price of the product, p , (2) the maximum acceptable price for the product, p_{\max} , and (3) a reference price, p_r . The reference price may be an expected price to pay, the last price paid, or the "normal" market price (Monroe 1973).

Thaler (1985) defines acquisition value as the value of a good compared to the outlay. More specifically, acquisition value is defined as the net value that accrues from the tradeoff between the actual price charged for the product and the perceived benefits of acquiring the product. The perceived benefits of the product are equivalent to the disutility of paying the maximum acceptable price. Thus, perceived benefit is equivalent to p_{\max} and acquisition value is $(p_{\max} - p)$. Acquisition value, defined in this manner, is conceptually equivalent to perceived value in the price-perceived quality conceptualization.

To incorporate the notion of reference price, the concept of transaction value is presented. Thaler (1985) suggests that acquisition value is just one aspect of the total value received in a transaction. Total value (perceived value) is defined as acquisition value plus transaction value, where transaction value is defined as the perceived merits of a "deal", i.e., the additional value that is achieved through the way an offer is framed. Thus, transaction value is defined as $(p_r - p)$.

Transaction value can be positive if the actual price is less than the reference price and negative if the actual price is more than the reference price. Therefore,

$$\text{Perceived value} = \text{Acquisition value} + \text{Transaction value}$$

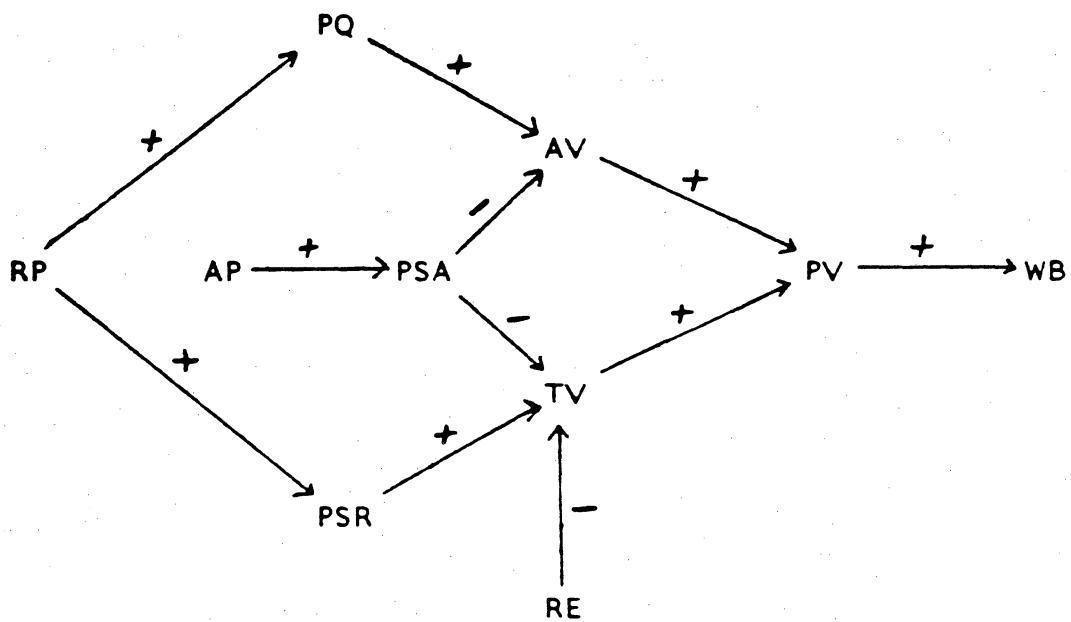
or,

$$pv = v(p_{\max} - p) + v(p_r - p) \quad (5)$$

Figure 8 shows how the concepts of acquisition value and transaction value can be used to extend the price-perceived quality model discussed earlier given a reference price and an actual price.

The concepts of acquisition value and transaction value are directly related to the use of discounts in the marketplace. First examine the situation of a simple price reduction, e.g., the price of a product is reduced from \$30 to \$25 with no reference being made to the previous price. The consumer will make a tradeoff between the perceptions of quality and sacrifice derived from the new \$25 price and arrive at a perception of value for the product as proposed by the original price-perceived quality conceptualization. This perception of product value may also be called acquisition value. Since there is no "deal" offered in the simple price reduction scenario, there will be no transaction value associated with the offer unless the buyer is aware of the price reduction; therefore, the total utility or value perceived by the consumer includes only the acquisition value as long as it is assumed that the buyer is unaware of the previous price. It is assumed the consumer does not use an internal reference price for comparison.

Second, take the situation where price is reduced and presented with a reference price to the consumer, e.g., a regular price/sale price scenario. Here the consumer may evaluate the quality of the product based on the regular price and the sacrifice for the product based on the actual selling price. The tradeoff between these two assessments results in the acquisition value for the offer. However, since the presence of the reference price compared to the sale price suggests a "deal," positive transaction value also exists. Perceived value for the offer will then be equal to the acquisition value combined with the positive transaction value.



Where:

AP is Actual Price
 PQ is Perceived Quality
 PSR is Perceived Sacrifice Regular
 AV is Acquisition Value
 PSA is Perceived Sacrifice Actual

PV is Perceived Value
 WB is Willingness to Buy
 RP is Reference Price
 RE is Redemption Effort
 TV is Transaction Value

Figure 8. The Extended Conceptualization

This same concept is illustrated by the use of either coupons or rebates. In each of these situations the regular market price is the reference price used and the lower selling price is the price obtained by subtracting the amount of the coupon or rebate from the market price. The difference between the reference price (market price) and the lower selling price (the price minus coupon or rebate) results in positive transaction value.

Transaction value affects the perceived value of an offer as illustrated by the silver lining principle in Figure 9. Positive transaction value is the perceived reduction of a loss (the price paid for a product) by a small gain (the savings from the coupon or rebate) and, when segregated in this manner, the perceived value of the offer is enhanced because the positive transaction value combines with acquisition value to enhance the perceived value of the offer.

Transaction value can have a positive or negative affect on perceived value. A mail-in rebate is an example of both the positive and negative effects of transaction value on perceived value. The mail-in rebate provides positive transaction value by reducing the regular price by the amount of the rebate. It also provides negative transaction value (transaction disutility) from the delayed reduction of the regular price (having to wait for the manufacturer to mail back the refund) and/or from the idea that in many cases to get a refund a person must pay postage. This delayed/reduced refund helps explain the different values obtained for the rebate and coupon in Figure 9. It should be noted that the use of a coupon also possesses transaction disutility because of the extra effort involved in clipping out the coupon and taking it to be redeemed; however, this effort is viewed as being less cumbersome than using a rebate that must be mailed to the manufacturer. This impact of redemption effort on transaction value is shown in the extended conceptualization in Figure 8.

The price-perceived quality conceptualization (Monroe and Krishnan 1984), prospect theory (Kahneman and Tversky 1979), the discount literature, and Thaler's (1985) silver lining principle and transaction utility theory are used to derive the following theoretical propositions.

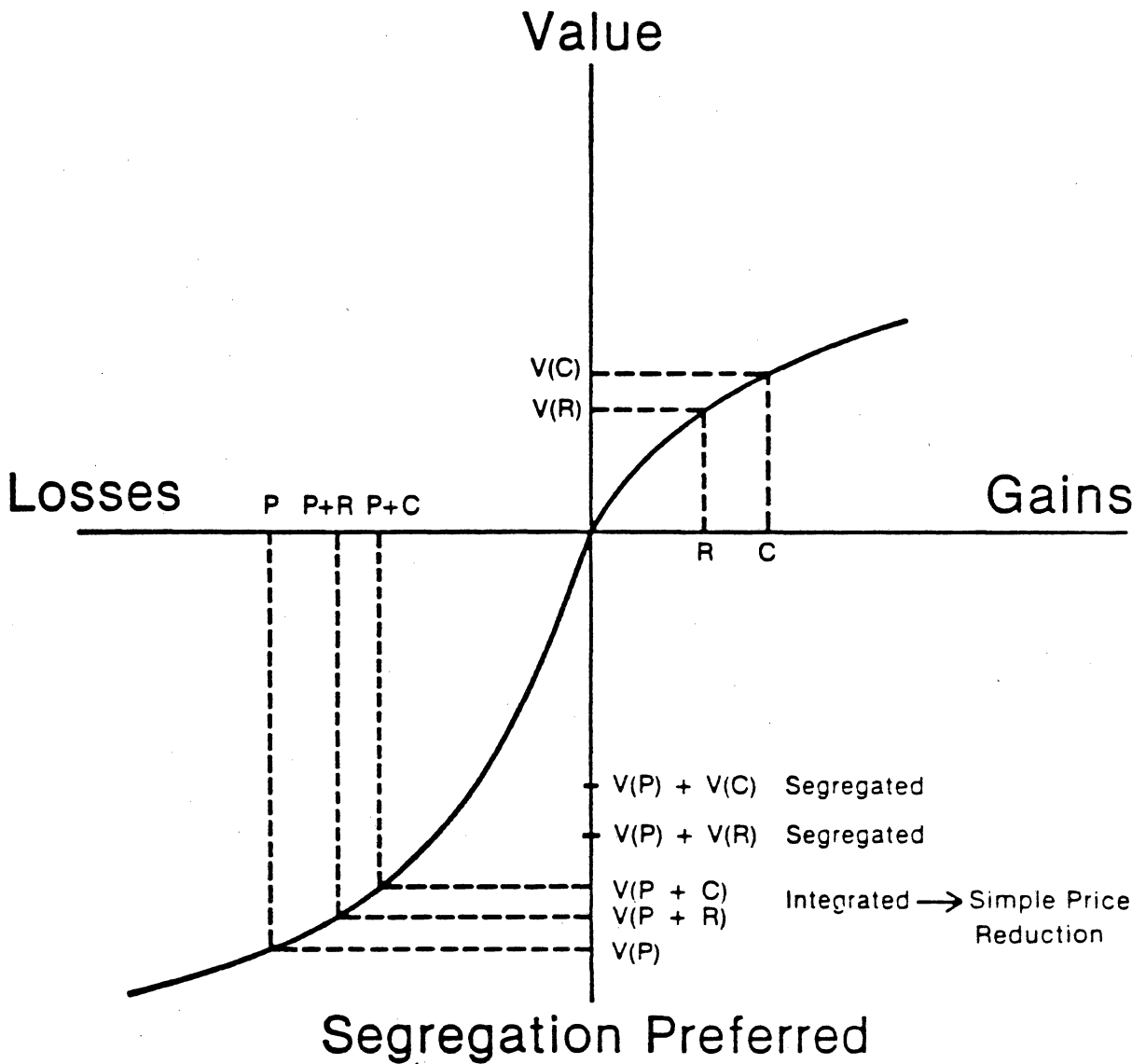


Figure 9. Silver Lining Principle (Coupons + Rebates)

Theoretical Propositions

The above conceptualization as summarized in Figure 8 leads to a number of theoretical propositions. The first five propositions are derived from the original price-perceived quality model and refer to a selling situation without a "deal" being offered or perceived by the buyer. All propositions are understood to be under conditions of *ceteris paribus*.

1. There is a positive relationship between price and buyers' perceptions of product quality.
2. There is a positive relationship between price and buyers' perceptions of sacrifice.
3. There is a positive relationship between buyers' perceptions of product quality and their perceptions of acquisition value.
4. There is a negative relationship between buyers' perceptions of sacrifice and their perceptions of acquisition value.
5. There is a positive relationship between buyers' perceptions of acquisition value and their willingness to buy.

The next propositions refer to a selling situation where a "deal" is offered and perceived by the buyer.

6. There is a negative relationship between buyers' perceptions of sacrifice based on the actual price and their perceptions of transaction value.
7. There is a positive relationship between buyers' perceptions of sacrifice based on the reference price and their perceptions of transaction value.

8. There is a negative relationship between buyers' perceptions of the amount of effort required to obtain the "deal" and transaction value.
9. There is a positive relationship between buyers' perceptions of transaction value and their overall perceptions of the value of the offer.
10. There is a positive relationship between buyers' perceptions of acquisition value and their overall perceptions of the value of the offer.
11. There is a positive relationship between buyers' overall perceptions of value of the offer and their willingness to buy.

Proposition eleven is a restatement of proposition five for the "deal" situation.

Summary

This chapter presented a review of the literature in the price-perceived quality research area. The role that price plays in buyers' subjective evaluations of products was examined from both the economic and behavioral perspectives, and a conceptualization that attempts to blend these two perspectives was also presented. Next, qualitative and quantitative reviews of empirical research in the price-perceived quality area were presented. Findings from these reviews show the need for further investigation into the price-perceived quality relationship. More specifically, the relationships of price with the four independent variables perceived quality, perceived sacrifice, perceived value, and willingness to buy need further study as well as the effect of other extrinsic cues on these relationships. In particular, the effect of the extrinsic cue, promotional discounts, is not addressed by the original price-perceived quality conceptualization. Further, the price-perceived sacrifice relationship needs to be measured to accurately test the proposed conceptualization.

A review of some of the past research on discounting showed that not only the size of the discount, but the method of presenting the discount (the way it is framed) affects buyers' evaluations of purchase offers. The concept of transaction utility theory was introduced to examine the role that price discounts play in the proposed price-perceived quality conceptualization. The chapter concluded with a presentation of the theoretical propositions deduced from this extended conceptualization.

Chapter III

Research Design and Methodology

Overview of the Chapter

This chapter presents the research design and methodology used to test the operationalization of the theoretical propositions listed in Chapter II. Operational hypotheses are developed from the theoretical propositions and issues related to the research design and methodology are discussed.

The first section of this chapter presents the operational hypotheses for the independent variables effects on perceived quality, perceived sacrifice, perceived value, and willingness to buy. The second section presents the methodology for the experiment which includes discussion of the research design, independent variables, sample selection, stimulus presentation, dependent variables, and data collection techniques. The third section presents the research plan which is broken down into two phases, a pretest phase and test phase of the research.

Research Hypotheses

This section converts the theoretical propositions presented in Chapter II to testable hypotheses. The operational hypotheses are presented following a brief discussion of the four scenarios that were given to the subjects. The explanation of each scenario should help clarify the operational hypotheses that follow.

A question of interest is the effect that the framing of an offer has on the perceived quality of the product. There were four scenarios presented in the research in which the product offer was framed in a different manner for each scenario. In the first scenario, a single price for a product was presented. This price represented a simple price reduction. For example, a product that may sell for \$144.95 was offered at \$129.95 (a simple price reduction). In the second scenario, the offer was framed as a discount using the semantic cues "regular price/sale price." For example, both the regular and sale prices were presented as \$144.95 and \$129.95 respectively. Here the \$144.95 price was an attempt to impose a reference price for the subjects.

In the third scenario, the offer was framed using a regular price in combination with a coupon. The regular price of \$144.95 was presented along with a coupon of \$15 with instructions that the coupon needed to be clipped and taken to the store for redemption. The fourth scenario was framed using a regular price in combination with a rebate. The regular price of \$144.95 was presented along with a rebate certificate worth \$15.00 that would have to be mailed to the manufacturer. The rebate certificate indicated that it would take four to six weeks to be processed.

Since offers including regular price/sale price, coupons, and rebates had a higher reference price than a simple price reduction offer that was equivalent financially (same monetary sacrifice), the offers that included the discounts were expected to have a higher perceived quality. For example, a product that has a list price of \$144.95 is sold at one store for \$129.95 by use of a \$15 coupon whereas the exact same product is sold at another store for \$129.95 (a simple price reduction). In the instance where the coupon is used, the reference price given is \$144.95; however, in the case of the simple price reduction, the reference price given is \$129.95.

Since the original conceptualization proposed by Monroe and Krishnan (1985) suggests a positive price-perceived quality relationship, perceived quality should be higher for the coupon offer due to the higher reference price used to judge the quality. The same situation occurs for the rebate and regular price/sale price scenarios. Also, the perceived quality should be the same for financially equivalent offers that include a rebate, regular price/sale price, or a coupon because each offer had the same reference price for the consumer to use to evaluate quality.

The following hypotheses were based on the conceptualization of the price-perceived quality relationship, the theoretical propositions, and the review of the literature on discounts, which includes the discussions on coupons, rebates, framing, and acquisition and transaction values.

Price Effects (H1)

As price increases it would be expected that perceived quality and perceived sacrifice would continue to increase. However, at some higher acceptable price, both perceived value and willingness to buy would begin to decrease due to the sacrifice component becoming more important in the tradeoff with perceived quality. Thus, it was expected that perceived value and willingness to buy will decrease after first increasing (Figure 2, Chapter II). The hypotheses for price effects are:

1. As price increases from a low price to a higher price, subjects' perceptions of product quality will increase. There is a positive relationship between price and perceived quality, *ceteris paribus*.
2. There is a positive relationship between the regular price and perceived sacrifice regular.
3. There is a positive relationship between the actual price and perceived sacrifice actual.
4. There is a positive relationship between perceived quality and perceived acquisition value.

5. There is a negative relationship between perceived sacrifice actual and perceived acquisition value.
6. There is a negative relationship between perceived sacrifice actual and perceived transaction value.
7. There is a positive relationship between perceived sacrifice regular and perceived transaction value.
8. There is a positive relationship between perceived acquisition value and willingness to buy.
9. There is a positive relationship between perceived transaction value and willingness to buy.
10. As price increases within the subjects' acceptable price ranges from a low price to a higher price, subjects' perceptions of value will increase and then decrease.

Form of Discount Effects (H2)

The hypotheses for the effects of the form of discounts on perceived quality, perceived sacrifice, perceived value, and willingness to buy are broken down into sections for each of these dependent variables.

Perceived Quality

The discount offers had regular prices presented that acted as reference prices. The reference prices were used to assess product quality and were higher than the offer with only the selling price; therefore, the perceived product quality should be higher for the discount offers. For example, an offer with a price of \$100 with a \$10 coupon has the same monetary sacrifice as an offer of \$100 with a \$10 rebate, a regular price/sale price offer of \$100 regular price (RP) and \$90 sale price (SP),

and a selling price offer of \$90. However, in each of the discount offers the reference price of \$100 should be used to assess product quality whereas \$90 should be used for the selling price only offer resulting in a higher perception of quality for the discount offers.

1. Given financially equivalent offers (the actual monetary sacrifice is equal), perceived product quality will be higher for an offer that includes a coupon than for an offer with only the selling price.
2. Given financially equivalent offers, perceived product quality will be higher for an offer that includes a rebate than for an offer with only the selling price.
3. Given financially equivalent offers, perceived product quality will be higher for an offer that presents both regular and sale prices than an offer with only the selling price.
4. Given financially equivalent offers, perceived product quality will be the same for offers that include a coupon, a rebate, or both regular and sale prices if the same reference price is presented for each situation.

Perceived Sacrifice (Actual and Regular)

The original price-perceived quality model also suggests a positive price-perceived sacrifice relationship. Therefore, if an offer that includes a coupon, a rebate, or regular price/sale price is financially equivalent to another offer (a simple price reduction), then the actual perceived sacrifice should be equivalent for each offer since they are financially equivalent. For example, a product offer that has a regular price of \$100 and also has a \$10 coupon should be perceived as being financially equivalent to an offer that has a regular price of \$100 and a \$10 rebate, an offer that has a regular price of \$100 and a sale price of \$90, and an offer that has only a regular price of \$90 dollars because the perceived sacrifice of the offer is the same, i.e., \$90.

If the offers are financially equivalent, the monetary sacrifices of the offers should be equivalent. In the example above, the offers are financially equivalent, that is, the monetary loss for each offer is \$90. This perception of monetary loss is the measure of perceived sacrifice actual; therefore, perceived sacrifice actual should not differ.

5. Given financially equivalent offers, perceived sacrifice actual will not differ for offers with only the selling price, offers with coupons, offers with rebates, and offers presenting regular and sale prices.

In the example above, the reference price for the sale price only offer is \$90 and for all three discount offers is \$100. The perception of the monetary loss is the measure of perceived sacrifice regular. Therefore, perceived sacrifice regular should not differ for the three discount offers, but should be lower for the sale price only offer when compared to the discounts offers.

6. Given financially equivalent offers, perceived sacrifice regular will not differ for offers with coupons, offers with rebates, and offers presenting regular and sale prices, but should be lower for the sale price only offer.

Perceived Value

As shown in Figure 7, when a loss is combined with a relatively small gain, segregation of the events is preferred because of the added value obtained. This is known as the silver lining principle. This principle is evident in the marketplace today in the use of forms of discounts. Coupons, rebates, and regular price/sale price can be viewed as different ways of framing a product offer to the consumer (Figure 9). Each of these forms of discounts allows the seller to frame the offer as a re-

duction of a loss (segregation). This is viewed as a better offer than simply reducing a price (integration).

The selling price only offer, coupon offer, rebate offer, and regular price/sale price offer all have acquisition value. The total perceived value of the selling price only offer is equal to its acquisition value. However, the total perceived value of the discount offers equals the acquisition value plus transaction value. The regular price/sale price offer elicits positive transaction value because of the perceived merits of the "deal." The coupon offer has both positive transaction value (the perceived savings of the deal) and transaction disutility (having to clip and redeem the coupon). The rebate offer also has both positive transaction value (the perceived savings of the deal) and transaction disutility (the delay in obtaining the mail-in rebate and the cost of postage). The transaction disutility will be greater for the rebate than for the coupon because of the greater effort and time involved to redeem the rebate.

Perceived value will be greater for the discount offers than for the selling price only offer due to the positive transaction value of these offers. Also, since the perceived sacrifice actual of all four offers is the same and perceived quality is higher for the discount offers, the tradeoff between perceived sacrifice and perceived quality will result in greater perceived value for the discount offers. The perceived value will be greater for the regular price/sale price offer than for the coupon or rebate offer because of the transaction disutility associated with both the coupon and rebate offers. This transaction disutility reduces the perceived value of an offer. Since the transaction disutility is greater for the rebate offer than the coupon offer, the perceived value will be greater for an offer with a coupon than an offer with a rebate. Therefore, the following hypotheses were made regarding the use of discounts:

7. Given financially equivalent offers, perceived value will be greater for an offer with a coupon than for an offer with only the selling price.
8. Given financially equivalent offers, perceived value will be greater for an offer with a rebate than for an offer with only the selling price.

9. Given financially equivalent offers, perceived value will be greater for an offer with both a regular price and a sale price than for an offer with only the selling price.
10. Given financially equivalent offers, perceived value will be greater for an offer with both a regular price and a sale price than for an offer with a coupon.
11. Given financially equivalent offers, perceived value will be greater for an offer with both a regular price and a sale price than for an offer with a rebate.
12. Given financially equivalent offers, perceived value will be greater for an offer with a coupon than for an offer with a rebate.

Size of Discount Effects (H3)

Since a constant reference price is used over all discount levels, perceived quality and perceived sacrifice regular should not differ because they will be assessed based on the reference price provided. Also, since perceived sacrifice actual is the measure of the perceived monetary sacrifice, perceived sacrifice actual will decrease as the size of the discount increases. Since the perception of a "deal" will increase as the size of the discount increases, transaction value will increase. That is, as the size of the discount increases, perceived sacrifice regular remains constant and perceived sacrifice actual decreases resulting in an increase in the perceived merits of the deal, i.e., increased transaction value.

Perceived value is the tradeoff between perceived quality and perceived sacrifice. Therefore, since perceived quality will remain constant as the size of the discount increases and perceived sacrifice actual will decrease as the size of the discount increases, perceived value will increase as the size of the discount increases.

1. Perceived quality will not differ for offers using regular/sale price, coupons, or rebates regardless of the size of the discount. dli. Perceived sacrifice regular will not differ for offers using regular/sale price, coupons, or rebates regardless of the size of the discount.
2. Perceived sacrifice actual will be inversely related to the size of the discount.
3. Perceived transaction value will be positively related to the size of the discount.
4. Perceived value will be positively related to the size of the discount.

Willingness to Buy (H4)

The price-perceived quality conceptualization suggests that the fourth dependent variable, willingness to buy, is directly and positively related to perceived value. Therefore, the hypothesis for willingness to buy is:

Willingness to buy will be positively related to perceived value across all conditions.

Methodology

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

1. the generalizability with respect to populations,
2. precision in control and measurement of variables related to the behavior(s) of interest, and

3. existential realism for the participants.

However, as also pointed out by McGrath (1982 p. 74), "ceteris is never paribus in the world of research," i.e., a researcher cannot maximize all three of these areas at the same time. Research becomes a tradeoff among these three desiderata. Depending on the research objective, researchers will choose to optimize one or two of the conditions mentioned above at the expense of the other(s).

Since past price-perceived quality research has been fragmented and inconclusive, a research strategy that focuses on precision in control and measurement of variables would be best since this would improve the internal validity of the study. In line with McGrath's (1982) suggestions, a secondary but important concern would be to try to minimize the problems of realism and generality. However, since a tradeoff must be made, internal validity took precedence over external validity in this study.

Design

The research was conducted using a 4 x 4 between subjects design with four levels of price and four levels of forms of discounts. The form of discount levels that were used are: no discount, regular price/sale price, coupons, and rebates. Prices were set based on the results of a pretest conducted to find an acceptable range of prices and so that the prices were an equal distance apart between each price level. (The pretest is discussed in Chapter IV). The regular price/sale price, coupon, and rebate levels of forms of discounts differed according to the effort it would take subjects to receive the discounts. The fourth level was a no discount (price only) treatment. The actual research design is presented in Table 7.

The no discount treatment allowed for the analysis of the price main effect whereas the regular/sale, coupon, and rebate treatments allowed for the analysis of the effects of the size of the discounts (price manipulation) as well as the form of the discounts on the dependent variables.

Table 7. Research Design

		Form of Discount			
		No Discount	Regular/Sale	Coupons	Rebates
	P1	\$129.95	\$144.95 129.95	\$144.95 15.00	\$144.95 15.00
Price	P2	\$114.95	\$144.95 114.95	\$144.95 30.00	\$144.95 30.00
	P3	\$ 99.95	\$144.95 99.95	\$144.95 45.00	\$144.95 45.00
	P4	\$ 84.95	\$144.95 84.95	\$144.95 60.00	\$144.95 60.00
		\$144.95			

The no discount treatment acted as a control group to make comparisons across studies. Also, a fifth price x no discount level was incorporated as a control or comparison for the other form of discount levels. The price for this fifth level was the same price as the reference price used in each of the other three form of discount levels. This fifth price also enhanced comparisons made across studies. It should be noted that by varying the price levels in the no discount level, the original price-perceived quality conceptualization also was tested.

For the no discount level, subjects were presented with a description for the product similar to a catalog's copy and a selling price. Five prices were chosen from within a set of acceptable prices for the product determined in a preliminary experiment. The prices were selected from the set of acceptable prices so that the provided reference prices for the other three discount levels were acceptable to the subjects. Recall that in the extended conceptualization, it is suggested that transaction value is determined when the selling price is compared to a reference price. Also, there was a constant monetary distance between the prices. Subjects were asked to rate the product's quality, the amount of sacrifice implied by the price, the overall value of the offer, and to indicate their willingness to buy at the stated price.

Subjects in the other three forms of discount levels were treated to a similar process. Subjects were presented with a product description for the same product that was presented in the no discount level; however, each of these levels offered a "deal" to the subjects. More specifically, the regular price/sale price treatment provided the subjects with an actual price and a reference price for comparison, and the coupon and rebate treatments offered a reference price in conjunction with a coupon or rebate discount. The monetary distance between the discount sizes was the same as the distance between prices in the no discount level, and again, subjects were asked to rate the product's quality, the amount of the sacrifice implied by the price, the overall value of the offer, the perceived merits of the offer, and to indicate their willingness to buy given the particular offer.

A between subjects design was chosen for each experiment to avoid the possible confound of the subjects learning the true intent of the researcher and responding in the hypothesized direction. It was pointed out in Chapter II that within subject designs are often criticized for the po-

tential lack of internal validity because of this learning effect. Therefore, since the primary concern for this study was to maximize internal validity, the between subjects design was selected.

Sample

Calder, Phillips, and Tybout (1981, 1982, 1983) suggest that if the objective of the research is to test theoretical propositions and not to generate findings that can be directly applied to a particular situation, then more precise theoretical understanding can be obtained by using a sample of homogeneous respondents. Petroschus (1983) suggests that if statistical generalization of the finding is not the goal, then a more representative sample of the population is not necessary and any relevant sample such as students will allow for the theoretical findings to be interpreted. Therefore, for the purpose of this study, subjects were a convenience sample of students selected from marketing management classes and advertising classes at Virginia Tech. Sample selection is discussed in more detail in Chapter V.

The sample size selected for the research design was determined by the desired precision, power, confidence level, and effect size. A cell size of 15 subjects, an estimated effect size " f " of 0.4 obtained from the quantitative review, an alpha level of .05, and the number of treatment levels in the proposed design resulted in a power of 0.88 and a total sample size of 255 subjects.

Dependent Variables

It is a common assertion that reliability of measures is a necessary but not sufficient condition for construct validity (Carmines and Zeller 1979). Churchill (1979), McGrath (1982), and Monroe and Krishnan (1984) all feel that marketers need to pay more attention to measurement development and that better measures can be developed by developing multiple measures for the dependent variable. The theoretical constructs, perceived quality, perceived sacrifice (actual and regular),

perceived (acquisition) value, perceived transaction value, and willingness to buy were the dependent variables used in this study. At least three indicators were used for each of these constructs.

In research conducted by Dodds (1985), Petroschius (1983), Krishnan (1984), and Rao (1986) multi-item measures were used to assess the three constructs, perceived quality, perceived value, and willingness to buy, and correlation analysis was used to test the reliability of the measures. The reliabilities for perceived quality for Dodds (1985) ranged from .89 to .96 using Cronbach's Alpha. Petroschius (1983), using the same method of testing the reliability of her measures, obtained Cronbach Alpha values that ranged from .84 to .88 for product quality, .87 to .92 for value of offer, and .86 to .88 for purchase. Krishnan (1984) obtained Cronbach Alpha values that ranged from .89 to .91 for perceived quality while Rao (1986) obtained values of .81, .79, .92, and .96 for perceived quality, perceived sacrifice, perceived value, and willingness to buy respectively using the same measure.

This research used scales similar to those used in the above studies. Also, since perceived sacrifice had been previously measured in only Rao's (1986) study, scales were developed to measure this construct. A sample of the actual scales used is presented in Appendix B. A reliability assessment of indicators was conducted in a pretest resulting in some alterations to the scales used for the study. A sample of the scales used for the pretest is presented in Appendix A.

Independent Variables

The independent variables for this study were price, size of the discount (as a price manipulation), and the forms of discounts. The manipulations of these independent variables are discussed below.

Price

Five levels of price were used for the no discount level, and four levels of price discounts were used for the experiment. The price selected for cell 5 of the no discount level was for control purposes (Table 7). As previously stated, this price represented the reference price for the various forms and sizes of discounts. These five prices were selected based on the results of a pretest given to ensure that the prices were within the subjects' acceptable price ranges. This was done by requesting that subjects in the pretest indicate a dollar figure which they felt was too high (too expensive), too low (begin to suspect the quality), and normal for the product. The differences between the prices were equal in magnitude (Table 7).

Size of Discount

The size of discount manipulation was actually the same as the price manipulation. In fact, it was a price manipulation simply presented in an alternative form. Therefore, the increase in the size of the discount for the regular/sale, coupon, and rebate levels coincided directly with the price reduction of the no discount level (Table 7). For example, the reference price provided for the third price level (discount level) for coupons minus the coupon discount resulted in the same cost to subjects as the actual price presented to subjects at the third price level of the no discount level. This procedure was the same for all forms of discounts at each price level. That is, cell 2 in the no discount level was compared to cell 2 of the other discount levels, cell 3 of the no discount level was compared to cell 3 of the other discount levels, and so on.

Form of Discount

As discussed in Chapter II, rebates and coupons were chosen to be used in this experiment because of their ever growing popularity in the marketplace. The other discount levels were a

regular/sale price treatment and a no discount treatment. The regular/sale price treatment was used so that research conducted by Della Bitta, Monroe, and McGinnis (1981) and Berkowitz and Walton (1980) could be partially replicated. These studies examined the effect that information cues, such as regular price/sale price, had on perceived value and willingness to buy. Also, the selection of these forms of discounts tested the effect that the framing of an offer has on subjects' product evaluations, i.e., the amount of effort involved to obtain the discount will increase from the regular/sale price treatment to the coupon treatment to the rebate treatment and should have an impact on transaction value. Finally, the price only treatment enabled a comparison between forms of discounts and an equivalent financial offer presented in the no discount treatment.

It should be noted here that some will argue that brand name and/or store name should have been used in the experiment to make it more like an actual purchase situation for the subjects; however, since the effect of forms of discounts had not been studied in the price-perceived quality conceptualization, controlling for the effect of store name and brand name should have enabled the researcher to test this relationship more precisely. Future research efforts can incorporate these other variables to produce additional information about the relationship.

Stimulus Presentation

As discussed in Chapter II, the form of stimulus presentation may be a potential source of variation in an experiment. Presenting the actual physical product may result in subjects using a variety of senses to evaluate the product. Therefore, in this experiment, the subjects were presented a product description to avoid the above problem and, therefore, enhance the internal validity of the study. The product description was similar to an actual description of the product selected from a catalog. The product (a dual cassette recorder) was selected based on the results of a pretest (Chapter IV).

Data Collection

The measurement of the constructs perceived quality, perceived sacrifice (actual and regular), perceived transaction value, perceived (acquisition) value, and willingness to buy were made using a seven-point category scale. As discussed in Chapter II, this method of measurement has been used in many of the previous price-perceived quality studies reviewed. Subjects were asked to circle the number on the scale which best reflects their reaction to a question. Each number on the scale had a verbal cue that was considered appropriate for that particular number. For example, the number "5" on a scale may be cued by the words "slightly high" on a scale from very low to very high as shown in Appendix A.

The Research Plan

The research proceeded in two stages. The first stage concentrated on:

1. Choosing a population of products that subjects were familiar with and/or knowledgeable about.
2. Choosing a population of products that were conducive to coupons and cash rebates.
3. Setting the discounts and thus the price manipulations such that they fell within the acceptable price ranges.
4. Presenting the form of the discount so that the subjects perceived the extra effort involved in using the coupon and rebate discounts.

5. Testing the scales that were to be used for the actual study.

The selection of a population of products was guided by the criteria used by Petroschius (1983):

1. The subjects should be potential purchasers and/or users of these products.
2. The products should represent different price ranges to increase the generalizability of the findings across product categories.
3. Since it is desired to use subjects of both sexes in this study, the product should normally be used by both males and females to avoid sexual bias.

The selection of products had to be made with consideration of the use of discounts and rebates with the product, i.e., it would be unrealistic to use a product that was not conducive to coupons or rebates. However, since both coupons and rebates are used today for a wide variety of products ranging from grocery items to automobiles, this constraint did not greatly restrict the choice of products available for the research. Since the majority of past price-perceived quality research has focused on lower-priced items, this research studied a higher-priced item. The product selection, choice of price levels, and discount manipulations were all derived from a pre-test in the initial phase.

The second phase of the research tested the effect of price, size of discount, and form of discount on price-perceived quality, perceived sacrifice (actual and regular), perceived transaction value, perceived (acquisition) value, and willingness to buy. The above independent variables are external information cues. As previously mentioned, since these cues are external to the product, this suggests that any internal product characteristics should be held constant. Therefore, since the presence of an actual product may have influenced a subject more than the external cues used in this study, only a product description was used to control the amount of intrinsic cue information available.

In this phase, subjects were selected from marketing principles classes at Virginia Tech. The seventeen experimental treatments were randomly assigned to subjects until the desired sample size was obtained. The subjects read a written product descriptions similar to an actual catalog description and then evaluated the product based on the additional information presented, i.e., the price and form of discount information available in each particular cell (Table 7). Subjects were asked several questions at the beginning of the study to attempt to mask the intent of the study, and the subjects were also debriefed following the experiment. The procedures for the second phase are discussed in detail in Chapter V.

Summary

This chapter presented the proposed design and methodology for this research project. The theoretical propositions from Chapter II were converted to testable hypotheses. The design was presented and issues of sample, dependent variables, independent variable manipulation, stimulus presentation, and the data collection method were discussed. The design was a 4 x 4 between subjects design and was analyzed by the use of ANOVA, Duncan's multiple comparisons, and trend analysis. Seven-point category scales were used to measure the multiple indicators for each dependent variable, perceived quality, perceived sacrifice (actual and regular), perceived transaction value, perceived (acquisition) value, and willingness to buy. The independent variables for this research were price and form of discount, and the sample was a convenience sample of marketing principles and advertising students at Virginia Tech.

Chapter IV

Pretest Results and Analysis

Overview of the Chapter

To test the extended price-perceived quality conceptualization described in Chapter II and to use the methodology described in Chapter III, two pretests were conducted. As discussed in Chapter III, the general objectives of the pretests were to:

1. Choose a population of products that subjects are familiar with and/or knowledgeable about.
2. Choose a population of products that are conducive to coupons and cash rebates.
3. Set the discounts and thus the price manipulations such that they fall within the acceptable price ranges of the subjects.
4. Present the forms of discounts so that the subjects perceived the extra effort involved in using the coupon and the rebate discounts.

5. Test the indicators used to measure the constructs.

The purpose of this chapter is to discuss the specific details of each of the two pretests.

Pretest I

The first pretest was conducted to obtain the first three general objectives discussed above, i.e., to choose a product that subjects are knowledgeable about, that is conducive to the use of coupons and rebates, and to select prices for the product so that the prices fall within the acceptable price ranges for the subjects. The questionnaires used to gather this information are shown in Appendix C. Using these questionnaires, sixty-four marketing management students were asked to read product descriptions for two products and to give their assessments of the products based on the descriptions. There were four products tested, therefore, thirty-two responses were gathered for each product.

The four products chosen for the first pretest were:

1. A Trimline Touch Tone Desk Telephone
2. An AM/FM Stereo Alarm Clock Radio
3. A Portable Dual Cassette Recorder with AM/FM Stereo Radio
4. A Stationary Exercise Bike

These products were chosen because it was believed that the student subjects would be somewhat familiar with each of the products and because each of the products were conducive to

both coupon and rebate promotions. The following two sections present the results of the first pretest.

Product Knowledge

For each of the four products, subjects were asked to indicate their knowledge of the product on a five point scale. As shown in Table 8, the subjects indicated that on the average they were more knowledgeable about the Trimline Touch Tone Desk Telephone and the Dual Cassette Recorder than the AM/FM Stereo Alarm Clock Radio and the Stationary Exercise Bike.

For each of the four products, subjects were asked to indicate a price they felt was too high to pay for the product, too low to pay for the product (they might suspect the product's quality), and normal or reasonable for the product. The resulting prices are listed in Table 9. On the average, the dual cassette recorder provides the widest range of prices from an average high price of \$187.90 to an average low price of \$65.45 (a \$122.45 price range). A wide price range was desirable because it enhances the chances of finding a price-perceived quality relationship between price levels.

Results

Since the subjects were more knowledgeable of the dual cassette recorder and there was a large range of acceptable prices for the product, the dual cassette recorder was chosen as the product to be used for the final survey. The next step was to establish a range of acceptable prices for the dual cassette recorder.

A high price of \$144.95 was chosen because it was well within the average high price (\$187.90) indicated by the subjects in the pretest (Table 9). The \$144.95 price is also well above the average normal price (\$115.32) indicated in the pretest. The high price was selected to imply a high quality

Table 8. Product Knowledge

<u>Product</u>	<u>Mean</u>	<u>Standard Deviation</u>
Telephone	2.69	.89
Alarm Clock Radio	2.97	.86
Dual Cassette Recorder	2.74	.96
Stationary Exercise Bike	3.56	1.16

5 Point Scale

Extremely
Knowledgeable

1

2

3

4

Not Knowledgeable
At All

5

Table 9. Price Selection

High Price

<u>Product</u>	<u>Mean</u>	<u>Standard Deviation</u>
Telephone	\$ 52.88	\$27.37
Alarm Clock Radio	39.44	15.36
Dual Cassette Recorder	187.90	94.12
Stationary Exercise Bike	140.75	65.10

Low Price

<u>Product</u>	<u>Mean</u>	<u>Standard Deviation</u>
Telephone	\$17.84	\$ 7.27
Alarm Clock Radio	15.78	5.48
Dual Cassette Recorder	65.45	24.83
Stationary Exercise Bike	50.94	22.52

Normal Price

<u>Product</u>	<u>Mean</u>	<u>Standard Deviation</u>
Telephone	\$ 33.84	\$14.15
Alarm Clock Radio	27.00	10.45
Dual Cassette Recorder	115.32	38.85
Stationary Exercise Bike	92.88	45.72

product. A low price of \$84.95 was selected because it was well within the average low price (\$65.45) indicated in the pretest for the dual cassette recorder and because it allowed for the selection of three other prices at \$15.00 intervals (\$129.95, \$114.95, and \$99.95) between the high and low prices selected. The low price (\$84.95) was selected below the average normal price (\$115.32) to imply a lower quality product. The low price of \$84.95 represents approximately a 41% discount from the high price of \$144.95. This was felt to be an acceptable size of discount for the subjects and the product selected. The frequency distributions for the selection of the high, low, and normal prices are presented in Table 10.

Pretest II

The objectives of the second pretest were to present the forms of discounts so that subjects would perceive the extra effort involved in using coupons and rebates and to test the reliability of the indicators used to measure the constructs. To help achieve these objectives, survey booklets were developed for the dual cassette recorder product description. The survey booklets used for the second pretest are presented in Appendix A. The following sections present the procedures and results for the second pretest.

Developing Indicators

There were four indicators developed for the perceived quality construct and three indicators were developed for each of the following constructs: perceived value, willingness to buy, perceived sacrifice actual, perceived sacrifice regular, perceived transaction value, and perceived effort. The indicators are presented in Appendix A in section II of the survey booklets. As indicated in Chapter

Table 10. Frequency Distributions

HIGH	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
60	1	1	3.226	3.226
75	1	2	3.226	6.452
80	2	4	6.452	12.903
100	1	5	3.226	16.129
120	1	6	3.226	19.355
130	1	7	3.226	22.581
140	1	8	3.226	25.806
150	5	13	16.129	41.935
175	2	15	6.452	48.387
190	1	16	3.226	51.613
200	10	26	32.258	83.871
250	2	28	6.452	90.323
300	1	29	3.226	93.548
450	1	30	3.226	96.774
500	1	31	3.226	100.000

LOW	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
15	1	1	3.226	3.226
20	1	2	3.226	6.452
30	1	3	3.226	9.677
35	2	5	6.452	16.129
50	8	13	25.806	41.935
55	1	14	3.226	45.161
60	1	15	3.226	48.387
70	2	17	6.452	54.839
75	2	19	6.452	61.290
80	3	22	9.677	70.968
85	2	24	6.452	77.419
90	2	26	6.452	83.871
99	1	27	3.226	87.097
100	4	31	12.903	100.000

NORM	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
40	1	1	3.226	3.226
50	1	2	3.226	6.452
55	1	3	3.226	9.677
60	1	4	3.226	12.903
75	2	6	6.452	19.355
80	1	7	3.226	22.581
100	4	11	12.903	35.484
105	1	12	3.226	38.710
110	2	14	6.452	45.161
115	1	15	3.226	48.387
120	4	19	12.903	61.290
125	2	21	6.452	67.742
130	2	23	6.452	74.194
150	5	28	16.129	90.323
160	1	29	3.226	93.548
600	2	31	6.452	100.000

III, several of these indicators (in similar formats) were used in past price-perceived quality studies and had been shown to be reliable.

It should be noted that an oversight resulted in indicators not being developed for perceived acquisition value for the discount levels; however, indicators for perceived acquisition value were developed for the actual research survey. It was felt that reliable indicators could be developed for perceived acquisition value in the discount levels since perceived acquisition value is closely related to perceived value; therefore, the indicators for perceived acquisition value were not pretested for reliability.

Data Collection

Having developed the indicators, the next step was to collect the data for the pretest. As shown in Appendix A, the price level of \$129.95 (across all four discount levels) was selected to test for the perceived effort associated with coupons and rebates and to test for the reliability of the indicators developed. There were thirteen indicators for the no discount level and nineteen for the regular price/sale price discount level; whereas, there were twenty-two indicators for the coupon and rebate discount levels. The reason for this difference was that there was no perceived sacrifice regular, no perceived transaction value, and no perceived extra effort in the no discount level, and there was no perceived extra effort in the regular price/sale price level.

The four scenarios were randomly assigned to students in two marketing management classes at Virginia Tech. The subjects in these two classes were assumed to be similar to the sample that would be used for the actual study. Each subject participated in only one of the questionnaire formats. In section III of each survey booklet, the subjects were asked to indicate what they thought was the objective of the study. Those booklets where the subjects accurately identified the purpose of the study were not used in the analysis because of the potential "helpful subject" bias, i.e., trying to respond according to the researcher's desired responses. If a particular scenario was thrown out, it was added to the next survey administration so that an equal number of subjects had

participated in each scenario. Sixty-eight questionnaires were issued and eight were discarded (for guessing the objective of the pretest) resulting in a total sample size of 60 subjects for the pretest. There were 15 subjects per discount level.

After the survey was given, subjects were debriefed as to the actual intent of the study. An open discussion was conducted to try to assess any potential problems with the questionnaires. Although it did not occur in the pretest, some subjects felt that the term "ghetto blaster," used to describe the dual cassette recorder, may be offensive to some individuals; therefore, the term was removed from the product description. Subjects also indicated that they had some trouble distinguishing between the indicators for perceived value and transaction value. Minor adjustments were made to several of the indicators to help resolve this problem. The specific adjustments made to the indicators are presented in Chapter V in a discussion of the actual research instrument.

Data Analysis and Results

Means were calculated for each of the indicators for each discount level and are presented in Table 11. The mean values give a general indication of the performance of the indicators for each of the constructs. The mean values should be similar for the indicators measuring a construct at a particular level. For example, the indicators measuring perceived quality at the coupon level should have similar mean values; and, as shown in Table 11, the mean values for perceived quality at the coupon level are similar. Overall, the mean values do not indicate any obvious problems with the indicators.

Not only do the mean values give an overall indication of the performance of the indicators, but, more importantly, the mean values indicated that subjects were noticing and reacting to the "effort" manipulations for the coupon and rebate levels. The means also indicated that subjects were accurately assessing more of an effort for the rebate level than the coupon level, i.e., mean values of indicators measuring effort in the coupon level ranged from 2.27 to 2.47; whereas, mean values of indicators measuring effort in the rebate level were substantially higher ranging from 3.80

Table 11. Indicator Mean Values

	<u>Price Only</u>	<u>Regular/Sale</u>	<u>Coupon</u>	<u>Rebate</u>
Perceived Quality Indicators	4.60	5.00	5.07	4.40
	4.47	5.13	5.33	5.20
	4.47	4.86	5.07	4.93
	4.20	4.20	4.93	4.60
Perceived Value Indicators	4.07	3.73	4.40	4.13
	3.80	3.73	4.27	4.00
	4.13	4.27	4.13	4.27
Willingness to Buy	3.67	3.53	4.27	3.33
	3.33	3.27	4.20	3.47
	3.73	2.87	4.00	3.13
Perceived Sacrifice Actual	4.60	4.60	4.07	4.47
	4.53	4.73	4.27	4.40
	4.93	5.13	4.20	4.53
Perceived Sacrifice Regular		5.13	4.47	4.47
		5.46	4.87	4.33
		4.93	4.73	4.80
Perceived Transaction Value		3.40	4.07	3.67
		3.93	4.33	4.33
		3.47	3.73	3.80
Perceived Effort Indicators			2.47	4.00
			2.40	3.80
			2.27	3.87

to 4.00. Therefore, the manipulations designed to indicate that there would be extra effort necessary to take advantage of the offers with coupons and rebates were effective.

To test the reliability of the measures more effectively, the data were analyzed using PACKAGE, which is a data analysis technique that aids in "cleaning up" the measurement model. The coefficient alphas, provided by the PACKAGE analysis, indicate the reliability of the multiple measures for each construct (Table 12). In general, the PACKAGE analysis supported the conclusions made based on the mean values for each of the measures, i.e., the indicators used to assess the constructs were reliable.

As shown in Table 12, the multiple indicators used to measure perceived sacrifice actual and perceived sacrifice regular performed well; however, there was some concern over the multiple indicators used to measure willingness to buy and perceived transaction value because the coefficient alpha scores for these constructs were .74 and .62 respectively. Based on these findings, slight adjustments were made to the indicators measuring willingness to buy. As previously noted, these adjustments are shown in the actual research instrument which is discussed in Chapter V.

The coefficient alpha value for perceived transaction value was the lowest value of any of the dependent variables. A possible explanation may be the fact that subjects were having difficulty distinguishing between indicators measuring perceived transaction value and those measuring perceived value in the discount levels; therefore, slight adjustments were also made for the indicators measuring perceived value. Also, the coefficient alpha value for perceived transaction value was based on a sample size of 45 (recall perceived transaction value was not measured in the price only, no discount level). It was felt that the adjustments made to the indicators for perceived value and the increase in sample size for the actual study would result in an improved coefficient alpha value for perceived transaction value.

Table 12. Reliability of Multiple Indicators

<u>Dependent Variable</u>	<u>Coefficient Alpha</u>
Perceived Quality	.87
Perceived Value	.85
Willingness to Buy	.74
Perceived Sacrifice Actual	.91
Perceived Sacrifice Regular	.90
Perceived Transaction Value	.62
Perceived Effort	.81

Summary

This chapter presented the objectives, procedures, and results of the two pretests that were conducted for the preliminary phase of this research. The first pretest resulted in the selection of a portable dual cassette recorder as the product to be used in the actual study. The product selection was based on two factors: 1) how knowledgeable the subjects were about the product, and 2) the ability to be able to select a wide range of prices within the product's acceptable range of prices. The first pretest also resulted in a selection of prices for the portable dual cassette recorder. The prices ranged from a high price of \$144.95 to a low price of \$84.95 with prices set at \$15 intervals between these end point prices, i.e, \$144.95, \$129.95, \$114.95, \$99.95, and \$84.95.

The results of the second pretest showed that while most of the measures proved reliable, there was a need to adjust some of the indicators to improve their reliability. The results of the second pretest also indicated that the "effort" manipulations used for the coupon and rebate levels were effective. Finally, a debriefing and open discussion with the subjects following the second pretest resulted in slight alterations in the product description for the portable dual cassette recorder.

Chapter V

Experimental Analysis and Results

This chapter presents the results and analysis of the actual experiment. First, an explanation of the experimental instrument is given. This is followed by a discussion of how the actual experiment was conducted. Third, the preliminary procedures prior to data analysis are delineated. Finally, some of the general results of the experiment are presented, followed by a step by step analysis and discussion of each of the hypotheses presented in Chapter III.

The Experimental Instrument

The experimental instrument used to collect data for this research was divided into three separate sections. A coverage page was also included. A description of the coverage page and each section of the instrument follows. Copies of the instruments used across all four discounts at the \$129.95 price level are presented in Appendix B.

Coverpage

The coverpage presented the general instructions for the data gathering session to the subjects. The product was introduced and the respondents were told that they were going to be asked to respond to an offer based on the product. The subjects were told that the questionnaire would be divided into a number of sections, and a brief description of each section was given. The respondents were instructed not to write their names anywhere in the booklets and were then told that every effort would be made to preserve their anonymity. Therefore, they were asked to respond in a honest and accurate manner. The coverpage concluded by thanking the respondents for their time and co-operation.

Section I

The first section of the research instrument was exactly the same for each survey used in the data collection. This section contained fifteen questions relating to the way subjects shop and the feelings they have about shopping. The purpose of this section was to help disguise the main objective of the research and to provide a more in-depth profile of the subjects for a later analysis. The subjects were asked to respond to each question using a seven-point Likert-type scale ranging from 1 to 7 with 1 corresponding to "strongly disagree" and 7 corresponding to "strongly agree."

Section II

The second section of the research instrument contained the same instructions, product description, and product features across all price and discount levels. However, the price and discount information presented to each subject differed depending upon which of the seventeen cells the re-

search instrument corresponded to (see the research design in Chapter III, Table 7). Also, the number of questions incorporated in the second section of the instrument varied depending upon which discount level the instrument represented. The following sections describe the second section of the research instrument for each discount level.

No Discount Level

The second section of the research instrument for the no discount level was three pages long. The first page consisted of some general instructions followed by a description of the dual cassette recorder. A listing of ten features of the dual cassette recorder was presented followed by the price of the product offer. The price of the product differed for the no discount level depending upon which of the five price levels the instrument represented, i.e., \$144.95, \$129.95, \$114.95, \$99.95, or \$84.95. The subjects were instructed that they could remove this page from the booklet to enable them to better answer the questions on the following pages that corresponded to the product information.

The second and third pages contained thirteen questions relating to the constructs, perceived quality, perceived sacrifice actual, perceived value, and willingness to buy. Questions 1, 6, 10, and 12 were indicators of perceived quality; questions 2, 5, and 9 were indicators of perceived sacrifice; questions 3, 7, and 13 were indicators of perceived value; and questions 4, 8, and 12 were indicators of willingness to buy. There were no indicators at the no discount level for the constructs, perceived sacrifice regular, acquisition value, transaction value, and redemption effort because these constructs do not exist in the model at the no discount level.

A brief set of instructions was presented at the beginning of each of the second and third pages indicating how the subjects should respond to the questions on each page. It should also be noted that, based on the results of the second pretest, slight changes were made in questions 4 and 8. These questions were reworded in an attempt to improve the reliability of the construct, willingness to buy. These changes are shown in Appendix B.

Regular Price/Sale Price Level

The second section of the research instrument for the regular price/sale price level was five pages long. The first page of this section was the same as the first page of the research instrument for the no discount level with exception of the price information. Here, a regular price was presented as well as a sale price. The regular price was \$144.95 for all price levels, and the sale price ranged from \$129.95 to \$84.95 depending upon which price level the instrument represented.

Pages 2 through 4 of the second section contained seventeen questions relating all the constructs except redemption effort. As indicated earlier, redemption effort does not exist in the model for the regular price/sale price discount level. Questions 1, 5, 9, and 12 were indicators of perceived quality; questions 17a, 17c, and 17e were indicators of perceived sacrifice actual; questions 3, 6, and 16 were indicators of perceived value; questions 4, 7, and 11 were indicators of willingness to buy; questions 2, 8, and 14 were indicators of perceived sacrifice regular; questions 17b, 17d, and 17f were indicators of acquisition value; and questions 10, 13, and 15 were indicators of transaction value.

Page five of this second section contained question 17, as described above. At the beginning of the page, subjects were asked to indicate a price for the following statement "If the product were acquired under the terms of this offer, the actual amount of money paid would be _____." The subjects were then asked to answer all parts of question 17 based on the indicated price.

The objective of this manipulation was to ensure that the subjects were using the sale price to judge both acquisition value and perceived sacrifice actual. It appeared in pretest II that subjects were not always using the sale price to judge acquisition value and perceived sacrifice actual when the indicators for these constructs were interspersed with indicators for perceived value and perceived sacrifice regular. That is, subjects were sometimes using the regular price as a reference when answering questions related to acquisition value and perceived sacrifice actual. Since, according to the model, acquisition value and perceived sacrifice actual are judged

based on the actual price paid (sale price), this manipulation was deemed necessary and the indicators for these two constructs were grouped under one question on the last page of section II.

As in the questionnaires for the no discount level, several questions for section II of the regular price/sale price level were reordered and/or reworded to improve the clarity and reliability of the indicators. These modifications were based on the results of pretest II and are shown in Appendix B.

Coupon Level

The second section of the research instrument for the coupon level was also five pages long. The first page of this section contained the same information as the first page of section II for the no discount level and the regular price/sale price level; however, at the coupon level, a regular price was presented along with a coupon for money off the purchase of the dual cassette recorder. The value of the coupon ranged from \$15 off to \$60 off depending on which price level the instrument represented. The regular price of \$144.95 was used at all levels as a reference price. It was also indicated on the coupon that the subject would need to present the coupon when purchasing the product to receive the discount on the purchase.

Pages 2 through 5 of this second section contained twenty questions relating to all eight constructs presented in the model, i.e., perceived quality, perceived sacrifice actual, perceived value, willingness to buy, perceived sacrifice regular, acquisition value, transaction value, and redemption effort. The same indicators that were used for the constructs in the regular price/sale price level were used for the same constructs in the coupon level; however, three additional indicators representing the construct, redemption effort, were intermingled with these indicators. Questions 5, 10, and 17 were the indicators representing redemption effort at the coupon level.

Rebate Level

The second section of the research instrument for the rebate level was five pages long. This section was set up exactly like the second section of the coupon level except for the information relating to the rebate itself. The regular price was presented to the subjects along with a rebate form. The value of the rebate to the subjects ranged from \$15 off to \$60 off as in the coupon level. The subjects were instructed that they needed to fill in their name and address on the rebate form and mail to a specified address along with the product code and cash register receipt (with the price circled) to obtain the discount. It was also indicated that it would take six to eight weeks to receive the refund.

Section III

The last section of the research instrument was used to gather demographic data such as age, sex, class standing, and major for each of the subjects. They were also asked questions regarding their ownership and knowledge of dual cassette recorders. Questions 3 and 4 were designed to screen subjects based on previous exposure to a similar experiment and for hypotheses guessing.

Conducting the Experiment

A sample of 307 students from marketing principles classes and marketing advertising classes at Virginia Tech was used in the final experiment. Data was collected over a two-day period using 12 separate classes during the Spring quarter, 1986. For each data collection session, an equal

number of questionnaires corresponding to each cell were distributed, i.e., the treatments were randomly assigned to subjects in each class.

At each data collection session, the subjects were informed that participation in the project was completely on a volunteer basis. After the subjects had cleared their desks, the questionnaires were distributed randomly. The participants were asked not to open their booklets until instructed to do so.

Before the subjects began, they were given further verbal instructions. First, they were asked to please read through each question carefully, take their time, and do their own work. Second, they were informed that the product description on page four could be removed from the booklet for ease of reference when answering the questions on the following pages. Subjects were also informed to disregard taxes when making any calculations, if calculations were needed (subjects in the regular price/sale price, coupon, and rebate levels were asked to determine the actual sacrifice made if all terms of the offer were met (Appendix B)). Finally, the participants were asked to close their booklets when they finished and sit quietly until everyone had finished the survey.

After every participant had completed the survey, they were asked to insert the product description back into the booklet. They were then asked to pass the booklets forward. Once all the booklets had been collected the subjects were debriefed as to the actual intent of the study. Finally, they were thanked for their time and asked not to discuss the study outside of the classroom for at least forty-eight hours because other students would be participating in the same study during that time period.

After each data collection session, the questionnaires were checked to determine: (1) if each subject had correctly and completely filled out the questionnaire, (2) if each subject had accurately completed the necessary calculation in the regular price/sale price, coupon, and rebate instruments, (3) if any of the subjects had recently participated in a similar study, and (4) if any of the subjects had guessed the actual purpose of the study. If a questionnaire was deemed unusable, it was replaced for the next data collection session to ensure an equal number of subjects for each cell. Fifty-two questionnaires were rejected: four due to incomplete answers, ten for inaccurate calcu-

lations, and thirty-eight for having recently participated in a similar study and/or guessing the actual purpose of the study. This resulted in a total of 255 usable questionnaires, 15 subjects per cell.

Data Analysis

The analysis for this experiment incorporated ANOVA, Duncan's multiple comparisons, and trend analysis to test the significance of the proposed relationships. LISREL (Joreskog and Sorbom 1984) was also used to assess the strength of the causal relationships among the proposed constructs. LISREL provides information on the strength of each individual relationship as well as indices of the goodness of fit. Essentially, LISREL provides similar information as obtained from the ANOVA and Duncan analyses; however, since LISREL is a relatively new technique, it was felt that its use would enhance the data analysis and perhaps provide researchers with an alternative analytical tool because LISREL tests the fit for the overall model rather than simply analyzing individual pieces of the model.

However, before the main data analysis could be conducted, it was necessary to reverse score the data for two of the indicators on the research instrument. For example, for the price only level (see Appendix B, first instrument, \$129.95 price only cell), indicator 5: "I feel that this dual cassette recorder is expensive" and indicator 11: "I would not consider buying this dual cassette recorder given the offer described" were reverse scored when the data were recorded for analysis. In other words, if the subject selected a 1 (strongly disagree) for indicator 5, it was recorded as a 7 for data analysis so that it would properly correspond with the other two indicators of perceived sacrifice actual, i.e., indicators 2 and 9. Likewise, if the subject selected a 1 (strongly disagree) for indicator 11, it was recorded as a 7 for data analysis so that it would properly correspond to the other two indicators of willingness to buy, i.e., indicators 4 and 8.

For the regular price/sale price, coupon, and rebate levels an additional indicator (for perceived sacrifice regular) needed to be reverse scored (see regular price/sale price instrument, Ap-

pendix B, indicator 14). If the subject selected a 1 for this indicator, a 7 was recorded for data analysis purposes so that the response for indicator 14 would properly correspond to the other two indicators of perceived sacrifice regular, i.e., indicators 2 and 8. A discussion of the reliability of the indicators is presented in the following section.

General Results

After the data were reverse scored and recorded, the actual analysis of the data was performed. The first step of the data analysis was to test the reliability of the indicators for each construct. The indicators need to be tested for reliability before examining the causal model. One way of assessing whether or not the multiple indicators being used are measuring the same construct is by a procedure called PACKAGE (Hunter and Cohen 1969). This process of examining the measurement model revealed the reliability of the indicators for each of the eight constructs by calculating the coefficient alphas for each construct. The coefficient alphas are presented in Table 13. Nunnally (1978) suggests that a coefficient alpha of .70 indicates minimum acceptable reliability for early, basic research. As shown in Table 13, all of the coefficient alpha values are above .70, suggesting that the indicators used for all eight constructs satisfy this minimum requirement for reliability.

The next step to the analysis was to calculate the means for each of the eight constructs: perceived quality, perceived sacrifice actual, perceived value, willingness to buy, perceived sacrifice regular, acquisition value, transaction value, and redemption effort. Since the indicators for each construct were reliable, the cell means were calculated by combining the raw scores for each indicator of each construct and dividing by the number of indicators. These scores were summed for each cell and divided by the number of observations per cell (15).

The means were calculated to obtain a general assessment of the data. The means were analyzed to check for obvious inappropriate values given the range of possible responses to each

Table 13. Reliability Assessment

	<u>Coefficient Alpha</u>
Perceived Quality	.89
Perceived Sacrifice (Actual)	.87
Perceived Sacrifice (Regular)	.85
Effort	.78
Acquisition Value	.95
Transaction Value	.75
Perceived Value	.91
Willingness to Buy	.92

question, to check that the data had been properly recorded and that the variables for the analysis were properly set up. The means for each of the eight constructs are presented in Table 14.

The mean value of 5.27 for the no discount, \$144.95 price cell for perceived quality represents a higher than average perception of quality for the dual cassette recorder. This average was based on a seven-point Likert type scale with 7 indicating the highest quality and 1 indicating the lowest quality. Therefore, in the no discount level, the perception of quality was higher at the \$144.95 price level (5.27) than at the \$84.95 price level (4.68). The number in parentheses corresponding to each mean value is the standard deviation for that mean. The same procedure and interpretation is used throughout Table 14 for each construct, i.e., the means are all based on a seven-point Likert type scale.

Before addressing each of the specified hypotheses presented in Chapter III, the data were examined to determine whether or not there was a significant price-perceived quality and price-perceived sacrifice effect for the original conceptualization presented in Chapter II. It was felt that if for some reason these relationships did not hold, there was no need to test the relationships hypothesized for the expanded model. The no discount level of the research design provides the data used to test the original model.

The LISREL analysis was conducted to determine the overall fit of the original model to the data. Three separate measures were used to assess the overall fit for the conceptual model: (1) goodness of fit index (GFI), (2) adjusted goodness of fit index (AGFI), and (3) root mean square residual (RMR). Both the GFI and the AGFI should be between zero and one. GFI is a measure of the relative amount of variances and covariances jointly accounted for by the model, AGFI is adjusted for the degrees of freedom, and RMR is a measure of the average of the residual variances and covariances (Joreskog and Sorbom 1984). The goodness of fit and the adjusted goodness of fit values should be "large," i.e., the values should be close to one to indicate good overall fit. A root mean square residual value that is "small" indicates that the model fits the data well (Hunter and Cohen 1969). The GFI was .871, the AGFI was .742, and the RMR was .198 for the original model indicating a good overall fit.

Table 14. Descriptive Statistics for Operational Variables

A. PERCEIVED QUALITY

Regular Price	Type of Discount			
	<u>No Discount</u>	<u>Regular/Sale</u>	<u>Coupon</u>	<u>Rebate</u>
\$144.95	5.27 (.6157)*			
\$129.95	5.18 (.5384)	4.93 (1.162)	4.80 (1.239)	4.67 (.9804)
\$114.95	4.92 (.6244)	5.05 (1.005)	5.12 (.8010)	4.40 (1.068)
\$99.95	4.77 (.7347)	4.90 (.9151)	4.88 (1.030)	4.65 (1.148)
\$ 84.95	4.68 (.7408)	5.16 (.9804)	4.70 (1.336)	4.72 (.9813)

B. PERCEIVED SACRIFICE (ACTUAL)

\$144.95	4.35 (.8306)			
\$129.95	4.15 (1.118)	4.15 (1.350)	4.20 (1.052)	4.20 (1.542)
\$114.95	4.02 (1.529)	4.15 (.8625)	4.13 (.8801)	4.02 (1.555)
\$99.95	3.62 (1.227)	3.67 (.7453)	3.64 (1.256)	3.77 (1.361)
\$84.95	3.48 (.9909)	3.35 (1.433)	3.78 (1.621)	3.33 (1.023)

* The numbers in parentheses are the standard deviations of the means

Table 14 (continued)

C. PERCEIVED VALUE

Regular Price	Type of Discount			
	<u>No Discount</u>	<u>Regular/Sale</u>	<u>Coupon</u>	<u>Rebate</u>
\$144.95	4.68 (.9467)			
\$129.95	4.91 (1.137)	4.46 (1.181)	4.55 (1.349)	4.37 (1.271)
\$114.95	4.84 (1.284)	4.91 (1.178)	4.93 (.9936)	4.37 (1.187)
\$99.95	4.77 (.8606)	4.86 (.9067)	4.95 (1.104)	4.42 (1.087)
\$84.95	4.64 (.9125)	5.33 (1.333)	4.40 (1.415)	4.64 (1.185)

D. WILLINGNESS TO BUY

\$144.95	4.02 (1.683)			
\$129.95	4.04 (1.767)	3.20 (1.468)	3.46 (1.694)	3.26 (1.677)
\$114.95	4.17 (1.446)	4.17 (1.484)	3.40 (1.911)	3.37 (1.627)
\$99.95	4.11 (1.571)	4.13 (1.239)	4.33 (1.188)	3.51 (1.597)
\$84.95	3.84 (.9417)	4.35 (2.102)	3.82 (1.838)	3.97 (1.450)

Table 14 (continued)

E. PERCEIVED SACRIFICE REGULAR

Regular Price	Type of Discount			
	<u>No Discount</u>	<u>Regular/Sale</u>	<u>Coupon</u>	<u>Rebate</u>
\$144.95	NA			
\$129.95	NA	4.62 (1.390)	4.71 (1.045)	4.57 (1.411)
\$114.95	NA	5.13 (.9154)	5.15 (1.075)	4.48 (1.407)
\$99.95	NA	5.08 (1.019)	5.04 (1.227)	4.68 (1.057)
\$84.95	NA	5.22 (.7628)	5.17 (1.350)	4.66 (.8997)

F. ACQUISITION VALUE

\$144.95	NA			
\$129.95	NA	4.42 (1.293)	4.44 (1.423)	4.37 (1.022)
\$114.95	NA	4.71 (1.407)	4.95 (1.045)	4.37 (1.385)
\$99.95	NA	4.86 (.9154)	4.82 (1.045)	4.55 (1.264)
\$84.95	NA	5.37 (1.457)	4.53 (1.355)	5.08 (1.204)

NA: Not Applicable

Table 14 (continued)

G. TRANSACTION VALUE

Regular Price	Type of Discount			
	<u>No Discount</u>	<u>Regular/Sale</u>	<u>Coupon</u>	<u>Rebate</u>
\$144.95	NA			
\$129.95	NA	4.11 (.9893)	4.24 (1.123)	4.17 (1.060)
\$114.95	NA	4.73 (1.209)	5.11 (.9055)	4.64 (.9633)
\$99.95	NA	4.77 (1.020)	5.06 (1.085)	4.77 (1.383)
\$84.95	NA	5.42 (1.287)	4.97 (1.108)	5.17 (.9160)

H. REDEMPTION EFFORT

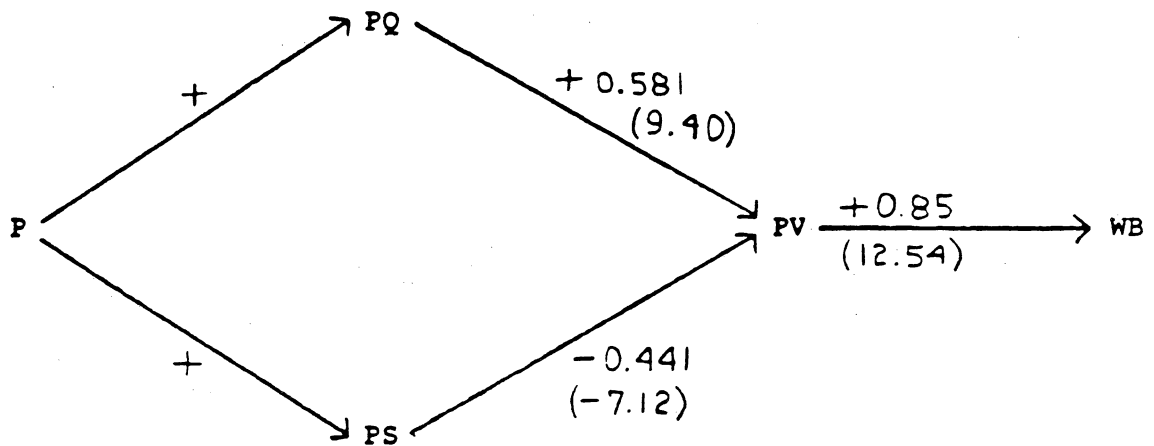
\$144.95	NA			
\$129.95	NA	NA	2.22 (.9813)	3.35 (1.019)
\$114.95	NA	NA	2.26 (1.363)	3.20 (1.510)
\$99.95	NA	NA	2.02 (.7813)	3.46 (1.457)
\$84.95	NA	NA	2.22 (.9567)	3.24 (1.042)

Correlations and maximum likelihood estimates (MLE) are also provided by the LISREL analysis. These results indicate the relationships between the dependent variables in the model. The MLE and their corresponding t-values are presented in the LISREL path model (original model) in Figure 10. The values in the parentheses are the t-values. A t-value provided by LISREL is defined as the parameter estimate divided by its standard error (Joreskog and Sorbom 1984). The maximum likelihood estimates show positive perceived quality-perceived value, negative perceived sacrifice-perceived value, and positive perceived value-willingness to buy relationships supporting the hypothesized relationships for the original model. The t-values are significant at $p < .005$ for each of the indicated relationships. The correlations also supported each of the above relationships with values of -0.65 for perceived sacrifice actual-perceived value, 0.74 for perceived quality-perceived value, and 0.85 for perceived value-willingness to buy relationships.

Effect sizes were also calculated for the relationship of price to each dependent variable in the original model. As shown in Table 15, there was a price-perceived quality effect of 0.123 and a price-perceived sacrifice effect of 0.080. The formula used for calculating these effect sizes is presented at the bottom of Table 15. The "f" in the formula is the f-value obtained from the one-way ANOVA results.

As discussed in Chapter II, Cohen (1977) has suggested that these values (0.123 and 0.080) would be considered medium effect sizes. Therefore, the price-perceived quality and price-perceived sacrifice relationships postulated in the original model were supported. Table 15 also shows price effect sizes for perceived value and willingness to buy, 0.009 and 0.005 respectively, are not significant (Cohen 1977). These results also support the original conceptualization because there was no direct relationship suggested between price and perceived value or price and willingness to buy in the original model. Price was postulated to be indirectly related to each of these constructs.

Having found support for the original conceptualization, the next step in the data analysis was to examine the extended model. The LISREL analysis was conducted to determine the overall goodness of fit of the data for the expanded conceptual model. Three separate measures were used to assess the overall goodness of fit for the conceptual model: (1) goodness of fit index, (2) adjusted goodness of fit index, and (3) root mean square residual. The goodness of fit index was .901, the



Where:

P is Price
 PQ is Perceived Quality
 PS is Perceived Sacrifice
 PV is Perceived Value
 WB is Willingness to Buy

Figure 10. LISREL Path Model (Original Model)

Table 15. Price Effect Sizes

Perceived Quality	.123
Perceived Sacrifice Actual	.080
Perceived Value	.009
Willingness to Buy	.005

$$\eta^2 = (f \times df \text{ between}) / (df \text{ between} + df \text{ error})$$

adjusted goodness of fit index was .831, and the root mean square residual was .110, indicating that the extended conceptual model used for this study fits the data well.

Analysis of Hypothesized Relationships

Having examined some of the general findings of the data analysis, the next step was to analyze the data with respect to each of the hypothesized relationships presented in Chapter III. This analysis will be broken down into three sections: (1) price effects, (2) form of discount effects, and (3) and size of discount effects.

Price Effects

The first ten hypotheses described the anticipated relationships among several of the dependent variables and the relationship of price with perceived quality, perceived sacrifice regular, and perceived sacrifice actual. These relationships were analyzed individually.

It should be noted before further discussion of the results that interactions between independent variables are extremely important. If there are interaction effects between the independent variables, it is more difficult to interpret the effect of a single independent variable. However, as will be shown in all the ANOVA results, there were no statistically significant interactions found in the analysis.

Price and Perceived Quality. The first hypothesis postulated a positive relationship between price and perceived quality, that is, as price increases from a low to a higher price, subjects' perceptions of product quality will increase. As previously shown, Table 15 indicated there was a medium price-perceived quality effect supporting the price-perceived quality relationship. Further results also strongly support this hypothesis.

Table 16 presents ANOVA results for a 3 x 4 model, the Duncan results for the no discount level, and the means for perceived quality (presented in Table 14) for ease of reference. As price increases, the perception of product quality should also increase for the mean responses in the no discount level. Recall, the no discount level provides a test of the original model. As price increases from the \$84.95 to \$144.95, the mean responses for perceived quality also increase from a low of 4.68 to 5.27. As shown by the Duncan analysis in Table 16, there is a significant difference between perceptions of quality at the \$144.95 compared to the \$84.95 level. These results provide support for a positive price-perceived quality relationship as hypothesized. Although there were not significant differences between perceptions of quality for each price level, the mean responses did show the correct tendency, i.e., the mean values for the perception of quality increased as price increased in the no discount level.

To test the linear tendency suggested by the means in the no discount level for perceived quality, a trend analysis was conducted utilizing contrasts. Contrasts are comparisons using two or more groups set up so that results obtained in the research are compared (or contrasted) to the predictions based on theories or hypotheses. Contrasts provide greater statistical power and much greater clarity of substantive interpretation of results when compared to the more omnibus or diffuse F-test obtained from ANOVA (Rosenthal and Rosnow 1984). An F-value, t-value, and r-effect size can be computed for the trend analysis using the formulas presented in Table 17. To compute the F-value, the mean square contrast is divided by the mean square error of the one-way analysis of variance. Also, since the F-values used to test contrasts have only one degree of freedom in the numerator, the square root of the F-value results in a two-sided t-test.

As shown in Table 17, the trend analysis results in a t-value of 2.97 with $p < .005$ and a r-effect size of 0.34 indicating a medium price-perceived quality effect. Cohen (1977) suggests that a r-effect size of 0.10 is small, 0.30 is medium, and 0.50 is large. Therefore, the Duncan analysis and the trend analysis both support the price-perceived quality hypothesis.

The ANOVA results in Table 16 are presented to show the relationship between price and perceived quality throughout the rest of the design. The 3 x 4 model examined included three discount levels (regular/sale, coupon, and rebate) and 4 price levels (\$84.95-\$129.95). For these cells

Table 16. Effect of Price on Perceived Quality

Regular Price Treatment	MEANS			
	No Discount	Type of Discount		
		Regular/Sale	Coupon	Rebate
\$144.95	5.27			
\$129.95	5.18	4.93	4.80	4.67
\$114.95	4.92	5.05	5.12	4.40
\$ 99.95	4.77	4.90	4.88	4.65
\$ 84.95	4.68	5.16	4.70	4.72

ANOVA RESULTS (3 X 4 MODEL)

Dependent Variable: Perceived Quality

Source of Variation	DF	F-Value	P-Value
Price (A)	3	0.04	0.98
Discount (B)	2	2.24	0.11
A*B	6	0.42	0.86

DUNCAN RESULTS

A	B			
No Discount				
5.27	5.18	4.92	4.77	4.68

Table 17. Trend Analysis: Price-Perceived Quality

No Discount Level

	Total					
<u>Price</u>	<u>\$144.95</u>	<u>\$129.95</u>	<u>\$114.95</u>	<u>\$ 99.95</u>	<u>\$ 84.95</u>	<u>L</u>
T	79.05	77.70	73.80	71.55	70.20	
λ	2	1	0	-1	-2	
T x λ	158.10	77.70	0	-71.55	-140.40	23.85

$$MS(\text{contrast}) = L^2/n(\sum\lambda^2) = 568.8225/150 = 3.79$$

$$F = MS(\text{contrast})/MSE = 3.79/0.4295 = 8.82$$

$$t = 2.97, \quad p < .005$$

$$r = 0.34$$

T = Mean x number of observations per cell

λ = Contrast Values

$$L = \sum(T \times \lambda)$$

$$t = \sqrt{F}$$

$$r = \sqrt{F/(F + df_{\text{error}})}$$

subjects were presented the same reference price of \$144.95 for the product. Since the same reference price was used throughout the 3 x 4 model, it was posited that there should be no significant differences in subjects' perceptions of quality. The F-value of 0.04 and the P-value of .98 indicate that there are no significant differences in perceptions of quality for this model.

Price and Perceived Sacrifice Regular. The second hypothesis suggested that there would be a positive relationship between the regular price and the perceived sacrifice regular. For this study the regular price presented to the subjects was held constant for the 3 x 4 model discussed above; therefore, perceived sacrifice regular should not differ. The regular price did vary in the no discount level (\$84.95-\$144.95); however, in the no discount level, perceived sacrifice regular equals perceived sacrifice actual. The relationship between price and perceived sacrifice actual for the no discount level and the entire design are discussed below.

Price and Perceived Sacrifice Actual. The third hypothesis suggested that there would be a positive relationship between the actual price and perceived sacrifice actual. As already shown in Table 15, there was a medium size (0.080) price-perceived sacrifice effect for the no discount level. This lends support to both the second and third hypotheses. A positive price-perceived sacrifice actual relationship should hold for all discount levels, i.e., as price decreases, price-perceived sacrifice actual should decrease for all discount levels.

Table 18 shows the effect of price on perceived sacrifice actual. ANOVA results and Duncan results are presented, and the means for perceived sacrifice actual (from Table 14) are included for ease of reference. ANOVA was conducted for the 4 x 4 model (the \$144.95, no discount control cell excluded) to test whether there was a significant price-perceived sacrifice actual relationship. The ANOVA results strongly support the price-perceived sacrifice actual relationship with a F-value of 4.11 and a P-value of 0.007. Although the Duncan results do not show significant differences at each discount level, the trend of the means do indicate a positive price-perceived sacrifice actual relationship, i.e., as price increases, the mean values for perceived sacrifice actual increase.

Table 18. Effect of Price on Perceived Sacrifice Actual

Regular Price Treatment	MEANS			
	No Discount	Type of Discount		
		Regular/Sale	Coupon	Rebate
\$144.95	4.35			
\$129.95	4.15	4.15	4.20	4.20
\$114.95	4.02	4.15	4.13	4.02
\$ 99.95	3.62	3.67	3.64	3.77
\$ 84.95	3.48	3.35	3.78	3.33

ANOVA RESULTS (4 X 4 MODEL)

Dependent Variable: Perceived Quality

<u>Source of Variation</u>	<u>DF</u>	<u>F-Value</u>	<u>P-Value</u>
Price (A)	3	4.11	0.007
Discount (B)	3	0.12	0.95
A*B	9	0.13	0.99

DUNCAN RESULTS

No Discount	A	_____				
		4.35	4.15	4.02	3.62	3.48
Regular/Sale	A	_____				
		4.15	4.15	3.67	3.35	
Coupon	A	_____				
		4.20	4.13	3.78	3.64	
Rebate	A	_____				
		4.20	4.02	3.77	3.33	

To test for a linear trend of the mean values for perceived sacrifice actual, a trend analysis similar to the one presented in Table 17 was conducted for each discount level. Table 19 shows the trend analysis for the no discount level. This analysis resulted in a t-value of 2.39 with $p < .005$ and a r-effect size of 0.28 indicating a medium price-perceived sacrifice actual effect. This indicates that there is a linear trend at the no discount level, which means that there is a positive price-perceived sacrifice (actual/regular) relationship. These results support both the second and third hypotheses.

Table 20 shows the trend analysis for the regular/sale discount level for price-perceived sacrifice actual. This analysis resulted in a t-value of 2.24 with $p < .025$ and a r-effect size of 0.29 indicating a medium price-perceived sacrifice actual effect. This indicates that there is a linear trend at the regular/sale price level. These results also lend support for the third hypothesis, i.e., there is a positive relationship between price and perceived sacrifice actual.

Table 21 shows the trend analysis for perceived sacrifice actual at the coupon level. This analysis resulted in a t-value of 1.32 with $p < .10$ and a r-effect size of 0.17 indicating a small to medium price-perceived sacrifice actual effect. These results indicate that there was a linear trend for the price-perceived sacrifice actual relationship at the coupon level. This also supports the third hypothesis.

Finally, Table 22 shows the trend analysis for price-perceived sacrifice actual at the rebate level. This analysis resulted in a t-value of 1.74 with $p < .05$ and a r-effect size of 0.23 indicating a medium to small price-perceived sacrifice actual effect. These results support the third hypothesis, i.e., there is a positive price-perceived sacrifice actual relationship.

In summary, the ANOVA results strongly supported the positive price-perceived sacrifice actual relationship for the 4 x 4 model. Although the Duncan analysis did not support the hypothesis at each individual discount level, the trend analysis did provide support for the third hypothesis at every discount level.

Perceived Quality and Perceived Acquisition Value. The fourth hypothesis suggested that there would be a positive relationship between perceived quality and perceived acquisition value. Figure 11 presents the LISREL path model for the extended conceptualization. This model shows the

Table 19. Trend Analysis: Price-Perceived Sacrifice Actual

No Discount Level

						Total
<u>Price</u>	<u>\$144.95</u>	<u>\$129.95</u>	<u>\$114.95</u>	<u>\$ 99.95</u>	<u>\$ 84.95</u>	<u>L</u>
T	65.25	62.25	60.30	54.30	52.20	
λ	2	1	0	-1	-2	
T x λ	130.50	62.25	0	-54.30	-104.40	34.05

$$MS(\text{contrast}) = L^2/n(\sum\lambda^2) = 1159.4025/150 = 7.73$$

$$F = MS(\text{contrast})/MSE = 7.73/1.3540 = 5.71$$

$$t = 2.39, p < .005$$

$$r = 0.28$$

T = Mean x number of observations per cell

λ = Contrast Values

$$L = \sum(T \times \lambda)$$

$$t = \sqrt{F}$$

$$r = \sqrt{F/(F + df_{\text{error}})}$$

Table 20. Trend Analysis: Price-Perceived Sacrifice Actual

Regular/Sale Level

	Regular/Sale Level				Total
Price	<u>\$129.95</u>	<u>\$114.95</u>	<u>\$ 99.95</u>	<u>\$ 84.95</u>	<u>L</u>
T	62.25	62.25	55.05	50.25	
λ	2	1	-1	-2	
T x λ	124.50	62.25	-55.05	-100.50	31.20

$$MS(\text{contrast}) = L^2/n(\sum\lambda^2) = 973.44/150 = 6.49$$

$$F = MS(\text{contrast})/MSE = 6.49/1.2944 = 5.01$$

$$t = 2.24, p < .025$$

$$r = 0.29$$

T = Mean x number of observations per cell

λ = Contrast Values

$$L = \sum(T \times \lambda)$$

$$t = \sqrt{F}$$

$$r = \sqrt{F/(F + df_{\text{error}})}$$

Table 21. Trend Analysis: Price-Perceived Sacrifice Actual

Coupon Level

	Coupon Level				Total
Price	\$129.95	\$114.95	\$ 99.95	\$ 84.95	<u>L</u>
T	63.00	61.95	54.60	56.70	
λ	2	1	-1	-2	
T x λ	126.00	61.95	-54.60	-113.40	19.95

$$MS(\text{contrast}) = L^2/n(\sum\lambda^2) = 398.0025/150 = 2.65$$

$$F = MS(\text{contrast})/MSE = 2.65/1.5227 = 1.74$$

$$t = 1.32, p < .10$$

$$r = 0.17$$

T = Mean x number of observations per cell

λ = Contrast Values

$$L = \sum(T \times \lambda)$$

$$t = \sqrt{F}$$

$$r = \sqrt{F/(F + df_{\text{error}})}$$

Table 22. Trend Analysis: Price-Perceived Sacrifice Actual

	Rebate Level				Total
Price	<u>\$129.95</u>	<u>\$114.95</u>	<u>\$ 99.95</u>	<u>\$ 84.95</u>	<u>L</u>
T	63.00	60.03	56.55	49.95	
λ	2	1	-1	-2	
T x λ	126.00	60.03	-56.55	-99.90	29.58

$$MS(\text{contrast}) = L^2/n(\sum\lambda^2) = 874.9764/150 = 5.83$$

$$F = MS(\text{contrast})/MSE = 5.83/1.9243 = 3.03$$

$$t = 1.74, p < .05$$

$$r = 0.23$$

T = Mean x number of observations per cell

λ = Contrast Values

$$L = \sum(T \times \lambda)$$

$$t = \sqrt{F}$$

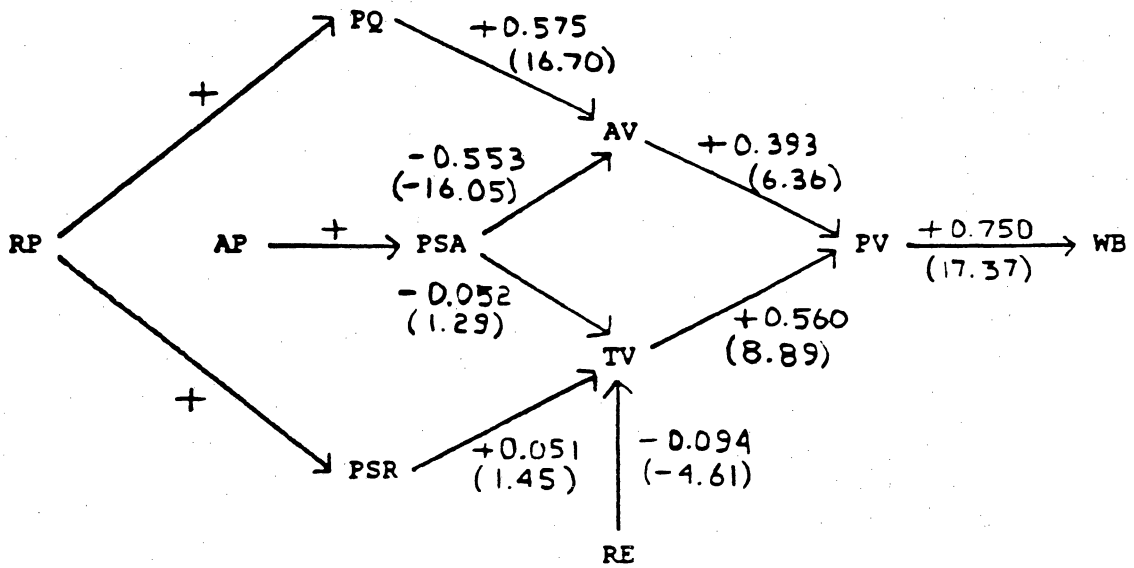
$$r = \sqrt{F/(F + df_{\text{error}})}$$

maximum likelihood estimates (MLE) and their related t-values for the dependent variable relationships. These values indicate the direction and strength of the relationships of the dependent variables. As shown in Figure 11, the MLE for the relationship between perceived quality and acquisition value was a positive 0.575 with a t-value of 16.70, significant at $p < .005$. Also, the correlation for the relationship between perceived quality and acquisition value was a positive 0.63. These results strongly support the positive relationship between perceived quality and acquisition value.

Perceived Sacrifice and Perceived Acquisition Value. The fifth hypothesis suggested that there would be a negative relationship between perceived sacrifice actual and perceived acquisition value. This relationship is shown in Figure 11. The MLE was a negative 0.553 with a t-value of -16.05, significant at $p < .005$. Also, the correlation for the relationship between perceived sacrifice actual and acquisition value was a negative 0.61. These results strongly support the above hypothesis.

Perceived Sacrifice Actual and Perceived Transaction Value. The sixth hypothesis suggested a negative relationship between perceived sacrifice actual and perceived transaction value. The MLE was a negative 0.052 (Figure 11) with a t-value of -1.29. This result was non-significant. The correlation for the perceived sacrifice actual-transaction value relationship was a negative 0.56. Although the direction of the relationship was supported, the strength of the relationship was weak; therefore, there was only weak support for this hypothesis.

Perceived Sacrifice Regular and Perceived Transaction Value. The seventh hypothesis suggested a positive relationship between perceived sacrifice regular and perceived transaction value. The LISREL path model in Figure 11 shows a positive relationship between perceived sacrifice regular and transaction value based on the 0.051 MLE; however, the corresponding t-value of 1.45 was non-significant. Also, the correlation (-0.29) shows a weak negative relationship. These mixed results do not support a positive perceived sacrifice regular-transaction value relationship.



Where:

AP is Actual Price
 PQ is Perceived Quality
 PSR is Perceived Sacrifice Regular
 AV is Acquisition Value
 PSA is Perceived Sacrifice Actual

PV is Perceived Value
 WB is Willingness to Buy
 RP is Reference Price
 RE is Redemption Effort
 TV is Transaction Value

Figure 11. LISREL Path Model (Extended Model)

Perceived Acquisition Value and Willingness to Buy. The eighth hypothesis suggested a positive relationship between acquisition value and willingness to buy. Although this relationship was not directly tested in the model, since acquisition value is positively related to perceived value (a positive 0.393 MLE) and perceived value is positively related to willingness to buy (a positive 0.750 MLE), then by deduction, acquisition value is positively related to willingness to buy (see Figure 11). Also, there was a positive 0.72 correlation between the two variables. Therefore, there is support for this hypothesis.

Perceived Transaction Value and Willingness to Buy. The ninth hypothesis suggested a positive relationship between transaction value and willingness to buy. Although this relationship was not directly tested in the model, since transaction value is positively related to perceived value (a positive 0.560 MLE) and perceived value is positively related to willingness to buy (a positive 0.750 MLE), then by deduction, acquisition value is positively related to willingness to buy (see Figure 11). Also, there was a positive 0.72 correlation between these two variables. Therefore, there is support for this hypothesis.

Price and Perceived Value. The tenth hypothesis suggested that as price increases within the subjects' acceptable price ranges from a low price to a higher price, subjects' perceptions of value would increase and then decrease. In studies conducted by Dodds (1985) and Rao (1986), this relationship was not found; however, the results in Table 23 lend support to this relationship between price and perceived value. Table 23 presents ANOVA results for the 3 x 4 model and Duncan results for each discount level. The means (from Table 14) are provided for ease of reference. The curvilinear relationship mentioned above should hold only for the no discount level for this study. As will be discussed later, perceived value should increase as the size of the discount increases at the other discount levels.

Although the Duncan results did not show any statistical differences in subjects' perceptions of value at the no discount level, the mean values for perceived value for the no discount level first increase and then decrease as price increases from \$84.95 to \$144.95. This tendency provides ten-

Table 23. Effect of Price on Perceived Value

Regular Price Treatment	MEANS			
	No Discount	Type of Discount		
		Regular/Sale	Coupon	Rebate
\$144.95	4.68			
\$129.95	4.91	4.46	4.55	4.37
\$114.95	4.84	4.91	4.93	4.37
\$ 99.95	4.77	4.86	4.95	4.42
\$ 84.95	4.64	5.33	4.40	4.64

ANOVA RESULTS (3 X 4 MODEL)

Dependent Variable: Perceived Value

<u>Source of Variation</u>	<u>DF</u>	<u>F-Value</u>	<u>P-Value</u>
Price (A)	3	0.70	0.56
Discount (B)	2	2.05	0.13
A*B	6	0.80	0.56

DUNCAN RESULTS

No Discount	A				
	4.91	4.84	4.77	4.68	4.64
Regular/Sale	A				
	5.33	4.91	4.86	4.46	
Coupon	A				
	4.95	4.93	4.55	4.40	
Rebate	A				
	4.64	4.42	4.37	4.37	

tative support for the above hypothesis. A plot of the means in Figure 12 illustrates the price-perceived value relationship and clearly shows the curvilinear relationship.

To ensure that the price-perceived value relationship was not linear in nature, a trend analysis was conducted. The results of this analysis are presented in Table 24. The analysis resulted in a t-value of 0.25, non-significant, and a r-effect size of 0.03 indicating relatively no price-perceived value effect. These results show that there was not enough evidence to show a linear price-perceived value relationship. Table 24 also presents a quadratic trend analysis that tested for the curvilinear relationship. This analysis produced a t-value of 0.72, also non-significant and a r-effect size of 0.01 indicating that the curvilinear relationship was not supported. Therefore, the relationship between price and perceived value was moderately supported. The relationship between price and perceived value throughout the rest of the model (3x4) is discussed later in the size of discount section.

Form of Discount Effects

The next twelve hypotheses are related to the effect that the forms of discounts have on perceived quality, perceived sacrifice actual, perceived sacrifice regular, and perceived value.

Perceived Quality-Coupon vs Price Only. The first hypothesis in this section suggested that perceived product quality would be higher for an offer that includes a coupon than for an offer with only the selling price. Table 25 shows the discount effect for the dependent variable, perceived quality. The table includes the Duncan results and the mean values (from Table 14) for ease of reference. The means for the no discount (price only) level are lower than those for the coupon level at all prices except the \$129.95 level. Although this indicates a correct tendency, the Duncan analysis did not show any significant difference in the means for perceived quality at the no discount compared to coupon levels; therefore, this hypothesis was not supported.

Perceived Value

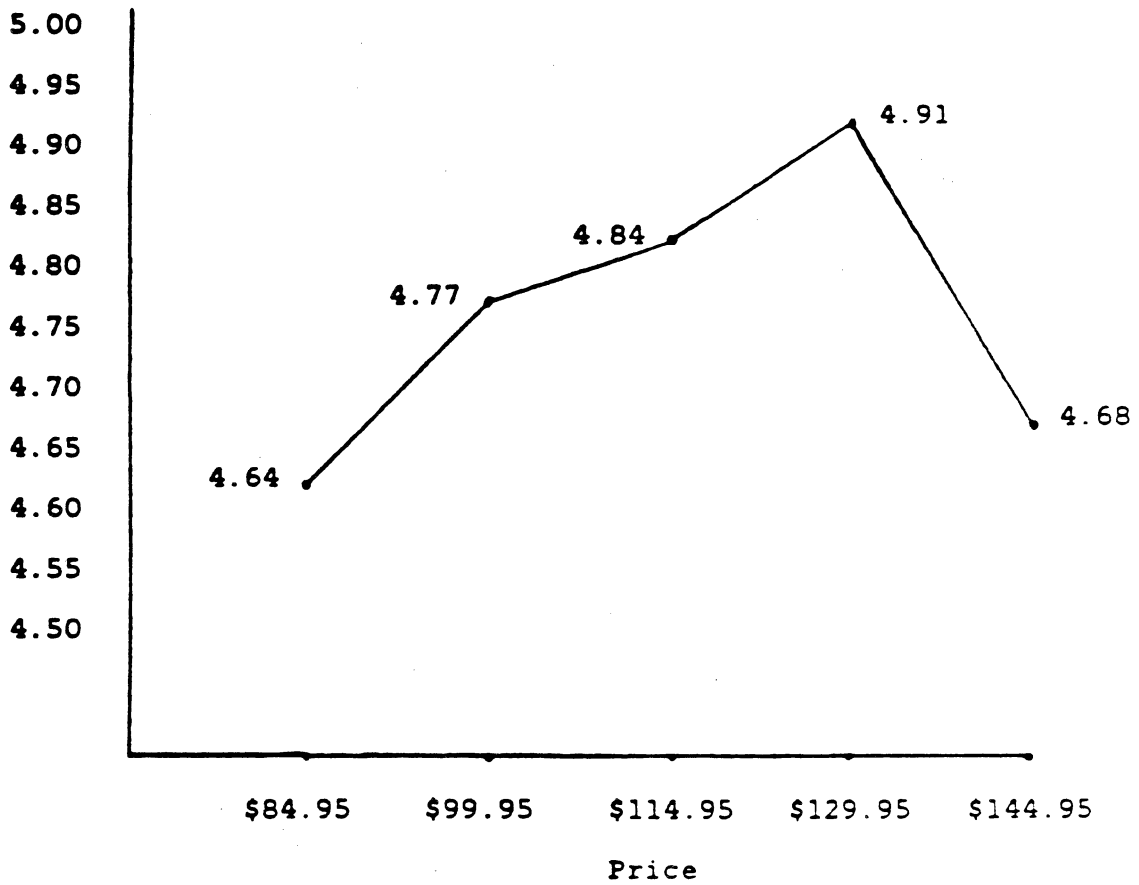


Figure 12. Price-Perceived Value Relationship

Table 24. Trend Analysis: Price-Perceived Value

No Discount Level

						Total
<u>Price</u>	<u>\$144.95</u>	<u>\$129.95</u>	<u>\$114.95</u>	<u>\$ 99.95</u>	<u>\$ 84.95</u>	<u>L</u>
T	70.20	73.65	72.60	71.55	69.60	
λ	2	1	0	-1	-2	
T x λ	140.40	73.65	0	-71.55	-139.20	3.30

$$MS(\text{contrast}) = L^2/n(\Sigma\lambda^2) = 10.89/150 = 0.07$$

$$F = MS(\text{contrast})/MSE = 0.07/1.0823 = 0.064$$

t = 0.25, non-significant

$$r = 0.03$$

Curvilinear Trend Analysis

						Total
<u>Price</u>	<u>\$144.95</u>	<u>\$129.95</u>	<u>\$114.95</u>	<u>\$ 99.95</u>	<u>\$ 84.95</u>	<u>L</u>
T	70.20	73.65	72.60	71.55	69.60	
λ	2	-1	-2	-1	2	
T x λ	140.40	-73.65	-145.20	-71.55	139.20	-10.80

$$MS(\text{contrast}) = L^2/n(\Sigma\lambda^2) = 116.64/210 = 0.555$$

$$F = MS(\text{contrast})/MSE = 0.555/1.0823 = 0.5132$$

t = 0.72, non-significant

$$r = 0.01$$

Note: Same formulas as in Table 22.

Table 25. Effect of Discount on Perceived Quality

Regular Price Treatment	MEANS			
	No Discount	Regular/Sale	Coupon	Rebate
\$144.95	5.27			
\$129.95	5.18	4.93	4.80	4.67
\$114.95	4.92	5.05	5.12	4.40
\$ 99.95	4.77	4.90	4.88	4.65
\$ 84.95	4.68	5.16	4.70	4.72

DUNCAN RESULTS

\$129.95	A	<hr/>			
	5.18	4.93	4.80	4.67	
\$144.95	A	<hr/>			
	5.12	5.05	4.92	4.40	
\$99.95	A	<hr/>			
	4.90	4.88	4.77	4.65	
\$84.95	A	<hr/>			
	5.16	4.72	4.70	4.68	

Perceived Quality-Rebate vs Price Only. The second hypothesis suggested that perceived product quality would be higher for an offer that includes a rebate than for an offer with the selling price only. Again, the Duncan results in Table 25 do not support this hypothesis. In fact, if the mean values in the no discount level are compared to those in the rebate level, perceived quality mean values in the rebate level are generally lower suggesting a relationship opposite to the one hypothesized. However, the Duncan analysis showed no significant difference in the means.

Perceived Quality-Regular Price/Sale Price vs Selling Price Only. The third hypothesis stated that perceived product quality would be higher for an offer that presents both regular and sale prices than for an offer with only the selling price. Just as in the coupon/price only comparison, the perceived quality mean values were greater in the regular price/sale price level than the corresponding values in the no discount level for all prices except the \$129.95 (Table 25). Although this analysis indicates directional support for the hypothesis, the Duncan analysis showed no significant difference in the responses at all price levels.

Perceived Quality-All Three Discount Levels. Hypothesis four suggested that perceived product quality would not differ for offers that include a coupon, a rebate, or both regular and sale prices if the same reference price is presented for each situation. The ANOVA results in Table 16 (p. 121) show a non-significant discount effect for perceived quality with an F-value of 2.24 and corresponding P-value of 0.11. Although this result approaches statistical significance, the Duncan analysis in Table 25 also supports this hypothesis, i.e., there is no difference in the perception of quality across discount levels.

Perceived Sacrifice Actual. The fifth hypothesis suggested that perceived sacrifice actual would not differ for offers with only the selling price, offers with coupons, offers with rebates, and offers presenting both regular and sale prices. The results summarized in Table 26 strongly support this hypothesis. Table 26 presents ANOVA results and Duncan results. The mean values (from Table 14) are provided for ease of reference. ANOVA was conducted for the 4 x 4 model and the results

indicate that the discount effect for perceived sacrifice actual was non-significant with an F-value of 0.12 and a corresponding P-value of .95. The Duncan analysis indicated that the discount effect for perceived sacrifice actual was also very nonsignificant across all discount levels at each price level.

Perceived Sacrifice Regular. The sixth hypothesis suggested that perceived sacrifice regular would not differ for offers with coupons, offers with rebates, and offers presenting both regular and sale prices, but should be lower for the sale price only offer. Table 27 shows the ANOVA results and Duncan results for perceived sacrifice regular. The mean values (from Table 14) are included for ease of reference. The ANOVA results for the 3 x 4 model indicate that there is a significant difference at the .08 level in mean values for perceived sacrifice regular. This difference may be due to the relatively low mean values in the rebate level. The Duncan analysis indicates that there is no significant difference at individual price levels. Also, even though the relationship was not statistically tested, the means in the no discount level were substantially lower than the corresponding means in the other three discount levels. These results provide support for this hypothesis.

Perceived Value-Coupon vs Selling Price Only. The seventh hypothesis suggested that perceived value would be higher for an offer with a coupon than for an offer with the price only. The results in Table 28 do not support this hypothesis. Table 28 presents the ANOVA results for the 4 x 4 model and the Duncan results for each of the four price levels. Again, the mean values (from Table 14) are given for ease of reference. The means for perceived value are higher at the coupon level when compared to the no discount level at only two prices, \$114.95 and \$99.95. This does not support the above hypothesis. The Duncan analysis also indicates no significant difference in mean values for perceived value across each of the discount levels.

Perceived Value-Rebate vs Selling Price Only. The eighth hypothesis suggested that perceived value would be greater for an offer with a rebate than for an offer with only the selling price. The Duncan analysis in Table 28 shows no significant difference in mean values for perceived value. In fact, an

Table 26. Effect of Discount on Perceived Sacrifice Actual

Regular Price Treatment	MEANS			
	No Discount	Type of Discount		
		Regular/Sale	Coupon	Rebate
\$144.95	4.35			
\$129.95	4.15	4.15	4.20	4.20
\$114.95	4.02	4.15	4.13	4.02
\$ 99.95	3.62	3.67	3.64	3.77
\$ 84.95	3.48	3.35	3.78	3.33

ANOVA RESULTS (4 X 4 MODEL)

Dependent Variable: Perceived Sacrifice Actual

Source of Variation	DF	F-Value	P-Value
Price (A)	3	4.11	0.007
Discount (B)	3	0.12	0.95
A*B	9	0.13	0.99

DUNCAN RESULTS

\$129.95	A	<hr/>			
	4.20	4.20	4.15	4.15	
\$114.95	A	<hr/>			
	4.15	4.13	4.02	4.02	
\$99.95	A	<hr/>			
	3.77	3.67	3.64	3.62	
\$84.95	A	<hr/>			
	3.78	3.48	3.35	3.33	

Table 27. Effect of Discount on Perceived Sacrifice Regular

Regular Price Treatment	MEANS			
	No Discount	Type of Discount		
		Regular/Sale	Coupon	Rebate
\$144.95	4.35			
\$129.95	4.15	4.62	4.71	4.57
\$114.95	4.02	5.13	5.15	4.48
\$ 99.95	3.62	5.08	5.04	4.68
\$ 84.95	3.48	5.22	5.17	4.66

ANOVA RESULTS (3 X 4 MODEL)

Dependent Variable: Perceived Sacrifice Regular

Source of Variation	DF	F-Value	P-Value
Price (A)	3	0.96	0.41
Discount (B)	2	2.59	0.08
A*B	6	0.24	0.96

DUNCAN RESULTS

\$129.95	A	<hr/>		
		4.71	4.62	4.57
\$114.95	A	<hr/>		
		5.15	5.13	4.48
\$99.95	A	<hr/>		
		5.08	5.04	4.68
\$84.95	A	<hr/>		
		5.22	5.17	4.66

Table 28. Effect of Discount on Perceived Value

Regular Price Treatment	MEANS			
	Type of Discount			
	No Discount	Regular/Sale	Coupon	Rebate
\$144.95	4.68			
\$129.95	4.91	4.46	4.55	4.37
\$114.95	4.84	4.91	4.93	4.37
\$ 99.95	4.77	4.86	4.95	4.42
\$ 84.95	4.64	5.33	4.40	4.64

ANOVA RESULTS (4 X 4 MODEL)

Dependent Variable: Perceived Value

Source of Variation	DF	F-Value	P-Value
Price (A)	3	0.37	0.78
Discount (B)	3	1.57	0.20
A*B	9	0.74	0.67

DUNCAN RESULTS

\$129.95	A	<hr/>			
		4.91	4.55	4.56	4.37
\$114.95	A	<hr/>			
		4.93	4.91	4.84	4.37
\$99.95	A	<hr/>			
		4.95	4.86	4.77	4.42
\$84.95	A	<hr/>			
		5.33	4.64	4.64	4.40

analysis of the means in the no discount level compared to the rebate level shows that the mean values in the rebate level tend to be lower than those in the no discount level. In fact, the means are lower for the rebate level at all prices except the \$84.95 price. This is just the opposite of the hypothesized relationship. This hypothesis was not supported.

Perceived Value-Regular/Sale Price vs Selling Price Only. The ninth hypothesis suggested that perceived value would be greater for an offer with both a regular price and a sale price than for an offer with only the selling price. Again, the Duncan analysis in Table 28 shows no significant difference in mean values for perceived value. However, an analysis of the means in the no discount level compared to the regular price/sale price level shows a tendency for support of the hypothesis, i.e., the mean values are higher in the regular/sale discount level than the no discount level at all prices except the \$129.95 price.

Perceived Value-Regular/Sale Price vs Coupon. The tenth hypothesis suggested that perceived value would be greater for an offer with both a regular price and a sale price than for an offer with a coupon. The Duncan analysis in Table 28 did not support this hypothesis. There was no difference found in perceptions of value across discount levels. A comparison of the means at the regular price/sale price and coupon levels do not show support for this hypothesis. The means for perceived value are lower in the regular/sale discount level than the coupon level for all prices except the \$84.95 price. This is opposite of the hypothesized relationship.

Perceived Value-Regular/Sale Price vs Rebate. The eleventh hypothesis suggested that perceived value would be greater for an offer with both a regular price and a sale price than for an offer with a rebate. The Duncan analysis in Table 28 did not support this hypothesis. There was no difference found in perceptions of value across discount levels. However, a comparison of the means at the regular/sale discount level with the rebate level indicates higher means at the regular/sale discount for all prices. Therefore, although there was no statistical support for the hypothesis, the tendencies of the mean values showed some support for the hypothesis.

Perceived Value-Coupon vs Rebate. The twelfth hypothesis for this section suggested that perceived value would be greater for an offer with a coupon than for an offer with a rebate. Once again, the Duncan analysis in Table 28 does not support this hypothesis. There was no significant difference in perceptions of value across discount levels. However, a comparison of mean values at these two discount levels shows a tendency for support of the hypothesis, i.e., the mean values in the coupon level tend to be higher than the corresponding values in the rebate level for all prices except the \$84.95 price.

Size of Discount

The following five hypotheses are related to the effect of the size of discounts on the dependent variables: perceived quality, perceived sacrifice regular, perceived sacrifice actual, perceived transaction value, and perceived value.

Perceived Quality. The first hypothesis in this section suggested that perceived quality would not differ for offers using regular/sale price, coupons, or rebates regardless of the size of the discount. Table 16 (p. 121) shows the ANOVA results strongly support this hypothesis. The price effect (size of discount) for the 3 x 4 model is nonsignificant at the .98 level, i.e., there is no significant difference in perceived quality for the regular/sale price, coupon, and rebate levels.

Perceived Sacrifice Regular. The second hypothesis suggested that perceived sacrifice regular would not differ for offers using regular/sale price, coupons, or rebates regardless of the size of the discount. The ANOVA results in Table 27 (p. 141) support this hypothesis. The price effect (size of discount) for the 3 x 4 model is nonsignificant at the 0.41 level, i.e., there is no difference in perceived sacrifice regular for offers with regular/sale price, coupons, or rebates regardless of the size of the discount.

Perceived Sacrifice Actual. The third hypothesis suggested that perceived sacrifice actual would be inversely related to the size of the discount, i.e., as the size of the discount increases, the perception of sacrifice actual should decrease. Table 18 (p. 124) strongly supports this hypothesis. The ANOVA results for the price effect (size of discount) is very significant at the .007 level, i.e., as the size of the discount increases there is a significant difference in subjects' perceptions of actual sacrifice. Although the Duncan analysis does not show significant differences at the individual levels, an analysis of the means suggests support for this hypothesis at each discount level, i.e., the mean values do decrease as the actual price decreases for each discount level. As discussed earlier, the linear trend analyses presented in Tables 19-22 also support the above findings, i.e., there were significant linear trends for the perceived sacrifice mean values at all discount levels.

Transaction Value. The fourth hypothesis suggested that transaction value will be positively related to the size of the discount. In other words, as the size of the discount increases, perceived transaction value should also increase. This hypothesis was strongly supported as shown by the results summarized in Table 29. This table presents ANOVA results for the 3 x 4 model and Duncan results for each discount level. The mean values (from Table 14) are included for ease of reference. The ANOVA results show a price effect (size of discount) significant at the .0003 level, i.e., as the size of the discount increases, transaction value also increased.

The Duncan results also supported this hypothesis at the regular/sale price levels and rebate levels with significance at the .025 and .11 levels respectively. To further support the Duncan analysis and to determine if there was a linear trend in the coupon level, a trend analysis was conducted for the three discount levels. Table 30 shows the trend analysis for the regular/sale price level. This analysis resulted in a t-value of 2.87 with $p < .005$ and a r-effect size of 0.39 indicating a medium to large price-transaction value effect. These results strongly support the hypothesis at the regular/sale price level.

Table 31 presents the trend analysis for the coupon level. This analysis resulted in a t-value of 1.63 with $p < .10$ and a r-effect size of 0.21. Table 32 presents the trend analysis for the rebate

Table 29. Effect of Price on Transaction Value

Regular Price Treatment	MEANS			
	No Discount	Type of Discount		
		Regular/Sale	Coupon	Rebate
\$144.95	NA			
\$129.95	NA	4.11	4.24	4.17
\$114.95	NA	4.73	5.11	4.64
\$ 99.95	NA	4.77	5.06	4.77
\$ 84.95	NA	5.42	4.97	5.17

ANOVA RESULTS (3 X 4 MODEL)

Dependent Variable: Transaction Value

Source of Variation	DF	F-Value	P-Value
Price (A)	3	6.78	0.0003
Discount (B)	2	0.30	0.78
A*B	6	0.49	0.81

DUNCAN RESULTS

Regular/Sale	A	_____		
		B	_____	
	5.42	4.77	4.73	4.11
Coupon	A	_____		
		B	_____	
	5.11	5.06	4.97	4.24
Rebate	A	_____		
		B	_____	
	5.17	4.77	4.64	4.17

Table 30. Trend Analysis: Price-Transaction Value

	Regular/Sale Level				Total
Price	<u>\$129.95</u>	<u>\$114.95</u>	<u>\$ 99.95</u>	<u>\$ 84.95</u>	<u>L</u>
T	61.65	70.95	71.55	81.30	
λ	2	1	-1	-2	
T x λ	123.30	70.95	-71.55	-162.60	-39.90

$$MS(\text{contrast}) = L^2/n(\Sigma\lambda^2) = 1592.01/150 = 10.61$$

$$F = MS(\text{contrast})/MSE = 10.61/1.2857 = 8.25$$

$$t = 2.87, p < .0005$$

$$r = 0.39$$

T = Mean x number of observations per cell

λ = Contrast Values

$$L = \Sigma(T \times \lambda)$$

$$t = \sqrt{F}$$

$$r = \sqrt{F/(F + df_{\text{error}})}$$

level. This analysis resulted in a t-value of 2.38 with $p < .025$ and a r-effect size of 0.30. The results of these two trend analyses also strongly support the positive size of discount-transaction value relationship.

Perceived Value. The fifth hypothesis suggested that perceived value should be positively related to the size of the discount. The results in Table 24 (p. 136) do not support this hypothesis. The ANOVA results show a price effect (size of discount) that is nonsignificant at the .56 level. The Duncan analysis also showed nonsignificant results. However, if the mean values for the regular/sale price and rebate levels are examined, the values do tend to show support for this hypothesis, i.e., the mean values for perceived value do increase as the size of the discount increases at the regular/sale price and rebate levels.

To further test this hypothesis, trend analyses were conducted at each discount level. Table 33 presents the results of the trend analysis at the regular/sale price level. This analysis resulted in a t-value of 1.78 with $p < .05$ and a r-effect size of 0.23 indicating a medium to small price-perceived value effect. These results support the positive size of discount-perceived value relationship. Table 34 presents the results of the trend analysis for the coupon level, and Table 35 shows the results of the trend analysis for the rebate level. As shown in the tables, these results do not support the positive size of discount-perceived value relationship. The t-values were non-significant at 0.28 and 0.61 for the coupon and rebate levels respectively. These results suggest that forms of discounts such as coupon and rebates may adversely affect a buyers' perception of value of an offer.

Willingness to Buy

The final hypothesis analyzed is related to the dependent variable, willingness to buy. This hypothesis suggested that willingness to buy would be positively related to perceived value across all conditions. The LISREL path model in Figure 11 (p. 131) supports this general hypothesis. The maximum likelihood estimate for the relationship between perceived value and willingness to

Table 31. Trend Analysis: Price-Transaction Value

Price	Coupon Level				Total
	<u>\$129.95</u>	<u>\$114.95</u>	<u>\$ 99.95</u>	<u>\$ 84.95</u>	<u>L</u>
T	63.60	76.65	75.90	74.55	
λ	2	1	-1	-2	
T x λ	127.20	76.65	-75.90	-149.10	-21.15

$$MS(\text{contrast}) = L^2/n(\sum\lambda^2) = 447.32/150 = 2.98$$

$$F = MS(\text{contrast})/MSE = 2.98/1.1222 = 2.66$$

$$t = 1.63, \quad p < .10$$

$$r = 0.21$$

T = Mean x number of observations per cell

λ = Contrast Values

$$L = \sum(T \times \lambda)$$

$$t = \sqrt{F}$$

$$r = \sqrt{F/(F + df_{\text{error}})}$$

Table 32. Trend Analysis: Price-Transaction Value

<u>Price</u>	<u>Rebate Level</u>				<u>Total</u>
	<u>\$129.95</u>	<u>\$114.95</u>	<u>\$ 99.95</u>	<u>\$ 84.95</u>	<u>L</u>
T	62.55	69.60	71.55	77.55	
λ	2	1	-1	-2	
T x λ	125.10	69.60	-71.55	-155.10	-31.95

$$MS(\text{contrast}) = L^2/n(\Sigma\lambda^2) = 1020.80/150 = 6.81$$

$$F = MS(\text{contrast})/MSE = 6.81/1.2018 = 5.67$$

$$t = 2.38, p < .025$$

$$r = 0.30$$

T = Mean x number of observations per cell

λ = Contrast Values

$$L = \Sigma(T \times \lambda)$$

$$t = \sqrt{F}$$

$$r = \sqrt{F/(F + df_{\text{error}})}$$

Table 33. Trend Analysis: Price-Perceived Value

Regular/Sale Price Level

	Regular/Sale Price Level				Total
<u>Price</u>	<u>\$129.95</u>	<u>\$114.95</u>	<u>\$ 99.95</u>	<u>\$ 84.95</u>	<u>L</u>
T	66.90	73.65	72.90	79.95	
λ	2	1	-1	-2	
T x λ	133.80	73.65	-72.90	-159.90	-25.35

$$MS(\text{contrast}) = L^2/n(\sum\lambda^2) = 642.62/150 = 4.28$$

$$F = MS(\text{contrast})/MSE = 4.28/1.3455 = 3.18$$

$$t = 1.78, \quad p < .05$$

$$r = 0.23$$

T = Mean x number of observations per cell

λ = Contrast Values

$$L = \sum(T \times \lambda)$$

$$t = \sqrt{F}$$

$$r = \sqrt{F/(F + df_{\text{error}})}$$

Table 34. Trend Analysis: Price-Perceived Value

Price	Coupon Level				Total
	<u>\$129.95</u>	<u>\$114.95</u>	<u>\$ 99.95</u>	<u>\$ 84.95</u>	
T	68.25	73.95	74.25	66.00	
λ	2	1	-1	-2	
T x λ	136.50	73.95	-74.25	-132.00	4.2

$$MS(\text{contrast}) = L^2/n(\sum\lambda^2) = 17.64/150 = 0.1176$$

$$F = MS(\text{contrast})/MSE = 0.1176/1.5076 = 0.078$$

$$t = 1.28, \text{ non-significant}$$

$$r = 0.04$$

T = Mean x number of observations per cell

λ = Contrast Values

$$L = \sum(T \times \lambda)$$

$$t = \sqrt{F}$$

$$r = \sqrt{F/(F + df_{\text{error}})}$$

Table 35. Trend Analysis: Price-Perceived Value

	Coupon Level				Total
<u>Price</u>	<u>\$129.95</u>	<u>\$114.95</u>	<u>\$ 99.95</u>	<u>\$ 84.95</u>	<u>L</u>
T	65.55	65.55	66.30	69.60	
λ	2	1	-1	-2	
T x λ	131.10	65.55	-66.30	-139.20	-8.85

$$MS(\text{contrast}) = L^2/n(\sum\lambda^2) = 78.3225/150 = 0.52215$$

$$F = MS(\text{contrast})/MSE = 0.5222/1.4034 = 0.3721$$

$$t = 0.61, \text{ non-significant}$$

$$r = 0.08$$

T = Mean x number of observations per cell

λ = Contrast Values

$$L = \sum(T \times \lambda)$$

$$t = \sqrt{F}$$

$$r = \sqrt{F/(F + df_{\text{error}})}$$

buy was a positive 0.750 with a related t-value of 17.37, significant at $p < .005$. Also, the correlation for this relationship was a positive 0.75. These results indicate a very strong positive relationship between these two dependent variables for the model in general.

Redemption Effort

One final result of interest which was not hypothesized is related to redemption effort. The extended conceptual model suggested that redemption effort would have a negative effect on transaction value, i.e., the more effort needed to be able to take advantage of the discounted offer, the less the subject would perceive the offer as a "deal." It was also suggested that redemption effort would be perceived as being greater for an offer with a rebate than an offer with a coupon because of the "hassle" of having to mail the rebate to the manufacturer and wait for the refund.

The LISREL path model shows the relationship between redemption effort and transaction value (see Figure 11). The maximum likelihood estimate was a negative 0.094. Although there was not a real strong relationship found between redemption effort and transaction value, the suggested negative relationship between the two was supported. The idea that redemption effort would be greater for the rebate level when compared to the coupon level was also supported. The ANOVA results in Table 36 show a discount effect significant at the .0001 level. Also, an examination of the means shows the greater mean values for the rebate level. Finally, as would be expected, there was no difference between the redemption effort mean values for each discount level across price levels. This was nonsignificant at the .99 level.

Table 36. Effect of Price and Discount on Redemption Effort

<u>Regular Price Treatment</u>	<u>MEANS</u>			
	<u>No Discount</u>	<u>Type of Discount</u>		
		<u>Regular/Sale</u>	<u>Coupon</u>	<u>Rebate</u>
\$144.95	NA	NA		
\$129.95	NA	NA	2.22	3.35
\$114.95	NA	NA	2.26	3.20
\$ 99.95	NA	NA	2.02	3.46
\$ 84.95	NA	NA	2.22	3.24

ANOVA RESULTS (2 X 4 MODEL)

Dependent Variable: Perceived Quality

<u>Source of Variation</u>	<u>DF</u>	<u>F-Value</u>	<u>P-Value</u>
Price (A)	3	0.02	0.99
Discount (B)	1	28.33	0.0001
A*B	3	0.27	0.85

Summary

This chapter began by discussing the research instrument used in the experiment. Changes made in the research instrument based on the pretest results in Chapter 4 were presented in this discussion. The method of conducting the experiment was also discussed. Briefly, data for the experiment was collected over a two day period using marketing principles and advertising classes at Virginia Tech during the Spring quarter, 1986.

The general results of the study found the data to fit the extended conceptual model quite well overall. An analysis of each of the specific hypotheses presented in Chapter III revealed promising results. For the ten price effect hypotheses, seven were strongly supported, one had moderate support, and two were weakly supported. For the twelve forms of discount hypotheses, one was strongly supported, two had moderate support, three had weak support, and six were not supported. For the five size of discount hypotheses, four were strongly supported and one showed moderate support. Finally, the hypothesis for willingness to buy was strongly supported. A summary of these results are presented in Table 37.

Table 37. Summary of Results

<u>Hypothesized Relationship</u>	<u>Result</u>
PRICE EFFECTS	
1. Positive Price-PQ	Strong Support
2. Positive Price-PSR	Strong Support
3. Positive Price-PSA	Strong Support
4. Positive PQ-AV	Strong Support
5. Negative PSA-AV	Strong Support
6. Negative PSA-TV	Weak Support
7. Positive PSR-TV	Weak Support
8. Positive AV-WB	Strong Support
9. Positive TV-WB	Strong Support
10. Curvilinear Price-PV	Moderate Support
FORMS OF DISCOUNT EFFECT	
1. PQ coupon > PQ no discount	No Support
2. PQ rebate > PQ no discount	No Support
3. PQ reg/sale > PQ no discount	No Support
4. PQ reg/sale = PQ coupon = PQ rebate	Moderate Support
5. PSA should not differ	Strong Support
6. PSR C = PSR R = PSR R/S > PSR ND	Moderate Support
7. PV-coupon > PV-no discount	No Support
8. PV-rebate > PV-no discount	No Support
9. PV-reg/sale > PV-no discount	Weak Support
10. PV-reg/sale > PV-coupon	No Support
11. PV-reg/sale > PV-rebate	Weak Support
12. PV-coupon > PV-rebate	Weak Support
SIZE OF DISCOUNT	
1. PQ-reg/sale = PQ-coupon = PQ-rebate	Strong Support
2. PSR-reg/sale = PSR-coupon = PSR-rebate	Strong Support
3. Negative size of discount(SOD)-PSA	Strong Support
4. Positive SOD-TV	Strong Support
5. Positive SOD-PV	Moderate Support
POSITIVE WB-PV	Strong Support

Chapter VI

Discussion of Results

Overview of the Chapter

This final chapter of the dissertation summarizes the significance of the research findings. The chapter begins with an overview of the research and is followed by a discussion of the major findings. The findings are then discussed in terms of the theoretical contributions, the methodological contributions, and the potential managerial contributions. The limitations of the research based on the empirical study are presented, and the chapter concludes with suggestions for areas of future research based on the findings of this study and conceptual and methodological issues that were beyond the realm of this dissertation.

Overview of the Research

The objective of this research was to investigate empirically the effects of price and forms of discounts on buyers' subjective product evaluations. More specifically, this research investigated the relationships of eight dependent variables, i.e., perceived quality, perceived sacrifice actual, perceived value, willingness to buy, perceived sacrifice regular, acquisition value, transaction value, and redemption effort, and the effect that changes in price and forms of discounts had on these constructs. The model tested was an extension of the conceptual model proposed by Monroe and Krishnan (1985), (Figure 1, Chapter II). This original model defines the influence of price on buyers' perceptions of product quality, sacrifice, value, and willingness to buy. This model was extended by Dodds (1985) to include the effect of brand name and store name on perceptions of quality, value, and willingness to buy. Rao (1986) extended the model in another theoretical direction by testing the effect of past familiarity on perceived quality, sacrifice, value, and willingness to buy. The research by Rao (1986) was the first attempt to measure the perceived sacrifice construct.

Thaler's (1985) transaction utility theory based on Kahneman and Tversky's (1979) prospect theory provided the mechanism for incorporating discounts into the original price-perceived quality conceptualization derived by Monroe and Krishnan (1985). As defined in transaction utility theory, transaction value is the perceived merits of an offer. The perceived merits are the contrasts between the actual price and a buyer's reference price. For any buyer, transaction value is positive if the actual price is less than the reference price and negative if the actual price is more than the reference price. Thus, the concept of transaction value, by using the notion of reference prices, provided the mechanism to incorporate discounts into the price-perceived quality model. The extended price-perceived quality model tested in this research is presented in Chapter II, Figure 8.

From the conceptual model, theoretical propositions were posited for the eight constructs in this extended model. The propositions were empirically tested in the form of operational hypotheses about the effects of price (size of discount) and form of discounts on perceived quality, per-

ceived sacrifice actual, perceived value, willingness to buy, perceived sacrifice regular, acquisition value, transaction value, and redemption effort. A summary of the results for the hypotheses was presented in Table 37 in Chapter V.

The research was conducted using a 4 x 4 between subjects design with four levels of price and four levels of forms of discounts. A fifth price x no discount level was incorporated as a control or comparison for the other forms of discount levels. The price for this fifth level was the same price as the reference price used in each of the other three forms of discount levels. ANOVA, multiple comparisons, trend analysis, and LISREL were used to analyze the data.

Discussion of the Major Findings

The purpose of this research was to test an extension of the price-perceived quality conceptualization proposed by Monroe and Krishnan (1985). This study lends support for the original model as well as the extended model. The data were shown to be an overall good fit for both the original model and the extended version even though not all hypotheses were supported.

Perceived Quality

The study lends support to the original model and to previous research that posits that as price increases, perceived quality increases. This research also supported the extended model which suggested that perceived quality would not differ because of the forms of discounts or size of discounts.

The extended model suggested that perceived product quality should not differ for the three discount levels since the perception of quality would be based on the same reference price throughout; however, the model also suggested that perceived quality would be higher in the three

discount levels compared to the no discount level. This argument was not supported by the data in this research. In fact, the data seemed to indicate that subjects' were not using the reference price to evaluate perceived quality in the discount levels.

All of the mean values for perceived quality in the three discount levels were lower than the mean value for the control level; however, this relationship was not tested for statistically significant differences. These values should have been equal because they were based on the same reference price. This suggests that subjects may have used some other reference price than the one provided to assess perceived product quality or they may have "discounted" the "regular" price.

One possible explanation for these results is that subjects came into the experiment with their own mental reference price based on their past experience or familiarity with the product, and their reference prices may have been lower than the one suggested in the survey resulting in a lower perception of product quality. Another possible explanation is that the subjects did not believe that the reference price provided was the actual regular price for the product; therefore, they may have discounted the reference price to a lower price resulting in a lower perception of product quality.

A third possible explanation for the perception of quality being lower in the discount levels compared to the no discount control cell is that the subjects may view products that are discounted as lower quality products. This may be due simply to an overall product judgement or to the additional effort required for some forms of discounts, e.g., coupons and rebates. In other words, the subjects' perceived redemption effort may directly affect their perceptions of product quality resulting in a lower perception of quality for the product. This would explain the generally lower perceptions of quality found throughout the rebate level.

Perceived Sacrifice

The extended model suggested that a buyer has two different perceptions of sacrifice when offered a discount, a perception of sacrifice based on the regular (reference) price and a perception of sacrifice based on the actual price paid. In the no discount level perceived sacrifice actual equaled

perceived sacrifice regular because only one price was presented to the buyer. The original model suggested that as price increased the perception of sacrifice should also increase. This was supported based on the analysis of perceived sacrifice in the no discount level. The extended model also suggested that as price increased perceived sacrifice actual would increase. The research data strongly supported this argument. This indicates that buyers do tend to use the actual price as a measure of perceived sacrifice even in the presence of discounted offers with more than one price presented.

It was also hypothesized for the extended model that perceived sacrifice actual would not differ for offers with only the selling price, offers with coupons, offers with rebates, and offers with regular/sale prices. The data for this research strongly supported this argument. This implies that subjects do tend to use the actual price paid when assessing actual sacrifice. Therefore, when making a pricing decision, marketers do not need to worry about customers using the reference price to determine the cost of their purchase. According to these results, it would seem that customers are able to determine the price that represents the actual cost to them even when given an additional reference price.

The extended model suggested that perceived sacrifice regular would not differ for offers using the same reference price. The research data partially supported this argument as was conceptualized. It was also posited that perceived sacrifice regular should be smaller for offers in the no discount level compared to offers in the three discount levels. This was strongly supported by the research data indicating that subjects did tend to use the reference price when assessing perceived sacrifice regular.

However, it may be possible that these results occurred due to the methods used to measure perceived sacrifice actual and perceived sacrifice regular. As shown in Appendix B, perceived sacrifice actual indicators were offset from the indicators for perceived sacrifice regular and the other constructs. The indicators were offset because it appeared that subjects were confusing indicators for the perceived sacrifice actual with perceived sacrifice regular. However, by offsetting the indicators, it may have actually forced the subjects to notice the difference between PSA and PSR when otherwise they may not have noticed a difference.

Perceived Value

As suggested by the original model and the extended model in the no discount (price only) level, as price increases within the subjects' acceptable range of prices from a low price to a higher price, subjects' perceptions of value would increase and then decrease. The research data in this study partially supported this general price-perceived value relationship that had not been demonstrated in previous research.

As conceptualized in the extended model, as the size of the discount increased (as the actual price decreased), perceived value would increase. Perceived value is the tradeoff between perceived quality and perceived sacrifice actual and is also affected by transaction value. Transaction value is the perceived merits of the offer or the perceived "deal." The larger the discount, the greater perception of a deal. Therefore, as the size of the discount increased, perceived value should increase because of the positive effect of transaction value and the increasing difference in the tradeoff between perceived quality and perceived sacrifice actual. The data did tend to show support for this argument in the regular/sale price and rebate levels; however, it was not supported in the coupon level. Perceived value did not increase as the size of the discount increased.

The extended model also suggested that perceived value would be greater for the regular/sale price offer than the coupon offer, which would be greater than the rebate offer, which would be greater than the no discount (price only offer). The data for the research did not support this argument.

Part of the reason for this non-support may be because subjects did not have to actually complete the tasks necessary to obtain the discounts for the coupon and rebate offers; therefore, the perceived value for the discount offers would not be expected to differ because there would be no redemption effort effect on transaction value, which directly affects perceived value according to the extended model. It may also be that redemption effort does not necessarily only affect transaction value. Redemption effort may actually have an affect on some of the other dependent variables other than transaction value. The significance of this will be discussed in the section below. A third

explanation involves the relationship of transaction value to perceived value which is also discussed in the following section.

Another explanation as to why perceived value was not lowest for offers in the no discount (price only) level may be due to subjects not using the reference price in the three discount levels to assess perceived quality. This argument is somewhat supported at the rebate level where it appears that lower perceptions of quality for rebates have resulted in generally lower perceptions of value. examining the mean values.

Transaction Value and Redemption Effort

As discussed above, transaction value should increase as the size of the discount increased (as perceived sacrifice actual decreased) according to the extended conceptualization. The data in this research did support this argument. In other words, as the size of the discount increased, subjects perceived a greater "deal" or "bargain." However, the results of the data do bring up several issues regarding transaction value which need to be address. It was posited that redemption effort, perceived sacrifice actual, and perceived sacrifice regular would have a direct effect on transaction value. However, none of these relationships were found to be statistically significant. There are several possible explanations for these results.

First of all, it could be that the role of transaction value is as posited by the extended model, but that it was not measured properly. The coefficient alpha used to measure the reliability of the indicators for each construct was lowest for transaction value at 0.75. Since this was the first attempt to measure transaction value, it was felt that the 0.75 showed adequate reliability; however, it may be that developing more reliable indicators would better show the posited relationships.

Another explanation is that transaction value may not only have an effect on perceived value, but also on perceived quality. If, as suggested earlier, the perception of a deal through a discount lessens the perception of quality for a product, perceived value would be affected positively by the

perception of a deal and negatively by the reduction of perceived quality. This would help explain the inconsistent results relating to perceived value discussed previously.

A third explanation relates to redemption effort. As suggested earlier, redemption effort may not affect only transaction value. It may be that redemption effort also has an effect on perceived product quality. That is, subjects may view any product offering coupons or rebates as inferior and feel that the only way a company can sell the product is to offer a discount; therefore, redemption effort would reduce perceived value through the reduction of perceived quality and not necessarily through the reduction of transaction value.

Finally, it could be that redemption effort does not have an affect on either perceived quality or transaction value, but on willingness to buy. This would help explain why perceived value did not differ across the various forms of discount levels. If redemption effort did not affect perceived quality or transaction value, perceived value would be posited to be equal for offers using a regular/sale price, a coupon, or a rebate. It may be that redemption effort has a negative affect on product evaluations only when it comes down to the purchase decision.

Significance of the Research

This research makes a conceptual and methodological contribution to the product perception paradigm. There is also a practical application for marketing managers seeking to improve their methods of presenting a product offer to the consumer to foster more effective and efficient behavior in the marketplace. The following sections discuss the significance of the research from theoretical, methodological, and managerial perspectives.

Theoretical Contribution

This research has tested a model that goes beyond the original price-perceived quality paradigm. Rather than limiting the study to the effect of price on perceptions of product quality, this model goes further by exploring the relationships of several constructs, i.e., perceived quality, perceived sacrifice actual, perceived value, willingness to buy, perceived sacrifice regular, acquisition value, transaction value, and redemption effort. With the exception of perceived quality, perceived sacrifice actual, perceived value, and willingness to buy, none of these other constructs have been examined in the price-perception paradigm. Also, perceived sacrifice actual has only been examined once prior to this research in the price-perceived quality paradigm research.

By breaking away from studying the price-perceived quality relationship as a phenomenon in and of itself, this research has investigated how external information cues such as price and forms of discounts, e.g., regular/sale price, rebates, and coupons influence buyers' perceptions and intentions. The discussion of the major findings in the previous section documents the major contributions that this model makes to knowledge of how buyers evaluate product offers. Given the overall strong empirical support for the conceptual relationships specified by the extended model, there are important implications for theory development. However, since this was the first empirical testing of the extended model, some of the theoretical propositions have received strong support, while other propositions have to be re-evaluated and studied through additional research.

Part of the analysis for this research enabled replication of past research on the original model tested by Dodds (1985). This research helped confirm many of the hypothesized relationships suggested by the original model and tested by Dodds (1985). This study supported the positive price-perceived quality relationship as well as the positive relationship between perceived value and willingness to buy. Studies by Dodds (1985) and Rao (1986) failed to provide evidence for the price-perceived value relationship as conceptualized in the original model. This research, however, did show some support for the curvilinear relationship between price and perceived value. From a theoretical viewpoint, these results lend support for the entire original price-perceived quality re-

relationship proposed by Monroe and Krishnan (1985). However, more research is still needed to verify the curvilinear price-perceived value relationship.

Only one previous study in this area has measured the price-perceived sacrifice relationship (Rao 1986). Rao (1986) did confirm the positive price-perceived sacrifice relationship suggested by the original model. This research also measured the perceived sacrifice construct, and therefore, provided replication of the price-perceived sacrifice relationship tested by Rao (1986). This study supported the previous findings of a positive price-perceived sacrifice relationship. Even though more research is needed in this area to verify the positive price perceived sacrifice relationship as proposed in the original conceptualization, these results also lend support to the original conceptual model.

Methodological Contributions

In addition to the theoretical contributions of this research, the methodological contributions are also important. As previously mentioned, the between subjects design with a no discount (price only) form of discount level allowed for replication of past price-perceived quality studies. It also extended the past approaches by using various combinations of price and forms of discounts to examine subjects' evaluations of product offers. Additionally, by using LISREL to assess the overall fit of the data to the entire model, all the construct relationships could be examined together instead of having to examine "pieces" of the models as has been done in several past price-perceived quality studies. The 4 x 4 between design also made it possible to "pull apart" the design to test various linear relationships at each discount level. This enabled the researcher to show significant trends in the data when the overall omnibus F-test did not show significant differences.

A third contribution from the methodology was incorporating scales that had been used in previous research. A plausible explanation for variation in results of past price-perceived quality studies have been the use of many different rating scales. Thus, by using the same set of scales in programmatic research, variation due to the use of different rating scales is reduced. Also, the

constructs measured in the research were assessed using multiple indicators of each construct. Since several past studies treated perceived quality unidimensionally, the assessment of reliability of the measures was not really possible within one study. The use of multiple indicators enables the assessment of the reliability of the measures within a single study; therefore, future refinement of the scales used for this research is possible.

Managerial Contribution

In today's marketplace, management has to make good, fast, and frequent decisions regarding marketing mix variables for each of their products. The price decision is crucial for any company because it directly affects revenue. In practice, marketers try to increase price to increase the profit margin for their products. Although, as shown in this research, an increase in price leads to a greater perception of product quality, there comes a point where the price increase also will lead to a reduction in the perception of value for a product offer. This reduction in perceived value will then result in the consumer becoming less willing to buy the product. Marketers need to be aware of the trade-off between perceived product quality and perceived sacrifice and need to determine at what point the perceived value of an offer begins to decline.

Since the objective of a price discount is to enhance unit sales, the trade-off between lower unit margin and increased sales volume determines whether or not there will be a positive impact on profits. However, if buyers do not perceive that there is a "deal" or that there is an enhancement in value, then the discount strategy may not have the desired impact on revenues. Thus, an incorrect price discount decision can be detrimental in terms of lost sales and profit.

Discounts are becoming more and more important in the marketplace today because they are viewed by the consumer as a more acceptable method of reducing price. In every store there seems to be shelf fliers advertising discounted products. Newspapers and magazines are offering more and more discounted products to the consumer in the form of coupons and rebates. In fact, Sunday newspapers include booklets of such promotional techniques.

It should be realized by management that a number of psychological and other contextual factors may lead to a buyers' perception that is different than the perception assumed by the seller. It may be that buyers evaluate the worth of an offer based on their perception of how good a deal they are getting, and they may evaluate deals differently depending on whether coupons or rebates are offered. The generally lower perceptions of product quality and perceived value for the rebate offer tend to support this notion. It may be that consumers tend to look upon products that offer rebates as lower quality products and/or that they view the value of a product lower because of the extra effort associated with the redemption of the rebate.

Although this research should not be taken as definitive, it is crucial for marketers to discover the effect that rebates and coupons have on the perceived quality and perceived value of a product. They should also ask themselves whether or not it is better to simply reduce the price of a product or to reduce the price through some form of discount. It appears from the results of this study that there may be instances when it is just as effective to simply reduce the price of a product as to offer a form of a discount to reduce the price. The method used to reduce prices of offers is important due to the enormous costs associated with discounts. Further research needs to be conducted to ascertain when discounts are most effective for marketers.

Limitations of the Research

There are several tradeoffs that have to be made in any research project. Since these tradeoffs are necessary, it is important that the researcher be aware of the strengths and weaknesses of the research. The importance of the study's results can then be properly interpreted in light of these known weaknesses. The following are some of the strengths and weaknesses of the research.

The Experimental Design

Fromkin and Streufert (1976) indicate that the most important feature of laboratory experiments is the use of control to identify sources of variation. This control increases confidence that the observed behavior can be attributed to the manipulations by the experimenter because the elimination of uncontrolled variables reduces the number of potential alternatives. Since store name and brand name were controlled for in this design, it could be argued that the results tended to be somewhat artificial. However, this is a tradeoff that must sometimes be made in order to isolate certain relationships. There always seems to be a need to bring more realism and generality into the experimental setting; however, the mere act of bringing the dependent variables into an experimental setting usually changes their nature resulting in failure to isolate a real life purchasing situation. Therefore, it is difficult, if not impossible to obtain mundane realism in a laboratory environment.

From a managerial perspective, this means that caution should be used when applying these results, as well as any results obtained from a laboratory experiment, to a real life situation. When other factors, such as store name and brand name, are intermingled with price and discount information, subjects' subjective product evaluations could differ.

Reference Prices and Discounts

A possible limitation for this study is in the selection of the reference price and the size of the discounts used for the research. First, the reference price chosen was one standard deviation above the price that subjects thought would be a normal price for the product. It could be that the subjects used for the actual study viewed the reference price as being too high. This would affect their evaluation of perceived quality producing results similar to those obtained for perceived quality and perceived value in this study.

It could also be that the size of the discount used in some scenarios affected the reference price used by subjects. For example, a \$60 coupon for a \$144.95 product may have seemed unrealistic resulting in the subject lowering the reference price to a level they deemed acceptable. This would also affect the results of the study.

Artifacts

One possible artifact is subjects attempting to be "good" subjects. This happens when they try to figure out the research question and give the researcher what they feel are the intended responses. This artifact can be avoided by disguising the objective of the research. The objective of this research was disguised by using a consumer survey format at the beginning of the questionnaire as in the study by Dodds (1985). Also, the subjects were asked at the end of the experiment what they thought the experiment was about and what the researcher was attempting to discover. Thirty-eight responses that showed knowledge of the objective of the research or that recently participated in a similar study were eliminated.

A second artifact is evaluation apprehension where the subject is concerned with winning a positive evaluation from the researcher or at least providing no grounds for a negative evaluation from the researcher. To minimize this problem, subjects were told at the beginning of the experiment that the researcher was interested only in groups of individuals' responses and not simply a single individual's response.

Pre-Research Exposure

Subjects come in to an experimental situation with different backgrounds and experiences. These various backgrounds and experiences could bring bias to the results if not controlled for. In this research, 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 ensure better homogeneity between treatment groups and thus helped alleviate this problem.

Another possible shortcoming for this research, may be subjects' familiarity with the selected product. It could be that subjects who are highly familiar with the product would tend to evaluate the product differently than subjects who are not familiar with the product at all. For example, a subject that is familiar with video cassette recorders may simply use the product description to infer product quality when subjects not familiar with the product would have to judge quality based on other factors such as price. These differences in assessing product quality could bias the results.

Efficiency and Causality

As previously mentioned, McGrath (1982) asserts that it would be desirable to maximize three separate areas in a research effort. However, it is not possible to maximize all three areas at the same time so it becomes a matter of tradeoffs. A tight experimental design that specifically addresses the main objectives of the research was desired. A tight experimental design enables the researcher to gain greater precision in control and measurement of the variables of interest; however, these positive gains come with the expense of not using a design that features realism and/or generality as primary goals. A design that enhances the internal validity of the study was considered vital in experimental research.

Also, by controlling all variables except for price and forms of discounts, the researcher can argue that there were no rival hypotheses to explain the obtained effects. The researcher can, therefore, claim with a high degree of confidence that by controlling for other possible alternative hypotheses, cause-effect relationships can be specified.

Cost and Appropriateness of Sample

Due to the constraint of time and money placed on the research, the researcher was not able to have such desirable characteristics as obtaining a truly random sample of the general population and collecting the data using a more efficient method. The design did not provide the researcher with the type of information that can be gathered using other types of designs such as field studies and interviews.

Also, the ability to generalize from an experimental design is typically limited to the population from which the sample is drawn. The use of college students in research experiments has been logically argued by Calder, Phillips, and Tybout (1981, 1982, 1983) and Petroschius (1983). They state that if the objective of the proposed research is to test theoretical propositions and not to generalize findings that can be directly applied to a particular situation, then a relevant sample such as college students is appropriate. Also, the value of the study and the argument for using college students for the sample is enhanced by selecting products that are appropriate to the chosen population of students.

Future Research

Based on this and previous price-perceived quality studies, there are several avenues open for future research on the price-perceived quality paradigm. In general, it was observed in the discussion of past literature that many of the price-perceived quality studies have not tested the robustness and boundaries of the empirical findings. The future objective of this research paradigm should be to obtain a better understanding of the original conceptual model through a series of replications where product information such as price, discounts, brand names, store names, and other sources of product information not tested in this research are manipulated.

The purpose of these future studies would be to conduct a robustness and boundary analysis to determine in what conditions the general findings hold. If external validity (generalizability) is one of the objectives of a programmatic research stream in the price-perceived quality paradigm, it will only be achieved after a series of studies are conducted to test the robustness and boundaries of the research domain. More specifically, research attention is needed in the following areas.

Research for both the original model and the extended model should continue using different products, populations, and/or settings to examine the robustness and boundaries of the findings. Research should also be conducted for both models using a wider range of prices for products and using prices that are above and below the acceptable price range for the subjects. A wider price range may enhance perception differences for all constructs. The range of products tested within these conceptual models should be increased to include products that are relatively inexpensive and products that are relatively expensive. Also, services need to be included in this research paradigm. Other variables besides price, brand name, store name, forms of discounts, familiarity of product should be examined, e.g., a person's interest in the product and/or the amount of descriptive information presented to the subject.

Sensory cues have been used in several past studies to evaluate perceived product quality. In this dissertation research, subjects were given a product description and were not exposed to any of the sensory cues such as taste, touch and smell that could normally be used in evaluating a product offer. To assist in enhancing realism, research should be conducted where the experimental cells would have different combinations of sensory cues when evaluating products.

For the extended model, research should continue to incorporate various types of sales promotion techniques that are becoming more and more popular in the marketplace, e.g., contests and double-coupons. Also, since this research did not support a greater perception of value for the three discount levels, further research needs to be conducted to determine whether product offers with discounts have a greater perceived value than products whose price is simply reduced or whether this argument needs to be rethought. Also, research should be conducted for the extended model using a control group where no discount and no price information is available. This would

enable the researcher to determine the effect of the product features on the perception of quality, value, and willingness to buy.

Another area for future research would be to investigate the use of reference prices by consumers. For example, how do they evaluate an unrealistic reference price compared to a realistic reference price? Do they impose their own reference price from past experience? Do they always use the provided reference price? Or, do they use some discounted reference price when evaluating discounted product offers?

It may also be beneficial to further test the relationships of transaction value and redemption effort for the extended model as well as evaluating various other possible relationships in the model. The use of LISREL would allow several different models to be compared so that the best model for the data can be selected. It may be that slight adjustments in the proposed extended model may result in a more appropriate alternative model involving the same constructs.

Summary

The final chapter of this dissertation gave an overview of the study and discussed the major findings of the research effort. The significance of the research was discussed both from a theoretical and methodological perspective, and the managerial implications based on the empirical results were presented. Next, the limitations of the research were discussed mainly in relation to problems associated with experimental laboratory research. The chapter concluded by addressing some of the possible avenues for research in the price-perceived quality research paradigm.

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Appendix A

PRE-TEST INSTRUMENT

SURVEY RESPONSE BOOKLET

In this booklet you will be asked to respond to a product offer for a dual cassette recorder. The offer situation is similar to offers you may have actually seen or responded to in the past. We are seeking your true reactions to the situation presented to you. Please respond in a natural manner--the way you believe you would actually react. Take your time in responding, and if at any time you have any questions, please raise your hand.

This questionnaire is divided into a number of sections. The first section asks about your shopping habits. The second section presents the dual cassette recorder and asks you to respond based on the information provided. A final section asks questions that will be used to classify your answers with those of various respondents.

Please do not write your name anywhere in this booklet. Every effort will be made to preserve your anonymity, so you may answer all questions accurately and honestly.

THANK YOU FOR YOUR TIME AND CO-OPERATION.

SECTION I

The following statements are concerned with the way you shop and the feelings you have about shopping. Please indicate the degree that you agree or disagree with each statement by circling the number corresponding to the scales below that best expresses your feelings.

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

1. I usually buy the lowest-priced brand available:

1 : 2 : 3 : 4 : 5 : 6 : 7

2. Advertisements for sales are usually misleading:

1 : 2 : 3 : 4 : 5 : 6 : 7

3. When shopping, I always compare prices before making my selection:

1 : 2 : 3 : 4 : 5 : 6 : 7

4. When shopping, I sometimes use coupons:

1 : 2 : 3 : 4 : 5 : 6 : 7

5. Brands within the same price range do not differ much in terms of quality:

1 : 2 : 3 : 4 : 5 : 6 : 7

6. Price is the most important factor to me when making purchase decisions:

1 : 2 : 3 : 4 : 5 : 6 : 7

7. When shopping, I sometimes take advantage of mail-in rebates:

1 : 2 : 3 : 4 : 5 : 6 : 7

8. I consider myself a real "bargain hunter":

1 : 2 : 3 : 4 : 5 : 6 : 7

9. Lower-priced items usually do not give good value for the money:

1 : 2 : 3 : 4 : 5 : 6 : 7

Please indicate the degree that you agree or disagree with each statement by circling the number corresponding to the scales below that best expresses your feelings.

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

10. There is too much effort involved in clipping-out coupons:

1 : 2 : 3 : 4 : 5 : 6 : 7

11. A person can save a lot of money shopping around for bargains:

1 : 2 : 3 : 4 : 5 : 6 : 7

12. I usually buy higher priced items to make sure that I get good quality in my purchases:

1 : 2 : 3 : 4 : 5 : 6 : 7

13. It is too much trouble to mail rebates back to the manufacturer:

1 : 2 : 3 : 4 : 5 : 6 : 7

14. A person can save a lot of money using coupons:

1 : 2 : 3 : 4 : 5 : 6 : 7

15. Product quality is hard to judge for most brands:

1 : 2 : 3 : 4 : 5 : 6 : 7

SECTION II

Instructions

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. PLEASE NOTE that the advertisement can be removed from the response booklet for ease of reference.

Product:

Portable Dual Cassette Recorder with AM/FM Stereo Radio: This dual cassette recorder (sometimes called a "boom box", "ghetto blaster", or "box") has a convenient handle attached and is light weight so that it can be carried with you practically anywhere you go. This dual cassette recorder is 19 inches long by 9 inches high by 5 inches wide, has dual cassette ports that enable you to duplicate other cassette tapes, and has an AM/FM stereo radio with attached antenna that ensures high quality reception.

Features:

1. High Speed Tape Duplicating System: Record a 60 minute cassette in 30 minutes.
2. Stereo Play/Record Cassette Deck with Digital Counter & Soft Eject Door.
3. Stereo Playback Deck with Soft Eject Door.
4. Continuous Play Feature with LED Indicators.
5. LED High Speed, FM Stereo, Power On Indicators.
6. Mic Mixing System with Mic Input Jack.
7. Loudness Switch, Stereo Headphone, and Phono Input Jacks.
8. Separate Volume, Balance, Tone Rotary Controls.
9. 2 Full Range Speakers with Tuned Radiators.
10. Operates on 6 "D" Cell Batteries (not included) or AC Line Cord.

Regular Price: \$129.95

For the product and offer described on the previous page, please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

1. The likelihood that the dual cassette recorder will be reliable is:

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

2. At this price, the amount of money required to acquire this dual cassette recorder 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. This dual cassette recorder is a good value for the money:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

4. If I were interested in dual cassette recorders, the likelihood that I would purchase this dual cassette recorder 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. I feel that this dual cassette recorder is expensive:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

6. This dual cassette recorder appears to be of:

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

Please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

7. I would consider this dual cassette recorder to be a good buy:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

8. My willingness to buy this dual cassette recorder is:

1	2	3	4	5	6	7
very unwilling	moderately unwilling	slightly unwilling	neither willing nor unwilling	slightly willing	moderately willing	very willing

9. The monetary sacrifice that I would be making if I purchased this dual cassette recorder is:

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

10. This dual cassette recorder would seem to be dependable:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

11. I would not consider buying this dual cassette recorder given the offer described:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

12. The likelihood that the dual cassette recorder will have a clear tone is:

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

Please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

13. The offer for this dual cassette recorder is a:

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

SECTION III

To help us better understand your reactions, please answer the following few questions.

1. Do you presently own a dual cassette recorder?

___ yes ___ no

2. How knowledgeable are you regarding dual cassette recorders?

1 2 3 4 5
extremely very moderately slightly hardly

3. Have you taken part in an experiment similar to this before?

___ yes ___ no

If yes, how recently? _____

4. What do you think the investigators are interested in determining from this study?

5. Your age: _____

6. Your sex: _____

7. Class standing: _____

8. Your major: _____

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10. There is too much effort involved in clipping-out coupons:

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11. A person can save a lot of money shopping around for bargains:

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Portable Dual Cassette Recorder with AM/FM Stereo Radio: This dual cassette recorder (sometimes called a "boom box", "ghetto blaster", or "box") has a convenient handle attached and is light weight so that it can be carried with you practically anywhere you go. This dual cassette recorder is 19 inches long by 9 inches high by 5 inches wide, has dual cassette ports that enable you to duplicate other cassette tapes, and has an AM/FM stereo radio with attached antenna that ensures high quality reception.

Features:

1. High Speed Tape Duplicating System: Record a 60 minute cassette in 30 minutes.
2. Stereo Play/Record Cassette Deck with Digital Counter & Soft Eject Door.
3. Stereo Playback Deck with Soft Eject Door.
4. Continuous Play Feature with LED Indicators.
5. LED High Speed, FM Stereo, Power On Indicators.
6. Mic Mixing System with Mic Input Jack.
7. Loudness Switch, Stereo Headphone, and Phono Input Jacks.
8. Separate Volume, Balance, Tone Rotary Controls.
9. 2 Full Range Speakers with Tuned Radiators.
10. Operates on 6 "D" Cell Batteries (not included) or AC Line Cord.

Regular Price: \$144.95

Sale Price: \$129.95

For the product and offer described on the previous page, please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

1. The likelihood that the dual cassette recorder will be reliable is:

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

2. At the regular price, the amount of money required to acquire this dual cassette recorder 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. This dual cassette recorder is a good value for the money:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

4. If I were interested in dual cassette recorders, the likelihood that I would purchase this dual cassette recorder 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. Given the offer, I feel that this dual cassette recorder is expensive:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

6. This dual cassette recorder appears to be of:

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

Please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

7. I would consider this dual cassette recorder to be a good buy:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

8. Given the offer, my willingness to buy this dual cassette recorder is:

1	2	3	4	5	6	7
very unwilling	moderately unwilling	slightly unwilling	neither willing nor unwilling	slightly willing	moderately willing	very willing

9. At the regular price, the monetary sacrifice that I would be making if I purchased this dual cassette recorder is:

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

10. This dual cassette recorder would seem to be dependable:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

11. Overall, the offer for this dual cassette recorder appears to be a bargain:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

12. I would not consider buying this dual cassette recorder given the offer described:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

Please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

13. Given the offer, the amount of money required to acquire this dual cassette recorder 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. The likelihood that the dual cassette recorder will have a clear tone is:

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

15. Overall, the offer for this dual cassette recorder is a:

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

16. At the regular price, I feel this dual cassette recorder is expensive:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

17. Given the offer, the monetary sacrifice that I would be making if I purchased this dual cassette recorder is:

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

18. People who purchase this product using this offer would save a lot of money:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

Please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

19. Overall, the offer for this dual cassette recorder is a:

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

SECTION III

To help us better understand your reactions, please answer the following few questions.

1. Do you presently own a dual cassette recorder?

___ yes ___ no

2. How knowledgeable are you regarding dual cassette recorders?

1 2 3 4 5
extremely very moderately slightly hardly

3. Have you taken part in an experiment similar to this before?

___ yes ___ no

If yes, how recently? _____

4. What do you think the investigators are interested in determining from this study?

5. Your age: _____

6. Your sex: _____

7. Class standing: _____

8. Your major: _____

SURVEY RESPONSE BOOKLET

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1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

1. I usually buy the lowest-priced brand available:

1 : 2 : 3 : 4 : 5 : 6 : 7

2. Advertisements for sales are usually misleading:

1 : 2 : 3 : 4 : 5 : 6 : 7

3. When shopping, I always compare prices before making my selection:

1 : 2 : 3 : 4 : 5 : 6 : 7

4. When shopping, I sometimes use coupons:

1 : 2 : 3 : 4 : 5 : 6 : 7

5. Brands within the same price range do not differ much in terms of quality:

1 : 2 : 3 : 4 : 5 : 6 : 7

6. Price is the most important factor to me when making purchase decisions:

1 : 2 : 3 : 4 : 5 : 6 : 7

7. When shopping, I sometimes take advantage of mail-in rebates:

1 : 2 : 3 : 4 : 5 : 6 : 7

8. I consider myself a real "bargain hunter":

1 : 2 : 3 : 4 : 5 : 6 : 7

9. Lower-priced items usually do not give good value for the money:

1 : 2 : 3 : 4 : 5 : 6 : 7

Please indicate the degree that you agree or disagree with each statement by circling the number corresponding to the scales below that best expresses your feelings.

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

10. There is too much effort involved in clipping-out coupons:

1 : 2 : 3 : 4 : 5 : 6 : 7

11. A person can save a lot of money shopping around for bargains:

1 : 2 : 3 : 4 : 5 : 6 : 7

12. I usually buy higher priced items to make sure that I get good quality in my purchases:

1 : 2 : 3 : 4 : 5 : 6 : 7

13. It is too much trouble to mail rebates back to the manufacturer:

1 : 2 : 3 : 4 : 5 : 6 : 7

14. A person can save a lot of money using coupons:

1 : 2 : 3 : 4 : 5 : 6 : 7

15. Product quality is hard to judge for most brands:

1 : 2 : 3 : 4 : 5 : 6 : 7

SECTION II

Instructions

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Product:

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Features:

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9. 2 Full Range Speakers with Tuned Radiators.
10. Operates on 6 "D" Cell Batteries (not included) or AC Line Cord.

Regular Price: \$144.95

15.00 off COUPON \$15.00 off

Important: Upon presentation of this coupon
you will receive \$15.00 off this price
of the dual cassette recorder.

\$15.00 off COUPON \$15.00 off

For the product and offer described on the previous page, please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

1. The likelihood that the dual cassette recorder will be reliable is:

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

2. At the regular price, the amount of money required to acquire this dual cassette recorder 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. This dual cassette recorder is a good value for the money:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

4. If I were interested in dual cassette recorders, the likelihood that I would purchase this dual cassette recorder 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. It would take very little extra effort to obtain the benefits of this offer:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

6. Given the offer, I feel that this dual cassette recorder is expensive:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

Please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

7. This dual cassette recorder appears to be of:

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

8. I would consider this dual cassette recorder to be a good buy:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

9. Given the offer, my willingness to buy this dual cassette recorder is:

1	2	3	4	5	6	7
very unwilling	moderately unwilling	slightly unwilling	neither willing nor unwilling	slightly willing	moderately willing	very willing

10. At the regular price, the monetary sacrifice that I would be making if I purchased this dual cassette recorder is:

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

11. The amount of effort necessary to qualify for the benefits of this offer is:

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

12. This dual cassette recorder would seem to be dependable:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

Please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

13. Overall, the offer for this dual cassette recorder appears to be a bargain:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

14. I would not consider buying this dual cassette recorder given the offer described:

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

17. Overall, the offer for this dual cassette recorder is a:

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18. At the regular price, I feel this dual cassette recorder is expensive:

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strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

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19. It probably would not be worth my time to do what is necessary to minimize my actual monetary expense when purchasing this dual cassette recorder:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

20. Given the offer, the monetary sacrifice that I would be making if I purchased this dual cassette recorder is:

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

21. People who purchase this product using this offer would save a lot of money:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

22. Overall, the offer for this dual cassette recorder is a:

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

SECTION III

To help us better understand your reactions, please answer the following few questions.

1. Do you presently own a dual cassette recorder?

___ yes ___ no

2. How knowledgeable are you regarding dual cassette recorders?

1 2 3 4 5
extremely very moderately slightly hardly

3. Have you taken part in an experiment similar to this before?

___ yes ___ no

If yes, how recently? _____

4. What do you think the investigators are interested in determining from this study?

5. Your age: _____

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7. Class standing: _____

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2. Advertisements for sales are usually misleading:

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4. When shopping, I sometimes use coupons:

1 : 2 : 3 : 4 : 5 : 6 : 7

5. Brands within the same price range do not differ much in terms of quality:

1 : 2 : 3 : 4 : 5 : 6 : 7

6. Price is the most important factor to me when making purchase decisions:

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1 : 2 : 3 : 4 : 5 : 6 : 7

8. I consider myself a real "bargain hunter":

1 : 2 : 3 : 4 : 5 : 6 : 7

9. Lower-priced items usually do not give good value for the money:

1 : 2 : 3 : 4 : 5 : 6 : 7

Please indicate the degree that you agree or disagree with each statement by circling the number corresponding to the scales below that best expresses your feelings.

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

10. There is too much effort involved in clipping-out coupons:

1 : 2 : 3 : 4 : 5 : 6 : 7

11. A person can save a lot of money shopping around for bargains:

1 : 2 : 3 : 4 : 5 : 6 : 7

12. I usually buy higher priced items to make sure that I get good quality in my purchases:

1 : 2 : 3 : 4 : 5 : 6 : 7

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1 : 2 : 3 : 4 : 5 : 6 : 7

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9. 2 Full Range Speakers with Tuned Radiators.
10. Operates on 6 "D" Cell Batteries (not included) or AC Line Cord.

Regular Price: \$144.95

\$15.00 off REBATE \$15.00 off
Important: This form must be completed and mailed to the address listed below along with product code and the cash register receipt with the price of the product circled to obtain this rebate.
Name _____
Address _____

\$15.00 off REBATE \$15.00 off

Mail to: Cassette Recorder Rebate
P.O. Box 123
Blacksburg, VA 24060

(Allow 6 to 8 weeks for refund.)

For the product and offer described on the previous page, please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

1. The likelihood that the dual cassette recorder will be reliable is:

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

2. At the regular price, the amount of money required to acquire this dual cassette recorder 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. This dual cassette recorder is a good value for the money:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

4. If I were interested in dual cassette recorders, the likelihood that I would purchase this dual cassette recorder 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. It would take very little extra effort to obtain the benefits of this offer:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

6. Given the offer, I feel that this dual cassette recorder is expensive:

1	2	3	4	5	6	7
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1	2	3	4	5	6	7
very unwilling	moderately unwilling	slightly unwilling	neither willing nor unwilling	slightly willing	moderately willing	very willing

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

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19. It probably would not be worth my time to do what is necessary to minimize my actual monetary expense when purchasing this dual cassette recorder:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

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2. How knowledgeable are you regarding dual cassette recorders?

1 2 3 4 5
extremely very moderately slightly hardly

3. Have you taken part in an experiment similar to this before?

___ yes ___ no

If yes, how recently? _____

4. What do you think the investigators are interested in determining from this study?

5. Your age: _____

6. Your sex: _____

7. Class standing: _____

8. Your major: _____

Appendix B

ACTUAL RESEARCH INSTRUMENT

SURVEY RESPONSE BOOKLET

In this booklet you will be asked to respond to a product offer for a dual cassette recorder. The offer situation is similar to offers you may have actually seen or responded to in the past. We are seeking your true reactions to the situation presented to you. Please respond in a natural manner--the way you believe you would actually react. Take your time in responding, and if at any time you have any questions, please raise your hand.

This questionnaire is divided into a number of sections. The first section asks about your shopping habits. The second section presents the dual cassette recorder and asks you to respond based on the information provided. A final section asks questions that will be used to classify your answers with those of various respondents.

Please do not write your name anywhere in this booklet. Every effort will be made to preserve your anonymity, so you may answer all questions accurately and honestly.

THANK YOU FOR YOUR TIME AND CO-OPERATION.

SECTION I

The following statements are concerned with the way you shop and the feelings you have about shopping. Please indicate the degree that you agree or disagree with each statement by circling the number corresponding to the scales below that best expresses your feelings.

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

1. I usually buy the lowest-priced brand available:

1 : 2 : 3 : 4 : 5 : 6 : 7

2. Advertisements for sales are usually misleading:

1 : 2 : 3 : 4 : 5 : 6 : 7

3. When shopping, I always compare prices before making my selection:

1 : 2 : 3 : 4 : 5 : 6 : 7

4. When shopping, I sometimes use coupons:

1 : 2 : 3 : 4 : 5 : 6 : 7

5. Brands within the same price range do not differ much in terms of quality:

1 : 2 : 3 : 4 : 5 : 6 : 7

6. Price is the most important factor to me when making purchase decisions:

1 : 2 : 3 : 4 : 5 : 6 : 7

7. When shopping, I sometimes take advantage of mail-in rebates:

1 : 2 : 3 : 4 : 5 : 6 : 7

8. I consider myself a real "bargain hunter":

1 : 2 : 3 : 4 : 5 : 6 : 7

9. Lower-priced items usually do not give good value for the money:

1 : 2 : 3 : 4 : 5 : 6 : 7

Please indicate the degree that you agree or disagree with each statement by circling the number corresponding to the scales below that best expresses your feelings.

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

10. There is too much effort involved in clipping-out coupons:

1 : 2 : 3 : 4 : 5 : 6 : 7

11. A person can save a lot of money shopping around for bargains:

1 : 2 : 3 : 4 : 5 : 6 : 7

12. I usually buy higher priced items to make sure that I get good quality in my purchases:

1 : 2 : 3 : 4 : 5 : 6 : 7

13. It is too much trouble to mail rebates back to the manufacturer:

1 : 2 : 3 : 4 : 5 : 6 : 7

14. A person can save a lot of money using coupons:

1 : 2 : 3 : 4 : 5 : 6 : 7

15. Product quality is hard to judge for most brands:

1 : 2 : 3 : 4 : 5 : 6 : 7

SECTION II

Instructions

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. PLEASE NOTE that the advertisement can be removed from the response booklet for ease of reference.

Product:

Portable Dual Cassette Recorder with AM/FM Stereo Radio: This dual cassette recorder (sometimes called a "boom box" or "box") has a convenient handle attached and is light weight so that it can be carried with you practically anywhere you go. This dual cassette recorder is 19 inches long by 9 inches high by 5 inches wide, has dual cassette ports that enable you to duplicate other cassette tapes, and has an AM/FM stereo radio with attached antenna that ensures high quality reception.

Features:

1. High Speed Tape Duplicating System: Record a 60 minute cassette in 30 minutes.
2. Stereo Play/Record Cassette Deck with Digital Counter & Soft Eject Door.
3. Stereo Playback Deck with Soft Eject Door.
4. Continuous Play Feature with LED Indicators.
5. LED High Speed, FM Stereo, Power On Indicators.
6. Mic Mixing System with Mic Input Jack.
7. Loudness Switch, Stereo Headphone, and Phono Input Jacks.
8. Separate Volume, Balance, Tone Rotary Controls.
9. 2 Full Range Speakers with Tuned Radiators.
10. Operates on 6 "D" Cell Batteries (not included) or AC Line Cord.

Regular Price: \$129.95

For the product and offer described on the previous page, please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

1. The likelihood that the dual cassette recorder will be reliable is:

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

2. At this price, the amount of money required to acquire this dual cassette recorder 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. This dual cassette recorder is a good value for the money:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

4. Given the offer described, the likelihood that I would purchase this dual cassette recorder 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. I feel that this dual cassette recorder is expensive:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

6. This dual cassette recorder appears to be of:

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

Please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

7. I would consider this dual cassette recorder to be a good buy:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

8. Given the offer described, my willingness to buy this dual cassette recorder is:

1	2	3	4	5	6	7
very unwilling	moderately unwilling	slightly unwilling	neither willing nor unwilling	slightly willing	moderately willing	very willing

9. The monetary sacrifice that I would be making if I purchased this dual cassette recorder is:

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

10. This dual cassette recorder would seem to be dependable:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

11. I would not consider buying this dual cassette recorder given the offer described:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

12. The likelihood that the dual cassette recorder will have a clear tone is:

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

Please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

13. The offer for this dual cassette recorder is a:

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

SECTION III

To help us better understand your reactions, please answer the following few questions.

1. Do you presently own a dual cassette recorder?

yes no

2. How knowledgeable are you regarding dual cassette recorders?

1 2 3 4 5
extremely very moderately slightly hardly

3. Have you taken part in an experiment similar to this before?

yes no

If yes, how recently? _____

4. What do you think the investigators are interested in determining from this study?

5. Your age: 17 or under 18 19 20 21 22 or over

6. Your sex: male female

7. Class standing: sophomore junior senior

8. Your major: _____

SURVEY RESPONSE BOOKLET

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1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

1. I usually buy the lowest-priced brand available:

1 : 2 : 3 : 4 : 5 : 6 : 7

2. Advertisements for sales are usually misleading:

1 : 2 : 3 : 4 : 5 : 6 : 7

3. When shopping, I always compare prices before making my selection:

1 : 2 : 3 : 4 : 5 : 6 : 7

4. When shopping, I sometimes use coupons:

1 : 2 : 3 : 4 : 5 : 6 : 7

5. Brands within the same price range do not differ much in terms of quality:

1 : 2 : 3 : 4 : 5 : 6 : 7

6. Price is the most important factor to me when making purchase decisions:

1 : 2 : 3 : 4 : 5 : 6 : 7

7. When shopping, I sometimes take advantage of mail-in rebates:

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9. Lower-priced items usually do not give good value for the money:

1 : 2 : 3 : 4 : 5 : 6 : 7

Please indicate the degree that you agree or disagree with each statement by circling the number corresponding to the scales below that best expresses your feelings.

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

10. There is too much effort involved in clipping-out coupons:

1 : 2 : 3 : 4 : 5 : 6 : 7

11. A person can save a lot of money shopping around for bargains:

1 : 2 : 3 : 4 : 5 : 6 : 7

12. I usually buy higher priced items to make sure that I get good quality in my purchases:

1 : 2 : 3 : 4 : 5 : 6 : 7

13. It is too much trouble to mail rebates back to the manufacturer:

1 : 2 : 3 : 4 : 5 : 6 : 7

14. A person can save a lot of money using coupons:

1 : 2 : 3 : 4 : 5 : 6 : 7

15. Product quality is hard to judge for most brands:

1 : 2 : 3 : 4 : 5 : 6 : 7

SECTION II

Instructions

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. PLEASE NOTE that the advertisement can be removed from the response booklet for ease of reference.

Product:

Portable Dual Cassette Recorder with AM/FM Stereo Radio: This dual cassette recorder (sometimes called a "boom box" or "box") has a convenient handle attached and is light weight so that it can be carried with you practically anywhere you go. This dual cassette recorder is 19 inches long by 9 inches high by 5 inches wide, has dual cassette ports that enable you to duplicate other cassette tapes, and has an AM/FM stereo radio with attached antenna that ensures high quality reception.

Features:

1. High Speed Tape Duplicating System: Record a 60 minute cassette in 30 minutes.
2. Stereo Play/Record Cassette Deck with Digital Counter & Soft Eject Door.
3. Stereo Playback Deck with Soft Eject Door.
4. Continuous Play Feature with LED Indicators.
5. LED High Speed, FM Stereo, Power On Indicators.
6. Mic Mixing System with Mic Input Jack.
7. Loudness Switch, Stereo Headphone, and Phono Input Jacks.
8. Separate Volume, Balance, Tone Rotary Controls.
9. 2 Full Range Speakers with Tuned Radiators.
10. Operates on 6 "D" Cell Batteries (not included) or AC Line Cord.

Regular Price: \$144.95

Sale Price: \$129.95

For the product and offer described on the previous page, please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

1. The likelihood that the dual cassette recorder will be reliable is:

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

2. At the *original, regular price*, the amount of money required to acquire this dual cassette recorder 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. Overall, this dual cassette recorder is a good value for the money:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

4. Given the offer described, the likelihood that I would purchase this dual cassette recorder 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. This dual cassette recorder appears to be of:

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

6. Overall, I would consider this dual cassette recorder to be a good buy:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

Please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

7. Given *this offer*, my willingness to buy this dual cassette recorder is:

1	2	3	4	5	6	7
very unwilling	moderately unwilling	slightly unwilling	neither willing nor unwilling	slightly willing	moderately willing	very willing

8. At the *original, regular price*, the monetary sacrifice that I would be making if I purchased this dual cassette recorder is:

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

9. This dual cassette recorder would seem to be dependable:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

10. Overall, the offer for this dual cassette recorder appears to be a bargain:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

11. I would not consider buying this dual cassette recorder *given the offer described*:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

Please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

12. The likelihood that the dual cassette recorder will have a clear tone is:

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

13. Overall, the offer for this dual cassette recorder is a:

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

14. At the *original, regular selling price*, I feel this dual cassette recorder is expensive:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

15. People who purchase this product *using this offer* would save a lot of money:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

16. Overall, the offer for this dual cassette recorder is a:

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

(Please continue to next page)

Please indicate a price for the following statement in the space provided.

17. If the product were acquired under the terms of *this offer*, actual amount of money paid would be _____.

Please answer the following questions based on the price you have indicated.

- a. I feel that this dual cassette recorder is expensive at this price:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

- b. This dual cassette recorder is a good value for this amount of money:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

- c. The amount of money required to acquire this dual cassette recorder 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

- d. I consider this dual cassette recorder to be a good buy at this price:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

- e. The monetary sacrifice that I would be making if I purchased this dual cassette recorder 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

- f. The offer for this dual cassette recorder at this price is a:

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

SECTION III

To help us better understand your reactions, please answer the following few questions.

1. Do you presently own a dual cassette recorder?

yes no

2. How knowledgeable are you regarding dual cassette recorders?

1 2 3 4 5
extremely very moderately slightly hardly

3. Have you taken part in an experiment similar to this before?

yes no

If yes, how recently? _____

4. What do you think the investigators are interested in determining from this study?

5. Your age: 17 or under 18 19 20 21 22 or over

6. Your sex: male female

7. Class standing: sophomore junior senior

8. Your major: _____

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- | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----------------------|------------------------|----------------------|----------------------------------|-------------------|---------------------|-------------------|
| strongly
disagree | moderately
disagree | slightly
disagree | neither
agree nor
disagree | slightly
agree | moderately
agree | strongly
agree |
- I usually buy the lowest-priced brand available:
1 : 2 : 3 : 4 : 5 : 6 : 7
 - Advertisements for sales are usually misleading:
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1 : 2 : 3 : 4 : 5 : 6 : 7
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1 : 2 : 3 : 4 : 5 : 6 : 7
 - Price is the most important factor to me when making purchase decisions:
1 : 2 : 3 : 4 : 5 : 6 : 7
 - When shopping, I sometimes take advantage of mail-in rebates:
1 : 2 : 3 : 4 : 5 : 6 : 7
 - I consider myself a real "bargain hunter":
1 : 2 : 3 : 4 : 5 : 6 : 7
 - Lower-priced items usually do not give good value for the money:
1 : 2 : 3 : 4 : 5 : 6 : 7

Please indicate the degree that you agree or disagree with each statement by circling the number corresponding to the scales below that best expresses your feelings.

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

10. There is too much effort involved in clipping-out coupons:

1 : 2 : 3 : 4 : 5 : 6 : 7

11. A person can save a lot of money shopping around for bargains:

1 : 2 : 3 : 4 : 5 : 6 : 7

12. I usually buy higher priced items to make sure that I get good quality in my purchases:

1 : 2 : 3 : 4 : 5 : 6 : 7

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3. Stereo Playback Deck with Soft Eject Door.
4. Continuous Play Feature with LED Indicators.
5. LED High Speed, FM Stereo, Power On Indicators.
6. Mic Mixing System with Mic Input Jack.
7. Loudness Switch, Stereo Headphone, and Phono Input Jacks.
8. Separate Volume, Balance, Tone Rotary Controls.
9. 2 Full Range Speakers with Tuned Radiators.
10. Operates on 6 "D" Cell Batteries (not included) or AC Line Cord.

Regular Price: \$144.95

\$15.00 off COUPON \$15.00 off

Important: Upon presentation of this coupon
you will receive \$15.00 off this price
of the dual cassette recorder.

\$15.00 off COUPON \$15.00 off

For the product and offer described on the previous page, please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

1. The likelihood that the dual cassette recorder will be reliable is:

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

2. At the *original, regular selling price*, the amount of money required to acquire this dual cassette recorder 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. Overall, this dual cassette recorder is a good value for the money:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

4. Given the offer described, the likelihood that I would purchase this dual cassette recorder 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. It would take very little extra effort to obtain the benefits of this offer:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

Please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

6. This dual cassette recorder appears to be of:

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

7. I would consider this dual cassette recorder to be a good buy:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

8. Given *this offer*, my willingness to buy this dual cassette recorder is:

1	2	3	4	5	6	7
very unwilling	moderately unwilling	slightly unwilling	neither willing nor unwilling	slightly willing	moderately willing	very willing

9. At the *original, regular selling price*, the monetary sacrifice that I would be making if I purchased this dual cassette recorder is:

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

10. The amount of effort necessary to qualify for the benefits of this offer is:

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

11. This dual cassette recorder would seem to be dependable:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

Please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

12. Overall, the offer for this dual cassette recorder appears to be a bargain:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

13. I would not consider buying this dual cassette recorder *given the offer described*:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

14. The likelihood that the dual cassette recorder will have a clear tone is:

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

15. Overall, the offer for this dual cassette recorder is a:

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

16. At the *original, regular selling price*, I feel this dual cassette recorder is expensive:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

17. It probably would not be worth my time to do what is necessary to minimize my actual monetary expense when purchasing this dual cassette recorder:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

Please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

18. People who purchase this product *using this offer* would save a lot of money:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

19. Overall, the offer for this dual cassette recorder is a:

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

Please indicate a price for the following statement in the space provided.

20. After *all terms of the offer* have been met the actual amount of money paid would be _____.

Please answer the following questions based on the price you have indicated.

- a. I feel that this dual cassette recorder is expensive at this price:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

- b. This dual cassette recorder is a good value for this amount of money:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

- c. The amount of money required to acquire this dual cassette recorder 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

- d. I consider this dual cassette recorder to be a good buy at this price:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

- e. The monetary sacrifice that I would be making if I purchased this dual cassette recorder 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

- f. The offer for this dual cassette recorder at this price is a:

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

SECTION III

To help us better understand your reactions, please answer the following few questions.

1. Do you presently own a dual cassette recorder?

yes no

2. How knowledgeable are you regarding dual cassette recorders?

1 2 3 4 5
extremely very moderately slightly hardly

3. Have you taken part in an experiment similar to this before?

yes no

If yes, how recently? _____

4. What do you think the investigators are interested in determining from this study?

5. Your age: 17 or under 18 19 20 21 22 or over

6. Your sex: male female

7. Class standing: sophomore junior senior

8. Your major: _____

SURVEY RESPONSE BOOKLET

In this booklet you will be asked to respond to a product offer for a dual cassette recorder. The offer situation is similar to offers you may have actually seen or responded to in the past. We are seeking your true reactions to the situation presented to you. Please respond in a natural manner--the way you believe you would actually react. Take your time in responding, and if at any time you have any questions, please raise your hand.

This questionnaire is divided into a number of sections. The first section asks about your shopping habits. The second section presents the dual cassette recorder and asks you to respond based on the information provided. A final section asks questions that will be used to classify your answers with those of various respondents.

Please do not write your name anywhere in this booklet. Every effort will be made to preserve your anonymity, so you may answer all questions accurately and honestly.

THANK YOU FOR YOUR TIME AND CO-OPERATION.

SECTION I

The following statements are concerned with the way you shop and the feelings you have about shopping. Please indicate the degree that you agree or disagree with each statement by circling the number corresponding to the scales below that best expresses your feelings.

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

1. I usually buy the lowest-priced brand available:

1 : 2 : 3 : 4 : 5 : 6 : 7

2. Advertisements for sales are usually misleading:

1 : 2 : 3 : 4 : 5 : 6 : 7

3. When shopping, I always compare prices before making my selection:

1 : 2 : 3 : 4 : 5 : 6 : 7

4. When shopping, I sometimes use coupons:

1 : 2 : 3 : 4 : 5 : 6 : 7

5. Brands within the same price range do not differ much in terms of quality:

1 : 2 : 3 : 4 : 5 : 6 : 7

6. Price is the most important factor to me when making purchase decisions:

1 : 2 : 3 : 4 : 5 : 6 : 7

7. When shopping, I sometimes take advantage of mail-in rebates:

1 : 2 : 3 : 4 : 5 : 6 : 7

8. I consider myself a real "bargain hunter":

1 : 2 : 3 : 4 : 5 : 6 : 7

9. Lower-priced items usually do not give good value for the money:

1 : 2 : 3 : 4 : 5 : 6 : 7

Please indicate the degree that you agree or disagree with each statement by circling the number corresponding to the scales below that best expresses your feelings.

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

10. There is too much effort involved in clipping-out coupons:

1 : 2 : 3 : 4 : 5 : 6 : 7

11. A person can save a lot of money shopping around for bargains:

1 : 2 : 3 : 4 : 5 : 6 : 7

12. I usually buy higher priced items to make sure that I get good quality in my purchases:

1 : 2 : 3 : 4 : 5 : 6 : 7

13. It is too much trouble to mail rebates back to the manufacturer:

1 : 2 : 3 : 4 : 5 : 6 : 7

14. A person can save a lot of money using coupons:

1 : 2 : 3 : 4 : 5 : 6 : 7

15. Product quality is hard to judge for most brands:

1 : 2 : 3 : 4 : 5 : 6 : 7

SECTION II

Instructions

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. PLEASE NOTE that the advertisement can be removed from the response booklet for ease of reference.

Product:

Portable Dual Cassette Recorder with AM/FM Stereo Radio: This dual cassette recorder (sometimes called a "boom box" or "box") has a convenient handle attached and is light weight so that it can be carried with you practically anywhere you go. This dual cassette recorder is 19 inches long by 9 inches high by 5 inches wide, has dual cassette ports that enable you to duplicate other cassette tapes, and has an AM/FM stereo radio with attached antenna that ensures high quality reception.

Features:

1. High Speed Tape Duplicating System: Record a 60 minute cassette in 30 minutes.
2. Stereo Play/Record Cassette Deck with Digital Counter & Soft Eject Door.
3. Stereo Playback Deck with Soft Eject Door.
4. Continuous Play Feature with LED Indicators.
5. LED High Speed, FM Stereo, Power On Indicators.
6. Mic Mixing System with Mic Input Jack.
7. Loudness Switch, Stereo Headphone, and Phono Input Jacks.
8. Separate Volume, Balance, Tone Rotary Controls.
9. 2 Full Range Speakers with Tuned Radiators.
10. Operates on 6 "D" Cell Batteries (not included) or AC Line Cord.

Regular Price: \$144.95

<p>\$15.00 off REBATE \$15.00 off</p> <p>Important: This form must be completed and mailed to the address listed below along with product code and the cash register receipt with the price of the product circled to obtain this rebate.</p> <p>Name _____</p> <p>Address _____</p> <p>_____</p> <p>\$15.00 off REBATE \$15.00 off</p>

Mail to:

Cassette Recorder Rebate
P.O. Box 123
Blacksburg, VA 24060

(Allow 6 to 8 weeks for refund.)

For the product and offer described on the previous page, please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

1. The likelihood that the dual cassette recorder will be reliable is:

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

2. At the *original, regular selling price*, the amount of money required to acquire this dual cassette recorder 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. Overall, this dual cassette recorder is a good value for the money:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

4. Given the offer described, the likelihood that I would purchase this dual cassette recorder 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. It would take very little extra effort to obtain the benefits of this offer:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

Please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

6. This dual cassette recorder appears to be of:

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

7. Overall, I would consider this dual cassette recorder to be a good buy:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

8. Given *this offer*, my willingness to buy this dual cassette recorder is:

1	2	3	4	5	6	7
very unwilling	moderately unwilling	slightly unwilling	neither willing nor unwilling	slightly willing	moderately willing	very willing

9. At the *original, regular selling price*, the monetary sacrifice that I would be making if I purchased this dual cassette recorder is:

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

10. The amount of effort necessary to qualify for the benefits of this offer is:

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

11. This dual cassette recorder would seem to be dependable:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

Please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

12. Overall, the offer for this dual cassette recorder appears to be a bargain:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

13. I would not consider buying this dual cassette recorder *given the offer described*:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

14. The likelihood that the dual cassette recorder will have a clear tone is:

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

15. Overall, the offer for this dual cassette recorder is a:

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

16. At the *original, regular selling price*, I feel this dual cassette recorder is expensive:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

17. It probably would not be worth my time to do what is necessary to minimize my actual monetary expense when purchasing this dual cassette recorder:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

Please respond to each of the following statements by circling the number that best expresses your feelings about that statement relative to the product and offer.

18. People who purchase this product *using this offer* would save a lot of money:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

19. Overall, the offer for this dual cassette recorder is a:

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

Please indicate a price for the following statement in the space provided.

20. After *all terms of the offer* have been met the actual amount of money paid would be _____.

Please answer the following questions based on the price you have indicated.

a. I feel that this dual cassette recorder is expensive at this price:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

b. This dual cassette recorder is a good value for this amount of money:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

c. The amount of money required to acquire this dual cassette recorder 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

d. I consider this dual cassette recorder to be a good buy at this price:

1	2	3	4	5	6	7
strongly disagree	moderately disagree	slightly disagree	neither agree nor disagree	slightly agree	moderately agree	strongly agree

e. The monetary sacrifice that I would be making if I purchased this dual cassette recorder 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

f. The offer for this dual cassette recorder at this price is a:

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

SECTION III

To help us better understand your reactions, please answer the following few questions.

1. Do you presently own a dual cassette recorder?

yes no

2. How knowledgeable are you regarding dual cassette recorders?

1 2 3 4 5
extremely very moderately slightly hardly

3. Have you taken part in an experiment similar to this before?

yes no

If yes, how recently? _____

4. What do you think the investigators are interested in determining from this study?

5. Your age: 17 or under 18 19 20 21 22 or over

6. Your sex: male female

7. Class standing: sophomore junior senior

8. Your major: _____

Appendix C

PRODUCT PRE-TEST

Please read carefully the following product description and answer the questions below. Do not put your name or any type of personal identification number on this page.

Product: Portable Dual Cassette Recorder with AM/FM Stereo Radio

Features:

1. High Speed Tape Duplicating System: Record a 60 minute cassette in 30 minutes.
2. Stereo Play/Record Cassette Deck with Digital Counter & Soft Eject Door.
3. Stereo Playback Deck with Soft Eject Door.
4. Continuous Play Feature with LED Indicators.
5. LED High Speed, FM Stereo, Power On Indicators.
6. Mic Mixing System with Mic Input Jack.
7. Loudness Switch, Stereo Headphone, and Phono Input Jacks.
8. Separate Volume, Balance, Tone Rotary Controls.
9. 2 Full Range Speakers with Tuned Radiators.
10. Operates on 6 "D" Cell Batteries (not included) or AC Line Cord.

Questions:

1. How knowledgeable are you of dual cassette recorders?

Extremely
Knowledgeable

Not Knowledgeable
at all

1

2

3

4

5

2. If you had the extra money, how willing would you be to purchase a dual cassette recorder?

Very
Willing

Not Willing
at all

1

2

3

4

5

3. Do you currently own or have you previously owned a dual cassette recorder?

Yes

No

4. Please indicate the price you feel would be too high to pay for the product described above.

Price \$ _____

5. Please indicate a price, if any, that you feel would be too low to pay for the product described above. (A price where you may begin to suspect the product's quality).

Price \$ _____

6. What price do you feel would be a normal or reasonable price for the product described above?

Price \$ _____

Please read carefully the following product description and answer the questions below. Do not put your name or any type of personal identification number on this page.

Product: Trimline Touch Tone Desk Telephone

Features:

1. Dial, dial pad, and hang-up button fit conveniently into handset so you can redial without returning handset to base.
2. LED lighted dial designed for safety and security. The illuminated dial allows you to make calls in the dark during an emergency. The illumination power comes from the telephone line at no extra charge.
3. 6 ft. coiled handset cord.
4. 7 ft. wall-to-set cord.
5. 8 1/2 long x 2 3/4 wide x 3 3/4 in. high.
6. Available in white, teal blue, brown, and ivory.
7. One button last minute redial. Allows you to redial the last number dialed by depressing the # button.

Questions:

1. How knowledgeable are you of trimline touch tone desk telephones?

Extremely
Knowledgeable

Not Knowledgeable
at all

1

2

3

4

5

2. If you had the extra money, how willing would you be to purchase a trimline desk telephone?

Very
Willing

Not Willing
at all

1

2

3

4

5

3. Do you currently own or have you previously owned a trimline touch tone desk telephone?

Yes

No

4. Please indicate the price you feel would be too high to pay for the product described above.

Price \$ _____

5. Please indicate a price, if any, that you feel would be too low to pay for the product described above. (A price where you may begin to suspect the product's quality).

Price \$ _____

6. What price do you feel would be a normal or reasonable price for the product described above?

Price \$ _____

Please read carefully the following product description and answer the questions below. Do not put your name or any type of personal identification number on this page.

Product: Stationary Exercise Bike

Features:

1. Large contoured adjustable saddle seat.
2. Full chain guard.
3. Adjustable handlebars.
4. 20-inch weighted rubber wheel.
5. Caliper-type tension control for accurate tension adjustment.
6. Speedometer/odometer instrument panel.
7. Heavy-duty steel frame.
8. Measures 44 x 24 x 44 inches high.

Questions:

1. How knowledgeable are you of stationary exercise bikes?

Extremely
Knowledgeable

Not Knowledgeable
at all

1

2

3

4

5

2. If you had the extra money, how willing would you be to purchase a stationary exercise bike?

Very
Willing

Not Willing
at all

1

2

3

4

5

3. Do you currently own or have you previously owned a stationary exercise bike?

Yes

No

4. Please indicate the price you feel would be too high to pay for the product described above.

Price \$ _____

5. Please indicate a price, if any, that you feel would be too low to pay for the product described above. (A price where you may begin to suspect the product's quality).

Price \$ _____

6. What price do you feel would be a normal or reasonable price for the product described above?

Price \$ _____

Please read carefully the following product description and answer the questions below. Do not put your name or any type of personal identification number on this page.

Product: AM/FM Stereo Alarm Clock Radio

Features:

1. Wake to music or alarm.
2. Electronic clock display for dual alarm/time/sleep/calender.
3. FM stereo indicator.
4. Automatic dimmer.
5. Pushbutton controls for calender, time set, hour/minute set, alarms, sleep, alarm/off, and snooze.
6. Slide switches for on/off and alarm radio/alarm buzzer.
7. Rotary controls for tone, balance, volume, and tuning.
8. AM/FM - FM stereo selection.
9. 110-120V AC with battery back-up system.
10. Woodgrain plastic cabinet.
11. 12 1/2 w. x 6 1/8 d. x 3 3/4 in. high.

Questions:

1. How knowledgeable are you of AM/FM stereo alarm clock radios?

Extremely
Knowledgeable

Not Knowledgeable
at all

1

2

3

4

5

2. If you had the extra money, how willing would you be to purchase an AM/FM stereo alarm clock radio?

Very
Willing

Not Willing
at all

1

2

3

4

5

3. Do you currently own or have you previously owned an AM/FM stereo alarm clock radio?

Yes

No

4. Please indicate the price you feel would be too high to pay for the product described above.

Price \$ _____

5. Please indicate a price, if any, that you feel would be too low to pay for the product described above. (A price where you may begin to suspect the product's quality).

Price \$ _____

6. What price do you feel would be a normal or reasonable price for the product described above?

Price \$ _____

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