The Effect of Current and Perceived Economic Conditions on Consumer Apparel Purchase Expenditures

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(Abstract)

Consumer spending accounts for over sixty-five percent of the Gross Domestic Product in the United States, greatly affecting the economy, as well as the retail sector. The consumer, rather than business or government, has become the dominant factor in shaping the course of the aggregate U.S. economy (Curtin, 1982). The purpose of this study is to examine whether the economy, as perceived by consumers, has any effect on the apparel purchase expenditures of consumers, and if so, how personal factors such as gender, age, income, educational attainment, race, and marital status contribute to their perceptions and decisions. A research model was created using consumers’ current economic perceptions, future economic perceptions, and importance of fashion as predictors of apparel expenditures. Demographic variables were included to see if demographics had any significant influence on current and future perceptions, importance of fashion, and/or apparel expenditures. Data for this study was obtained by administering a paper and internet survey to 166 consumers in the stratified market of Roanoke, VA. One-way ANOVA analysis findings indicate that age had an influence on consumers’ future economic expenditures. Age and education had an influence on consumers’ importance of fashion, while marital status had an influence on apparel expenditures. Regression analysis indicated that consumers’ perceptions of current and future economic conditions and importance of fashion were significant predictors of consumers’ apparel expenditures. Recommendations include collecting real expenditure amounts, comparing perceived economic conditions data to real economic indicators, and comparing Consumer Expenditure Survey data with real economic indicators.
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Problem Statement

Consumer spending accounts for over sixty-five percent of the Gross Domestic Product in the United States, greatly affecting the economy, as well as the retail sector. The consumer, rather than business or government, has become the dominant factor in shaping the course of the aggregate U.S. economy (Curtin, 1982). Both the business and government sectors are shaping themselves to meet the ever-changing needs of consumers (Lindquist & Sirgy, 2003). The question is “how do consumers' perceptions of the economy affect spending in the apparel retail sector?”

Economists and business leaders use different information sets than outside observers, such as everyday consumers, when studying the economy. Business leaders, forecasters, and supply managers try to find ways to anticipate consumer buying behavior by using economic indicators. This information is used to predict the demand and supply needed in items such as apparel. If the economy is not doing well and economic forecasters are predicting a recession, a business forecaster might decide to reduce the supply of apparel offered next season.

Consumers might not be anticipating this recession or inflation and might be well prepared to buy more than is offered, causing the retailer to lose revenue by not having a sufficient offering at the time. On the other hand, retailers might be expecting a great season, offering an increased supply only to find out
consumers are perceiving the economy as “bad,” and thus decrease their willingness or confidence to spend.

The media plays a big role in how consumers perceive the varying economic conditions. Most consumers make decisions based upon what they hear, are not trained in the field of economic forecasting, and make no real attempt to project future economic trends. Some consumers may not attempt to use economic information to decide how and what they are going to purchase in the future.

**Purpose**

The purpose of this study is to examine whether the economy, as perceived by consumers, has any effect on the apparel purchase expenditures of consumers, and if so how personal factors such as gender, age, income, educational attainment, race, marital status, and number of children contribute to their perceptions and decisions.

**Need for the Study**

Although researchers have investigated how consumers’ attitudes towards the economy affect their purchases of durables, such as housing and automobiles, few studies have been done to see how consumers’ attitudes affect the purchase of non-durables, such as food or apparel (Bell, 2002). However, annual expenditures on non-durables are more than double the expenditures on durables. (Guo, 1991)
Based on the data in the Consumer Expenditure Survey (U.S. Department of Labor [U.S. DOL], 2001), apparel is one of the top 10 major purchase categories made by consumers in the United States. Expenditures on apparel accounted for 4.4% of consumers’ overall spending in 2001, falling from 4.7% in 1999, and 5.7% in 1989. The average consumer unit spent $1,743 on apparel purchases in 2001 alone. This is similar to the $2,182 spent on health care and $1,953 spent on entertainment in that same year. (U.S. DOL, 2001).

**Definitions**

This section deals with the definitions of terms and variables used in this study.

*Apparel* - clothing, shoes, and accessories worn by consumers.

*Consumer behavior* - the study of individuals, groups, or organizations and the processes they use to select, secure, use, and dispose of products, services, experiences, or ideas to satisfy needs and the impacts that these processes have on the consumer and society (Consumer Psychologist, n.d.).

*Consumers’ perceptions* - consumers’ awareness or consciousness of objects, facts, conditions, or truths as a result of the perceptual process or the information processing which happened after the consumers obtained the stimuli. (Kim, 1998)

*Consumers’ perceptions of economic conditions* - consumer expectations of the economic conditions during the coming 12 months.
**Consumer Unit** - all members of a particular household who are related by blood, marriage, adoption, or other legal arrangements; a person living alone or sharing a household with others or living as a roomer in a private home or lodging house or in permanent living quarters in a hotel or motel, but who is financially independent; or two or more persons living together who use their incomes to make joint expenditure decisions. (U.S. DOL, 2001)

**Economy** - an organization for the production and distribution of goods and services. It comprises the institutions, laws, infrastructure, production of goods and services, management of resources, and conditions under which exchange takes place.

**Expenditures** - the transaction costs, including excise and sales taxes, of goods and services acquired during a certain period of time. (U.S. DOL, 2001).

**Leading Economic Indicator** - (LEI) a composite index of ten economic indicators designed to predict economic activity six to nine months in the future (The Conference Board, n.d). These indicators include:

1. The average manufacturing-worker workweek (from the Employment Report)
2. Initial jobless claims
3. Manufacturers' new orders for consumer goods and materials (from the Factory Orders Report)
4. Vendor performance (from the Purchasing Managers' Index report)
5. Manufacturers' new orders for non-defense capital goods (from the Factory Orders Report)

6. Building permits (from the Housing Starts report)

7. The level of the Standard & Poor's 500

8. The inflation-adjusted measure of the M2 Money Supply

9. The interest-rate spread between the 10-year Treasury note and the Fed's Funds Rate

10. The expectations portion of the University of Michigan's Consumer Sentiment Index

Nondurable: a product with an average life of less than three years. Apparel is classified as a nondurable by the U.S. Department of Commerce (1992). Apparel was classified as a nondurable for the purpose of this study.
Research Objectives

Given the issue of whether the economy has any effect on buying behavior of consumers, this study was designed to investigate how consumers perceive the economy, and if that perception affects their expenditures on the non-durable category of apparel. This study was designed to address these basic problems:

1. Are consumer apparel expenditures affected by consumers’ perceived outlook of economic conditions?
2. How do personal factors such as gender, age, family size, income, educational attainment, race, and employment status affect consumers’ apparel expenditures based on their perceived outlook of economic conditions?
3. Can businesses use economic key factors to predict consumer behavior in the apparel industry?

If it is found that consumers do vary their consumer expenditures based on the economic conditions they perceive, then businesses and other industry leaders will be able to use this information to make more accurate predictions in the apparel industry.

Hypotheses

Based on the purpose of the study, and questions raised, hypotheses were generated. They are stated in the null form for ease of statistical analysis.

Hypothesis 1: There is no significant influence of the demographic variables (a) gender, (b) age, (c) marital status, (d) race, (e) income, (f)
education, or (g) number of children, on consumers’ perceived outlook of current economic conditions.

Hypothesis 2: There is no significant influence of demographic variables (a) gender, (b) age, (c) marital status, (d) race, (e) income, (f) education, or (g) number of children, on consumers’ perceived outlook of future economic conditions.

Hypothesis 3: There is no significant influence of demographic variables (a) gender, (b) age, (c) marital status, (d) race, (e) income, (f) education, or (g) number of children, on consumers’ importance of fashion.

Hypothesis 4: There is no significant influence of demographic variables (a) gender, (b) age, (c) marital status, (d) race, (e) income, (f) education, or (g) number of children, on consumers’ apparel expenditures.

Hypothesis 5: Consumers’ apparel buying expenditures are not affected by their perceived outlook of current economic conditions.

Hypothesis 6: Consumers’ apparel buying expenditures are not affected by their perceived outlook of future economic conditions.

Hypothesis 7: Consumers’ apparel buying expenditures are not affected by their importance of fashion.
**Limitations and Delimitations**

Limitations to the study included that the study focused on consumers’ perceptions of the economy, and their spending and not real economic data. Perceptions are more subjective.

The relatively small sample size required the collapse of some demographic categories.

The sample contains a larger representation of younger consumers (from age 18-34), and a small representation in the 65 and over category, as compared to the national average.

The salon and vendor fair used for data collection had a relatively large number of female clients and few male clients.

The expenditure data may have been more accurate if it had been reported in real dollar expenditures by collecting it with diaries of actual expenses.

The study was delimited to include only consumers in Roanoke, VA. However, Roanoke, VA was identified as a stratified consumer market (Lindquist & Sirgy, 2003), since the population breakdown is almost equal to the national averages.

The study of expenditures is product specific, so findings could only be generalized to apparel expenditures.
Research Model

A conceptual model was used in this research study to structure the research design. The model is based on the premise and constructs of how current perception of the economy, future perception of the economy, and fashion importance affect overall apparel expenditures (Figure 1). This model was designed to answer the hypotheses of the study, with the goal of assessing if and how each of the constructs contributes to consumers’ apparel expenditures.

In the model, the constructs and independent variables are current perception of the economy, future perception of the economy, and fashion importance, and these constructs are all linked to the dependent variable of consumers’ expenditures for apparel.
Figure 1. Apparel Expenditures Model
For hypotheses 1-4, the model shows consumers’ demographic variables’ influence on their current or future perceived economic conditions, importance of fashion, or apparel expenditures. The survey measures included several demographic questions, including gender, age, income, education, race, and marital status.

For hypothesis 5 the model shows current perception of the economy as a predictor of apparel expenditures. The hypothesis developed for current perception of the economy is, (H5) consumers’ apparel buying expenditures are not affected by their perceived outlook of current economic conditions. The survey measures were developed to effectively measure consumers’ perceptions of the economy by gauging their perceptions of market conditions, personal finance, and business condition (Hartoyo, 1991). The survey measures for this hypothesis are:

1. Generally speaking do you think now is a good time or bad time for people to buy major household items such as furniture, major appliances, and televisions?
2. Are you better off, the same, or worse off financially as you were a year ago?
3. Now looking at business conditions in the country as a whole, do you think that now we are having good times financially or bad times financially?
4. Do you think that now the country as a whole will have continuous good times or bad times (periods of widespread unemployment and depression)?
The survey measure for the dependent variable of consumer’s current apparel expenditures is:

1. In general do you spend more, about the same, or less money on apparel as compared to a year ago?

For hypothesis 6, the model shows future perception of the economy as a predictor of apparel expenditures. The hypothesis developed for future perception of the economy is, (H6) consumers’ apparel buying expenditures are not affected by their perceived outlook of future economic conditions. The survey measures for this hypothesis are:

1. In about a year from now do you think that it will be a good time or bad time for people to buy major household items such as furniture, major appliances, and televisions?

2. Now looking ahead, do you think in one year from now you and your household will be better off, worse off, or just about the same as now financially?

3. How do you think business conditions will be in a year from now, do you think that now we will be having good times financially or bad times financially?

4. Looking ahead, Do you think that the country as a whole during the next 12 months will have continuous good times or bad times (periods of widespread unemployment or depression)?

The survey measure for the dependent variable of consumer’s future apparel expenditures is:
1. Now looking ahead, do you plan to spend more, the same, or less on apparel in the next year than you do now?

For hypothesis 7 the model shows importance of fashion as a predictor of apparel expenditures. The hypothesis developed for fashion importance is, (H7) consumers’ apparel buying expenditures are not affected by their importance of fashion. The survey measures for this hypothesis are:

1. I spend a lot of money on clothes and accessories.
2. It's important to be well dressed.
3. I'd spend my money on clothes sometimes before I'd spend it on other things I really need.
4. It is important for me to be a fashion leader.
5. I want to be one of the first to try new fashion trends.
6. I am not as concerned about fashion as I am about modest prices and wearability.

The survey measure for the dependent variable of consumer’s importance of fashion apparel expenditures is:

Do you spend more money on apparel than the average consumer?

Organization of Thesis

This chapter provides an overview the problem statements and purpose of this study. Definitions of terms used in the study were presented, and research objectives and hypotheses were outlined. Finally, a theoretical framework and research model were presented.
The organization of the remaining chapters are as follows: Chapter II, "Review of Literature and Theory"; Chapter III, "Methodology; Chapter IV, "Results and Discussion"; Chapter V, “Summary, Conclusions, and Recommendations.”
Chapter II
Review of Literature and Theory

The purpose of this chapter is to review literature related to expenditures on apparel, consumers' perceptions of economic conditions, and importance of fashion. Concepts central to consumer decision making are discussed. The ongoing debate of the classification of apparel as a necessity vs. luxury good, and nondurable vs. durable, and how these categories affect expenditures is summarized. Literature revealing the relationship between demographic variables and expenditures is discussed, along with relationships between perceptions and expenditures. The theoretical framework is also presented and related to the research model of this study.

Previous Studies on Clothing Expenditures

Clothing expenditures are a significant expense, as well as a basic need for U.S. households. This is why apparel has been a major area of study since the early 1950s. The majority of the studies are cross-sectional and time-series analyses. A cross section is a sample of a number of observational units all drawn at the same point in time, for example, a year. A time-series is a set of observations drawn on the same observational unit at a number of points in time, for example, multiple years (Kim, 1998). The economic factors that influence clothing expenditures include: household income, apparel price, and total household expenditures. Demographic variables such as gender, age, race,
education, and family size have been shown to be important in past studies (Kim, 1998). Intra-household allocation, or allocation of expenditures comparing expenditures on adults to children or women to men, has also been investigated (U.S. DOL, 2001).

The effect of price on expenditures is usually studied in time-series studies so that prices over different years can be compared to see if there was any significant influence on expenditures. Demographic and income studies tend to be cross-sectional so that these demographic and income variables can be assumed to be fixed over that particular period of time.

**Price and Income Elasticities for Clothing**

Several time-series studies have estimated the income and price elasticities of demand for clothing. The income elasticity of demand measures the responsiveness of quantity demanded to a change in income, with all other factors held constant; the price elasticity of demand measures the responsiveness of quantity demanded to a change in price, with all other factors held constant. If elasticity of demand is greater than one, the good is price elastic, meaning demand is relatively responsive to the change in income or price. If elasticity of demand is less than one, the good is price inelastic, meaning demand is relatively unresponsive to the change in income or price. If elasticity of demand is equal to one, the good has unit elasticity and demand changes in exact proportion to income or price. Most studies show that clothing is income elastic meaning income has a significant affect on the demand for
clothing. Income is usually the most predictive demographic variable, but income alone is less effective than socioeconomic models or models that combine socioeconomic and demographic variable. In time series analysis, the price variable of clothing is not often significant, due to price income correlations over time (Norton & Park, 1986).

Some consumers consider clothing to be a necessity good, meaning current or perceived economic conditions may have little or no effect on apparel expenditures. A study by Norum (1990) yielded an income elasticity of 0.974, close to one, for clothing expenditures. Other time series studies have also yielded income elasticities close to one for apparel (Blanciforti, Green, & King 1986; Deaton, 1974; Deaton & Muellbauer, 1980; Hamburg, 1958, 1960; Jackson and Al-Douri, 1977. Norton and Park (1986) think this may partially be attributed to the declining share of clothing in household expenditures over time. On the other side, a study completed by Fan, Lee, & Hanna (1996), utilizing the Almost Ideal Demand System (AIDS) model, estimated income elasticity for apparel to be 1.46, very elastic, suggesting that clothing is a luxury good. Lee and Phillips (1970) and Houthakker (1957) obtained similar values and classified clothing as a moderate luxury.

**Necessity vs. Luxury Good**

The proportion of household spending used to purchase necessities is of interest to policymakers and social researchers as an elementary indicator of economic well-being. As stated above, it is questionable as to whether apparel is
considered by all as a necessity or luxury good. According to the Consumer Expenditure Survey (U.S. Department of Labor, 2001), the categories of food, housing, and apparel are designated as necessity goods.

Winakor’s (1969) consumption process model recognizes that household clothing demand is greatly affected by the stock of clothing currently held within the household, as well as prices and household income. If the stock of clothing is low for a household, clothing may be more of a necessity to that household versus a household with a high stock of clothing which may consider purchasing more a luxury.

The social nature of clothing may also contribute to the consumption and expenditure differences in individuals. It can also contribute to stock effects, explaining why clothing may appear to be a luxury good.

As far as how strong of a factor household income plays, the shares of average annual expenditures allocated to apparel are barely discernible from one another. The range of apparel shares in the different income quintiles is less than 1 percentage point, from 4.7 percent spent by those in the lowest income quintile to 5.3 percent spent by those in the highest income quintile (Winakor, 1969).

**Nondurables vs. Durables**

Apparel is classified as a nondurable by the U.S. Department of Commerce (1992), due to the belief that apparel items have average lives of less than three years. Norton and Park (1986) note that Winakor’s (1969) proposition
that consumption is more comprehensive than expenditures or the final usage of apparel, assumes that apparel is a semi-durable or durable good. The consumption process of apparel begins with the acquiring of the goods, which are stored as inventory, worn, and subjected to maintenance and care, and ends with the releasing or discarding of the goods (Norton & Park, 1986).

A dynamic state adjustment model was developed by Houthakker and Taylor (1970) to examine effects of physical inventory and psychological stocks on consumption. Several categories of goods were examined using Department of Commerce data from 1929-1966. The study considered clothing as a durable good with an inventory effect. While women’s clothing was subject to habit, men’s clothing was more subject to inventory.

Bryant and Wang (1990) conducted a time-series analysis of the U.S. demand for various durable goods, nondurable goods, and services. They modeled clothing as a durable good and developed a stock adjustment model for durable goods in which per household constant dollar expenditures on durables were expressed as a function of real nonwage income per household, male and female rate wages, own prices, and the percent of the population between 20-34 years of age. The annual adjustment rates for clothing and shoes were higher than those of other durable goods in this study, meaning they were less durable than other durable goods. They attributed the variance in high stock adjustment rates to the fact that clothing and shoes have the attributes of more fashion-driven goods.
Clothing Consumption

Winakor (1969) suggested that there are two different ways the word “consumption” is used in research. The first definition of consumption is synonymous with money expenditures and simply tells how much money was spent on a particular item by a consumer and does not encompass the value of use. The second definition is the full “process of acquiring, storing, using, maintaining, and the discarding of the clothing.”

Lindquist and Sirgy (2003) define consumption as simply “the possession and/or use of goods and services and the benefits they deliver.” How the product is going to be used affects the consumer’s purchase evaluation and the expenditures made on that purchase. They also note that consumption and lifestyle go together and are inseparable because as our lifestyle changes, our consumption styles change. Understanding consumers’ lifestyles, as well as basic economic principles, can help us better understand purchase decisions and purchase behavior. They add, consumption is also influenced by other factors such as culture, personal values, relationships, motivation, beliefs, attitudes, communication, persuasion, social class, and reference group and family influences.

Consumer Decision Making

Classical, static microeconomic theory sets the stage for much of the research on demand, expenditures, and budgets (Norton & Park (1986)).
Demand functions, Engel functions, and price and income elasticities provide a basis for much of the research conducted.

Consumer behavior models seek to explain consumer decisions outside of the norms or what is expected. Graham and Issac (2000) compared the neoclassical theory of consumer behavior and the behavioral life-cycle model. The neoclassical theory works off the core assumptions of the maximization of utility, which are also the basis of core economic rationality (Kim, 1998). Utility maximization is usually characterized by budget constraints and the availability of information, such as economic forecasts, and assumes that consumers rationalize all of their choices when making decisions so that they are able to fully maximize their utility. It is believed that the rational consumer will always choose the most preferred bundle of goods from a feasible set of consumption bundles allowed by his budget (Kim, 1998). Graham and Issac (2000) have found that the consumer behavior of even the most educated consumers deviates highly from this neoclassical theory, by purchasing bundles outside of their optimal set.

The behavioral life-cycle model emphasizes self-control, mental accounting, and framing (Graham and Issac, 2000). It hypothesizes that consumers are “impatient” and have a weakness of will, which allows them to make buying decisions that are not maximizing their utility and not achieving their first-best consumption plans.
**Importance of Fashion**

Apparel, for some, has a fashion element which can lead to a need for personal and social acceptance of what is being worn outside of the basic biological need for clothing. Clothing has been considered to be a social good in many studies (Horn & Gurel, 1981; Ryan, 1966). Most clothing studies dealing with demand and expenditures on apparel ignore the importance of fashion to individuals and the social nature of clothing (Norton & Park, 1986). This social nature may contribute to the consumption and expenditure differences in individuals, and can also contribute to stock effects, explaining why clothing may appear to be a luxury good. Those who place a high importance on fashion may think it is more imperative to keep a high and current stock of fashion and they do not think of this good just as a necessity.

A strong and significant relationship between fashion involvement and clothing buying behavior was found by Tigert, Ring, and King (1976) and (Howard & Sheth, 1969). The high fashion-involved consumer represents a very large portion of the population (Kang, 1995). Shiffman & Kanuk (1983), as well as Traylor (1981), suggested that high fashion-involved consumers consider apparel purchases important to them.

**Individual Consumption**

“The definition of consumption punctuates that garments are personal goods, serving myriad functions for each wearer” (Norton & Park, 1986, p. 72).” Clothing has features that can make it either a personal or household
consumption good. This can depend on whether family utility functions and family decision making exist, or whether members share items for wearing (Norton & Park, 1986).

Nelson (1989) looked at individual consumption in the household as opposed to household consumption as a whole. Because most studies focus on consumption as a household or household unit, it was interesting to find data that focused on the individual consumer since a lot of decisions are made by the individuals as opposed to units. Nelson (1989) thought that examining demand on an individual level could reveal individual factors that aggregation of the expenditures of the household would not reveal.

The study focused on individual consumption for two reasons. First, the purchase of clothing is allocatable since it is usually purchased with a specific person in mind. Household purchases simply sum the purchases of all family members, but it is sometimes more helpful in certain product categories, such as clothing, which is purchased separately for each individual family member, to see the breakdown of purchases for each family member. The second reason for studying individual expenditures was that the U.S. Consumer Expenditures Survey allows respondents to break down expenditures based on allocation. Clothing and education expenses are the only categories that allow the respondent to allocate their expenditures on certain household members (Nelson, 1989).

The effects on clothing expenditure of the age, gender, and race of the household member, the composition, location, and total expenditures of the
household, and the education and occupation of the parents were also analyzed. Data from the U.S. Consumer Expenditure Survey, 1984-1985 were used. Earlier studies had used tabular analysis to evaluate survey data and understand the relationship between variables, but this study used multivariate regression analysis to identify the important factors that affected clothing expenditures.

Analysis revealed that clothing expenditures vary significantly for fathers, mothers, boys, and girls. Boys only receive about 81% of the expenditures spent on girls, and fathers receive 62% of the expenditures spent on mothers. Fathers receive about 57% of the clothing expenditures spent on boys and mothers about 73% of the expenditures spent on girls. The income elasticities for clothing expenditures, with respect to total clothing expenditures, are estimated to be 1.01, 1.03, 1.76, and 2.01 for girls, boys, mothers, and fathers respectively. The significantly large difference in elasticity can lead to some confusion in calculating an accurate elasticity when looking at overall household expenditures or overall clothing expenditures (Nelson, 1989).

Of all variables, age is one of the most important in determining expenditures (Norton & Park, 1986). Purchases and inventories peak in the 30s and 40s and fall off rapidly among the elderly. Gender also appeared to be important, with importance of clothing expenditures being higher for women than men at all ages, but with the difference in importance decreasing after age 18. Blacks also appear to own more and spend more on clothing than whites (Norton & Park, 1986), while Dorsett (1998) found that whites spent more money on clothing than blacks, and Hispanics spent more than whites. He also found that
higher education meant higher apparel expenditures, and larger households and married households reported larger expenditures, as did households headed by females. Expenditures also peaked at about age 34 and declined thereafter (Dorsett, 1998).

**Consumer Expenditures**

The U.S. Department of Labor (2001) has been gathering information on the spending patterns of consumers since 1888-1891 through the Consumer Expenditures Survey. In the 1972-1973 survey, they introduced the two separate surveys; the quarterly interview survey, and the weekly diary or recordkeeping survey. For the quarterly interview survey the interviewer visits each "consumer unit" every three months over a twelve month period. This survey was created to gather data on larger expenditures respondents would be able to recall for periods of 3 months or longer. According to the U.S. DOL (2001), it records an estimated 60 to 70 percent of the total household expenditures. Duly, Janini, Keil, & Paszkiewicz (2003) believe it captures 95 percent of total household expenditures. In the interview component for apparel, respondents are asked to identify the type of clothing purchased, for whom each item was bought, the number of items, the month of the purchase, and the purchase price. Purchases of gifts given or gifts received are not recorded (Nelson, 1989).

In the diary survey, the consumer units complete a diary or record of their expenses for two consecutive one-week periods. The diary is used to keep track of detailed data on smaller purchases or items that respondents are least likely to
remember or recall after a period of time. The major expenditures included in the survey as a whole are food, housing, apparel, transportation, health care, and entertainment, as well as other expenditures, such as education and tobacco products. Household characteristics, such as age, gender, race, marital status, and family composition, are also asked in a Household Characteristics Questionnaire (U.S. DOL, 2001). Samples are national probability samples representative of the U.S. civilian population. In 1999, over 30,000 consumer units participated in the interview survey while over 15,000 participated in the diary survey, with response rates of 79.8% and 74.9% respectively. It is believed that the apparel expenditures in the CE survey are underrepresented (Nelson, 1989). The estimated aggregate expenditures reported in the CE survey are only half of those reported in the National Income and Product Accounts (Geiseman, 1987).

**Economic Indicators**

The Conference Board also makes available to the public a variety of economic information, including the Leading Economic Indicator and Consumer Confidence studies. The Leading Economic Indicator is used by economists to help predict economic activity six to nine months into the future. The Leading Economic Indicator is published around the end every month. The Conference Board conducts the Consumer Confidence study monthly, as well, since 1977. They survey about 5,000 households to gauge the current level of consumer confidence. The number of respondents to this survey averages around 3,500.
The index is comprised of two sub-indexes; consumer appraisal of current conditions, and their expectations for future conditions. The index is based on responses to 5 questions included in the survey:

1. Respondents’ appraisal of current economic conditions.
2. Respondents’ expectations regarding business conditions six months hence.
3. Respondents’ appraisal of the current unemployment conditions.
4. Respondents’ expectations regarding employment conditions six months hence.
5. Respondents’ expectations regarding their total family income six months hence (Conference Board, n.d.).

For each of the five questions, there are three response options: positive, negative, and neutral.

**Consumer Confidence**

The Consumer Confidence Index is an average of all five indexes; the Present Situation Index is an average of indexes for questions 1 and 3; and the Expectations Index is an average of indexes for questions 2, 4, and 5. The response proportions to each question are seasonally adjusted. For each of the five questions, the positive figure is divided by the sum of the positive and negative to yield a proportion or relative value. The average relative value for the calendar year 1985 is then used as a benchmark to yield the index value for that question.
The University of Michigan has made major contributions in the study of consumer behavior. The university uses the Survey of Consumer Attitudes and Behavior to help calculate the Index of Consumer Sentiment. The Index of Consumer Sentiment is similar to the study published by the Conference Board. The University of Michigan's preliminary consumer sentiment survey is based on telephone interviews with about 300 households around the country on personal finances, business and buying conditions, and is rounded out to 500 by month's end. The expectations index data is included in the Leading Indicator Composite Index published by the US Department of Commerce. (The Street.com, n.d.). A preliminary and a final reading are released every month. The index is also divided into two sub indexes, expectations and current conditions.

A preliminary survey is usually reported about the second Friday of the month, while a more complete survey is reported two weeks later. The level of consumer sentiment is directly related to the strength of consumer spending and is mainly affected by inflation and employment conditions. The index is derived from these five questions:

1. We are interested in how people are getting along financially these days. Would you say that you (and your family living there) are better off or worse off financially than you were a year ago?

2. Now looking ahead--do you think that a year from now you (and your family living there) will be better off financially, or worse off, or just about the same as now?
3. Now turning to business conditions in the country as a whole--do you think that during the next twelve months we'll have good times financially, or bad times, or what?

4. Looking ahead, which would you say is more likely, that in the country as a whole we'll have continuous good times during the next five years or so, or that we will have periods of widespread unemployment or depression, or what?

5. About the big things people buy for their homes, such as furniture, a refrigerator, stove, television, and things like that. Generally speaking, do you think now is a good or bad time for people to buy major household items?

The Index of Consumer Sentiment (ICS), is calculated by first computing the relative scores (the percent giving favorable replies minus the percent giving unfavorable replies, plus 100) for each of the five index questions. Each relative score is then rounded to the nearest whole number. Using the formula shown below, sum the five relative scores, divide by the 1966 base period total of 6.7558, and add 2.0 (a constant to correct for sample design changes from the 1950s).

\[ ICS = \frac{X_1 + X_2 + X_3 + X_4 + X_5}{6.7558} + 2.0 \]

Using the same procedures given above, the Index of Current Economic Conditions (ICC) and the Index of Consumer Expectations (ICE) are calculated as follows.
In a study conducted by ACNielsen (Bell, 2002), the Consumer Sentiment Index was found to be a strong leading indicator of consumer purchasing of food, health and beauty aids, and non-food consumer packaged goods. According to Bell (2002), this was the first time the Consumer Sentiment Index findings were correlated to consumer purchase behavior. The findings indicate there was a twelve-month lag between the sentiment, or changing attitudes, and a change in purchase behavior of the non-durable goods. According to Richard Curtin of the University of Michigan some past research has linked the index to the purchase of durables like automobiles and appliances, as well as changes in unemployment levels (Bell, 2002).

ACNielsen wants to study the changes in sentiment on consumer behavior within specific retail channels and product categories. No information is given on the methods used in conducting the study. This is interesting information since apparel, which is the focus of this study, is a product category or nondurable which has not yet been linked to the survey. According to Curtin, the university has never seen the index predict changes in the purchasing of non-durables (Bell, 2002). The survey measures changes in consumer attitudes and expectations to understand why the changes occur, evaluate how they relate to consumer decisions, and to forecast changes in aggregate consumer behavior.
**Econographics**

Econographics is a predictive model that was introduced by Roberts (1998) in the book *Harness the Future*. The word econographics was coined for the study of leading and responsive drivers on consumer behavior. Econographics is a predictive model that can be used to help anticipate consumer demands of the future. Econographics is one model that ties together the two variables of this study, consumer behavior and the economy. The predictive model of econographics monitors nine key drivers that influence consumer behavior: economy, technology, globalization, government, environment, demographics, consumer psyche, wellness, and retailing.

Each one of the nine drivers is critical to understanding the consumer. The economy, in particular, affects consumers’ confidence and ability to spend, borrow, and save. Education is also said to strongly influence consumer behavior, meaning the more educated, the more economically thought out your decisions should be. The question is, without the other key drivers, how strong of a role does the economy alone play on consumer purchasing behavior? The model is set up so the first five drivers act as the leading drivers, or leading indicators, and the remaining four act as the responsive drivers, or lagging indicators. The consumer psyche, for example, is said to be very responsive to shifts in the economy. The timing of the differences between the leading and responsive drivers can help researchers predict consumer spending levels. Most researchers ask customers about their intended buying behaviors, and predict buying behaviors based on their results. The problem with this is that consumers
are only able to tell about their short-term buying decisions, and may not be aware of impending changes, such as the economy, that may alter their attitudes and responses three to five years from now.

**Theory**

*Engel's Law.*

Ernst Engel, a famous German economist decided in 1853 to study the budgets of Belgian families, after a meeting of the Belgian Congress. For the first time the state had decided to take on an investigation of family accounts. He was convinced that household statistics could do far more than merely show general truths of living conditions in countries. He thought that household statistics could be used to measure national welfare, as well as a country’s economic well-being. He wanted to extend the use of the materials and studies beyond Congress, since he was a student of social and economic problems. Seeing that the field of natural sciences had made giant leaps in improving their measuring devices, he wanted the field of social sciences to discover and perfect more of their methods of measurement applicable to social phenomena. His first study published in 1857, entitled “The Production and Consumption of Konigreichs Sachsen,” demonstrated the practicality of an official study of family receipts and expenditures, and the accounts gave Engel the quantitative data he needed for his work on laws of consumption. Using secondary data as well, he estimated average household incomes for families in Belgium, as well as their
average expenditures. From this data he drew these conclusions about family expenditures (Monroe, 1974).

1. The poorer the family, the greater the proportion of the total expenditures which must be devoted to the provision of food.

2. Absolute expenditures for food increase, though relative expenditures decrease, with increased well-being.

3. The amount of relative expenditures for food is an unmistakable measure of the material welfare of people.

4. Expenditures for food increase, according to a geometric progression, with the decrease in well-being.

5. The less the total amount available (the income) the greater the proportion of the expenditures necessary for physical existence.

6. With greater well-being there is joined not merely a better material existence, but also an improved intellectual and moral life.

7. The poorer the family, the greater the quota, proportionally, of its contributions to the indirect taxes. (Monroe, 1974)

Engle's ideas and data have been further developed in "Engel's Law" through various research studies based solely on quantitative data. Engel’s Law demonstrates that changes in real income will lead to predictable changes in the share of total spending on luxuries and necessities -- in particular, a slower rate of real income growth should lead to a slower increase in the share spent on luxuries. The “laws” used today are not exact laws given by Engle himself. The first account of the “laws” used in connection with a study of family expenditures
was that of Carroll D. Wright in 1875. He compared his finding with Engel’s findings, and presented relative expenditures for three income groups. Clearly stated it concludes:

1. The greater the income, the smaller the relative percentage of the outlay for subsistence.

2. The percentage of outlay for clothing is approximately the same, whatever the income.

3. The percentage for outlay for lodging, or rent and for fuel and light, is invariably the same, whatever the income.

4. As the income increased in amount, the percentage of outlay for “sundries” becomes greater. (Monroe, 1974)

Wright did not give the source of his statement of Engel’s economic law, since less emphasis was placed on citations of sources at the time. It is of interest to Monroe (1974), that Wright’s form of Engel’s Law has persisted relatively unchanged in all American discussions of the subject. In each of the studies that have used the law, there were slight variations in the wording, but the message was undoubtedly the same (Figure 2).
As Income Increases

- The percentage of expenditure on food decreases
- The percentage of expenditure on clothing does not change
- The percentage of expenditure on housing does not change
- The percentage of expenditure on leisure and education increases

Figure 2. Engel’s Law
It is also believed that Engel’s Law formed the basis of John Maynard Keynes’ fundamental law of consumption of the 1930’s that says, consumption expenditures and saving both increase as income rises (Srinivasa, 1993). Engel’s Law as we know it today has been used and supported in many studies, including the Consumer Expenditure Survey’s by the Bureau of Labor Statistics (Millican, 1967). These studies tend to support the conclusions made by those of Engel, except for that of clothing expenditures. They have been observed to rise in proportion to income, not stay the same. In 1955, Loeb used Engel’s law as a way to predict consumer expenditures. He concluded that predicting consumer expenditures requires an estimate of not only future disposable income, but also estimates of other economic as social factors as well. Guo (1991) also used Engel’s Law as a theory base for his study “Differences in income and consumer expenditure patterns between foreign and American graduate students at Virginia Tech.” His findings were consistent with the theory, but he also found that student’s expenditures exceed their yearly income.

**Theory of Reasoned Action.**

The Theory of Reasoned Action was developed by Fishbein and Ajzen in 1980, as an adaptation of the original Fishbein Model. The theory proposes that external variables may influence the relative weights of the attitude and that behavior is a direct result of intention. The attitude towards the act of purchasing a certain product or brand involves two important factors: attitude towards an act and subjective norm. Three types of external variables were identified as
explaining and predicting consumer behavior. These variables are demographics, attitudes toward target, and personality traits.

The Theory of Reasoned Action was further adapted by Shim, Morris, and Morgan (1989). This time it was to predict attitude towards purchasing clothing. In the new model, fashion involvement was also included as an external variable, because involvement with products was found to lead to greater perception of attribute differences, and perception of greater product importance. All external variables were determined by the classification of external variables categories proposed by Ajzen and Fishbein (1980). Demographics, clothing attitudes, self-perception, and fashion involvement were all predictors of attitudes toward purchasing apparel. Findings indicated that all four variables were significant predictors of attitude towards purchasing clothing.

**Application of theory.**

The model used in this study is an adaptation of both Engel’s Law and the revised Theory of Reasoned Action used by Shim, Morris, and Morgan (1989). In Engel’s Law, only income was used as a predictor of the four different types of expenditures. Kim (1998) found that income alone can not predict expenditures as well as when combined with other predictor variables. Understanding consumers’ lifestyles, as well as basic economic principles, can help us better understand purchase decisions and purchase behavior (Lindquist and Sirgy, 2003). Demographic variables such as age, race, gender, education, and family size also play a large part in past studies (Kim, 1998).
In the revised Theory of Reasoned Action, fashion involvement was also used as predictor, because it has been found to be a significant predictor of apparel expenditures. A strong and significant relationship between fashion involvement and clothing buying behavior was also found by Tigert, Ring, and King (1976) and Howard & Sheth (1969). The high fashion-involved consumer represents a very large portion of the population (Kang, 1995). Shiffman & Kanuk (1983), as well as Traylor (1981), suggested that high fashion-involved consumers consider apparel purchases important to them.

For these reasons consumer perceptions of the economy and importance of fashion are used as the predictors of apparel expenditures. Demographic effects have been included to see if demographic variables influence perceptions of the economy, importance of fashion, and also apparel expenditures. For this study the only expenditure category being examined is apparel.

**Summary of Literature Review**

Clothing expenditures are a significant expense, as a well a basic need for U.S. households. This is why apparel has been a major area of study since the early 1950s. The majority of the studies are cross-sectional and time-series analyses. The economic factors that influence clothing expenditures include household income, apparel price, and total household expenditures. Demographic variables such as age, race, gender, education, and family size also play a large part in past studies (Kim, 1998).
Most studies show that clothing is income elastic, meaning income has a significant effect on the demand for clothing. Income is usually the most predictive demographic variable, but income alone is less effective than socioeconomic models or models that combine socioeconomic and demographic variables. In time series analysis, the price variability of clothing is not often significant, due to price income correlations over time (Norton & Park, 1986).

Classical, static microeconomic theory sets the stage for much of the research on demand, expenditures, and budgets (Norton & Park, 1986). Demand functions, Engel functions, and price and income elasticities provide a basis for much of the research conducted. Lindquist and Sirgy (2003), found understanding consumers’ lifestyles, as well as basic economic principles, can help us better understand purchase decisions and purchase behavior.

Consumer behavior models seek to explain consumer decisions outside of the norms or what is expected. Clothing has been considered to be a social good in many studies (Horn & Gurel, 1981; Ryan, 1966). Most clothing studies dealing with demand and expenditures on apparel ignore the importance of fashion to individuals and the social nature of clothing (Norton & Park, 1986). This social nature may contribute to the consumption and expenditure differences in individuals, and can also contribute to stock effects, explaining why clothing may appear to be a luxury good. Some consumers consider clothing to be a necessity good, meaning current or perceived economic conditions may have little or no effect on apparel expenditures (Norum, 1990).
Engel’s Law and the Theory of Reasoned Action are also discussed as theoretical models for the study, and related to the model used in the study.
Chapter III

Methodology

The purpose of this chapter is to explain the research design of the study. It discusses use of a focus group, questionnaire development, pretesting, data collection, and the analysis methodology.

Research Design

A cross-sectional survey was used to collect data. The survey was divided into three parts that examine demographics, perceived economic conditions, and consumers’ apparel buying behaviors. This survey examined the proposed model of whether the economy, as perceived by consumers, has any effect on the apparel buying behavior of consumers. The study also examined if the importance consumers place on fashion has any effect on apparel expenditures, and if so, how strong each of the independent effects are, as well as the combined effects of the three independent variables. Further, it examined whether the three independent variables of current perceived economic conditions, future perceived economic conditions, and importance of fashion are influenced by the demographic variables of age, gender, marital status, race, income, education, household size, number of children, and occupation.

The survey method was recommended to examine economic conditions because of the rapidly changing conditions and consistency that can be used from year to year (Srinivasan & Hanway, 1999). The survey method was also used due to time and cost constraints.
Sample

Consumers in Roanoke, Virginia were chosen for the sample. Roanoke has been designated a stratified market for consumer research (Sirgy, 2003). Stratified samples are statistically more efficient than random sampling because they provide a more accurate population estimate (Parasurman, Grewal, & Krishnan, 2004).

In addition, sample surveys are subject to two types of errors: sampling and nonsampling. Sampling errors occur because the data are collected from a representative sample rather than the entire population. Nonsampling errors result from the inability or unwillingness of respondents to provide correct information, differences in interviewers’ abilities, mistakes in recording or coding, or other processing errors. (Parasurman, Grewal, & Krishnan, 2004; Duly, Janini, Keil, & Paszkiewicz, 2003).

Instrumentation

The questionnaire is divided into three sections: economic situation and expenditures, fashion importance, and demographics (Appendix A). The apparel expenditure questions were asked first so respondents would not let their responses to economic perceptions influence the way they might think they should answer the expenditure-related questions. For the fashion importance section, questions were developed to gauge the consumers’ importance of fashion, which was correlated with the expenditure information that was obtained from section 1 of the questionnaire. Demographics were placed last so that the
questionnaire would not seem as long, since the questions that required more thought were asked first. A focus group and pre-test were also conducted in the development of the questionnaire.

**Focus Group**

The focus group study was conducted in a graduate research seminar class to help develop the questions for the questionnaire, and to see if participants thought consumers considered economic factors while shopping for apparel; and if not, what they thought may influence it.

There were a total of 9 participants in the focus group, 2 professors and 7 students. To begin, each person was given a card with a number on it. They were instructed to hold up their number card before speaking, so that the transcribers could easily identify them, and also to say their number so that it would be heard on the tape recorder. There were two transcribers who recorded the information as the participants spoke and 2 tape recorders, as well, just in case they missed anything that was said. The transcribers’ information was then compared to the information on the recorded tape to ensure accuracy.

The focus group session lasted about 45 minutes to an hour. There were a total of eight questions asked, and they were listed in the transcription along with the responses to each question. The first three questions were economic questions that led into the discussion of economics and how it affected purchase expenditures. The last three questions tried to probe respondents to discuss what things affected their purchases on apparel; if the economic situation was
considered bad, what were some of the things that they would purchase less of, to see if apparel would be one of things that would be purchased less. To start off, question 1 asked respondents to give their answers and hopefully start a small discussion for the question, to elicit unexpected responses. After the responses died down the next question was introduced.

**Results of Findings of the Focus Group**

Some consumers were more adamant about apparel than others. From prior knowledge of the people who participated in the focus group as well, those with an apparel background and those more interested in fashion placed more importance on fashion than those who were majoring in housing or consumer studies. There were some who even said that they have bought apparel they really wanted, even when they knew they did not have money and could not afford to purchase the clothes: but they just love clothes so much they could not help it. There were others who said if they knew they could not afford it, or they thought economic situations were getting worse, they would not be as likely to purchase apparel as they would other basics like food. Others said they would just avoid really large purchases like cars or a house if the economic situation got worse. Some stressed that you always have older clothes to wear and they would just wear those, while others said they liked to wear the latest styles and maybe would not settle for older styles. Thus, the importance of fashion can be a significant influence on whether or not consumers would purchase less apparel if they perceived economic situations as being bad. Findings from the group
indicated that fashion sense and fashion importance is a significant factor in how consumers purchase apparel, even if they perceive the economy is “bad.”

The following section discusses the questions from the focus group study:

Question 1: What are some things you would spend less money on if you perceived the economic situation as being “bad” or getting “bad” in the next few months?

This question was intended to determine some things they would spend less money on and if apparel would be one of those things. It seemed that a significant portion of the participants would spend less on leisure and big purchases and maybe buy apparel wisely. This means that there are consumers who would decrease the amount of money that they would spend on apparel. There were no specific questions on the questionnaire related to this but it set the stage for the next questions and for the significance of the whole study. Do consumers spend less on apparel during hard economic times? If it was not significant, the study would be rethought.

Question 2: Do you spend your money on apparel before you would spend it on most other things?

There were a lot of “yes”es on this question and some who said yes indicated that they can do this because they do not have kids or others to think about. Others would rather spend on food or services.
Question 3: In this time of dismal economic outlook, do you think it is ridiculous to spend excessive amounts of money on apparel?

One respondent always spends money on clothes she does not need instead of paying on her credit card debt. One respondent bought up the fact that consumers don’t make clothes like they used to and they are forced to buy what they want. One person also said that it is good to put money in the economy when it is not doing well.

Question 4: If you are a fashion leader or if you see yourself as well dressed do you think your motivation to buy is stronger and not affected by the economy as much as someone who is not a fashion leader?

Respondents think that consumers will not care as much about the economy if they think being a fashion leader or being well dressed is important. One said she used to be that way but her priorities changed when she became older, this means age could be a factor as well as where you are in life.

Question 5, conclusion: When shopping for apparel are you more concerned about prices and wear ability, or trends and fashion?

Respondents think it depends on where you are, as in school or work. Many are still students and it is not as important for them to dress as if they had a job. One was more concerned about price, while others cared more about quality and would be willing to spend more, and another was more into fashion and trends.
The discussion of importance of fashion encouraged the researcher to further investigate the importance of fashion’s role on apparel expenditures and add it to the research model. The questions in the focus group were adapted to further the discussion of recurrent themes.

**Human Subjects Review**

Because of the use of human subjects in the survey data collection method, an application to the Institutional Review Board (IRB) of Virginia Tech was required. The research was approved by the IRB under exempt status (Appendix B).

**Pretest**

A pretest of the questionnaire was conducted with about 25 students in a senior level personal financial management class to see if the questions were understandable to the average consumer. Participants gave suggestions for rewording questions and responses, and also helped develop some demographic categories that were not included.

**Data Collection**

The survey was administered to the sample over a period of three weeks. Both a paper survey and an online survey were developed and administered in various ways to consumers in Roanoke, VA, because it has been identified as a stratified consumer market for consumer research. Online data collection was
the preferred method for the researcher, but paper and online methods were chosen because paper surveys were easy to distribute to the stationary locations where the surveys were collected and to avoid exclusion of anyone who did not have online access.

The online survey was sent to over 60 employees of a local corporate bank who were offered points towards their bonus reviews from management for completing the survey. It was also sent to a list serve of professionals and students at Virginia Western Community College in Roanoke, as well as two other list serves of over 200 people in the Roanoke metro area.

Paper surveys were administered at a nail and hair salon, as well as a vendor fair. Various incentives were offered to consumers for completing the survey. Every participant had the chance to win $50 gift certificates for Best Buy and Hecht’s, a local department store. Participants at the salon also could win a $25 gift certificate toward any service, and participants at the vendor fair had the chance to win a hand made broach from a jewelry vendor. A total of 166 respondents completed the questionnaire. Following the data collection, responses were coded for easy data analysis and were imported into SPSS.

Variables of Perceptions

Current economic perceptions.

This study used four questions as determinant variables of the current perceptions of economic conditions, as follows:
1. Generally speaking, do you think now is a good time or bad time for people to buy major household items such as furniture, major appliances, and televisions?

2. Are you better off, the same, or worse off financially as you were a year ago?

3. Now looking at business conditions in the country as a whole do you think that now we are having good times financially or bad times financially?

4. Do you think that now the country as a whole will have continuous good times or bad times (periods of widespread unemployment and depression)?

*Future economic perceptions.*

This study used four questions as determinant variables of the future perceptions of economic conditions, as follows:

1. In about a year from now, do you think that it will be a good time or bad time for people to buy major household items such as furniture, major appliances, and televisions?

2. Now looking ahead, do you think in one year from now you and your household will be better off, worse off, or just about the same as now financially?

3. How do you think business conditions will be in a year from now, do you think that now we will be having good times financially or bad times financially?
4. Looking ahead, do you think that the country as a whole during the next 12 months will have continuous good times or bad times (periods of widespread unemployment or depression)?

**Importance of fashion.**

This study used six questions as determinant variables of the importance of fashion, as follows:

1. I spend a lot of money on clothes and accessories.
2. It's important to be well dressed.
3. I'd spend my money on clothes sometimes before I'd spend it on other things I really need.
4. It is important for me to be a fashion leader.
5. I want to be one of the first to try new fashion trends.
6. I am not as concerned about fashion as I am about modest prices and wearability

**Apparel expenditures.**

This study used one question as the determinant variable of current apparel expenditures, as follows:

1. In general do you spend more, about the same, or less money on apparel as compared to a year ago?

This study uses one question as the determinant variable of future apparel expenditures, as follows:

1. Now looking ahead, do you plan to spend more, the same, or less on apparel in the next year than you do now?
This study uses one question as the determinant variable of average expenditures, as follows:

1. Do you spend more money on apparel than the average consumer?

These three individual variables of apparel expenditures also make up a combined variable of combined apparel expenditures.

**Analysis Methodology**

Analysis of Variance (ANOVA) is a statistical procedure used to compare the means of two or more groups. One-way ANOVA tests were used in this study to determine if consumers’ current perceptions, future perceptions, importance of fashion, and expenditures differ based on the demographic categorical variables of this study (H1-4). For example, the one-way ANOVA was used to determine whether the perceptions of current economic conditions were influenced by race. A priori, the significance level was set at p<.05, and it was the determinant of whether post-hoc tests were completed to determine which pairs differed significantly.

For the post-hoc analysis, either LSD, Tukey’s HSD, or Games-Howell were used. LSD or Tukey’s (HSD), were used if the Levene’s statistic was not statistically significant. If the Levene’s statistic is violated (p<.05), homogeneity of variance can not be assumed and the Welch F was used instead. If the Levene’s test was statistically significant, Games-Howell was used.

A regression model was also used. In trend regression the independent variable is taken to be the observation identifier. A trend regression equation
may be able to estimate, with some error, values of existing observations within the object series, and to predict hypothetical observations beyond the end of the series. Regression analysis seeks to provide answers to a very specific question such as, "What is the nature of the relationship between the dependent variable and an independent variable?" The question is answered by estimating values of the parameters in a best-fit equation.

Regression analysis answers two other very important questions: (a) Is there a significant relationship between the selected variables, economy and consumer apparel purchasing expenditures? and, if so: (b) How strong, close, or reliable is the relationship? If there is a statistically significant relationship, or even if the existing relationship is only trivial, an automated regression analysis will estimate the value of the parameters.

A simple linear equation was used to investigate the relationship between current economic perceptions (x1) and current expenditures (Y1), future economic perceptions (x2) and future expenditures (Y2), and importance of fashion (x3) and average expenditures (Y3). The unstandardized regression equations is:

\[ \hat{Y} = a + bx \]

Where:

\( \hat{Y} \) = the predicted value of Y for a given value of x

\( b \) = the slope of the regression line and represents the change in Y associated with one unit change in x

\( a \) = the Y intercept, or the value of \( \hat{Y} \), when is \( x = 0 \)
The three unstandardized linear equations for this study contain the following variables:

\[ Y_1 = X_1 \]
\[ Y_2 = X_2 \]
\[ Y_3 = X_3 \]

Stepwise regression equations were used to examine: how current economic perceptions \((x_1)\), future economic perceptions \((x_2)\), and importance of fashion combined affect current expenditures \((Y_1)\); how current economic perceptions \((x_1)\), future economic perceptions \((x_2)\), and importance of fashion combined predict future expenditures \((Y_2)\); how current economic perceptions \((x_1)\), future economic perceptions \((x_2)\), and importance of fashion combined affect average expenditures \((Y_3)\). The stepwise regression equations contain the following variables:

\[ \hat{Y}_1 = X_1 + X_2 + X_3 + X_1X_2 + X_2X_3 + X_1X_3 + X_1X_2X_3 \]
\[ \hat{Y}_2 = X_1 + X_2 + X_3 + X_1X_2 + X_2X_3 + X_1X_3 + X_1X_2X_3 \]
\[ \hat{Y}_3 = X_1 + X_2 + X_3 + X_1X_2 + X_2X_3 + X_1X_3 + X_1X_2X_3 \]

**Expected Outcomes**

Hypothesis 1: There is no significant influence of demographic variables of (a) gender, (b) age, (c) marital status, (d) race, (e) income, (f) education, and (g) number of children, on consumers’ perceived outlook of current economic conditions.
Hypothesis 2: There is no significant influence of demographic variables of (a) gender, (b) age, (c) marital status, (d) race, (e) income, (f) education, and (g) number of children, on consumers' perceived outlook of future economic conditions.

Hypothesis 3: There is no significant influence of demographic variables of (a) gender, (b) age, (c) marital status, (d) race, (e) income, (f) education, and (g) number of children, on consumers’ importance of fashion.

Hypothesis 4: There is no significant influence of demographic variables of (a) gender, (b) age, (c) marital status, (d) race, (e) income, (f) education, and (g) number of children, on consumers’ apparel expenditures.

Hypotheses 5: Consumers’ apparel buying expenditures are not affected by their perceived outlook of current economic conditions.

Hypothesis 6: Consumers’ apparel buying expenditures are not affected by their perceived outlook of future economic conditions.

Hypothesis 7: Consumers’ apparel buying expenditures are not affected by their importance of fashion.

For hypotheses 1 and 2, current economic perceptions may differ by age, due to life experiences that older consumers may have had. Income may also have an effect on how consumers perceive the economy, since higher income consumers may not have as many personal economic problems.

For hypothesis 3, importance of fashion may differ by age and gender. Female consumers are often more concerned with appearance and fashion, although more recently male consumers have become more fashion oriented.
Younger consumers may also be more trendy, fashion conscious, and fashion leaders.

For hypothesis 4, apparel expenditures may differ by gender. Females often buy more frequently, although men sometimes buy expensive pieces.

For hypotheses 5, it is not believed consumers track economic conditions and allow them to influence how they will spend money unless maybe for large durable purchases like a house or car. Even if consumers perceive the economy to be “bad,” (a) gender, (b) age, it is believed they do not change their buying habits based on this. It is believed consumers these days want what they want when they want it, and unless they have lost their jobs or something similar, they will continue to spend frivolously.

Hypotheses 6, is believed to be the same as hypothesis 1. If consumers are not making different decisions based on the current economy, they will be even less inclined to make different decisions based on what they think the future of the economy will be.

For hypothesis 7, it is believed that importance of fashion is not affected by consumers’ evaluation of the economy. Those who place a higher importance on fashion usually have higher apparel expenditures, and do not allow constructs such as the economy to affect their apparel expenditures much at all.

**Summary of the Chapter**

This study was designed to determine consumer perceptions of current and future economic conditions, and importance of fashion, and to investigate
how these perceptions affect their apparel expenditures. It was also designed to examine the influence of selected factors such as gender, age, marital status, race, income, education, and number of children on current and future economic conditions, importance of fashion, and apparel expenditures. A survey was designed and administered to consumers in Roanoke, VA. One-way ANOVA and regression analysis were used to analyze the data, using the SPSS statistical program.
Chapter IV
Results and Discussion

The purpose of this study was to examine whether the economy, as perceived by consumers, has any effect on the apparel purchase expenditures of consumers; if so, how do personal factors such as gender, age, marital status, race, income, education, and number of children contribute to their perceptions and decisions.

In this chapter, findings of the investigation are presented. The beginning of this chapter presents characteristics of the sample. Then, the results of the one-way ANOVA analysis are examined to determine if consumers’ current perceptions, future perceptions, importance of fashion, and expenditures differ based on the demographic categorical variables of this study. Finally, regression analysis results are used to analyze if current expenditures, future expenditures, and importance of fashion are significant predictors of consumers’ apparel expenditures. The presentation of each finding is followed by discussion.
Characteristics of Respondents

There were a total of 165 respondents to the survey. Of the respondents, 70.9% of these were female (Table 1). This proportion is much higher than that of the U.S. population of about 50.9% female to 49.1% male. The larger number of female participants may be attributed to the locations used to collect data. The salons and vendor fair had a larger number of female clients than the other locations used.

Table 1

Demographic Characteristics of Respondents - Gender

<table>
<thead>
<tr>
<th>Variables</th>
<th>N= 165</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>48</td>
<td>29.1%</td>
</tr>
<tr>
<td>Female</td>
<td>117</td>
<td>70.9%</td>
</tr>
</tbody>
</table>

Note. N= 165 may vary slightly in demographic tables depending on number of respondents for each demographic question.
This study involved consumers of ages 18 years and up (Table 2). Of the respondents, 32.7% were age 25-34, while 24.8% were 18-24. The next largest percentage was age 45-54 at 17.6%, which was almost equal to age 35-44 at 16.4%. Only one respondent was over age 65. The older population of 35-64 was almost equal to the US average. There were a smaller number of participants 65 and over, and the two younger age groups (18-24 and 25-34) were larger than the US average. This can also be attributed to the data collection methods. Older consumers may not be in the workforce and may not be as mobile as younger consumers. Also, many of them may not have the technology readily available to complete online surveys.

Table 2

Demographic Characteristics of Respondents - Age

<table>
<thead>
<tr>
<th>Variables</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>N= 161</td>
<td>%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>N= 161</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>41</td>
<td>24.8%</td>
</tr>
<tr>
<td>25-34</td>
<td>54</td>
<td>32.7%</td>
</tr>
<tr>
<td>35-44</td>
<td>27</td>
<td>16.4%</td>
</tr>
<tr>
<td>45-54</td>
<td>29</td>
<td>17.6%</td>
</tr>
<tr>
<td>55-64</td>
<td>19</td>
<td>7.9%</td>
</tr>
<tr>
<td>65 and over</td>
<td>1</td>
<td>.6%</td>
</tr>
</tbody>
</table>
The majority of the respondents in this study were single (52.1%), but an almost equal percentage were married or had once been married, 43.6% and 4.2% respectively (Table 3). No widowed or divorced census data were available, but about 51% of the US population is married (U.S. Department of Commerce [U.S. DOC], 2001.

Table 3
Demographic Characteristics of Respondents - Marital Status

<table>
<thead>
<tr>
<th>Variables</th>
<th>Respondents N= 165</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>86</td>
<td>52.1%</td>
</tr>
<tr>
<td>Married</td>
<td>72</td>
<td>43.6%</td>
</tr>
<tr>
<td>Widowed</td>
<td>4</td>
<td>2.4%</td>
</tr>
<tr>
<td>Divorced</td>
<td>3</td>
<td>1.8%</td>
</tr>
</tbody>
</table>
The racial mixture of the sample was fairly representative of the US population with the largest number of respondents being Caucasian (57.3%) (Table 4). African/Americans represented slightly over a third (36%) of the population, with Asian and Hispanic coming in at 3.7% and 1.6%, respectively. The African/American proportion was higher than the US population, the Asian population was about exactly equal to the US average, but the Hispanic population was underrepresented (U.S. DOC, 2001).

Table 4
Demographic Characteristics of Respondents - Race

<table>
<thead>
<tr>
<th>Variables</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>N= 163</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>94</td>
</tr>
<tr>
<td>African-American</td>
<td>59</td>
</tr>
<tr>
<td>Hispanic</td>
<td>3</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
</tr>
</tbody>
</table>
The largest proportion of respondents (24.8%) had a household income of $40,000 to $59,000 per year. As shown in Table 5, the percentage of respondents with incomes of $20,000- $39,999 was 21.8%, very close to the percentage of respondents who had household incomes of $60,000- $79,999 (19.4%). A larger percentage of households fell into the $100,000 and over category (12.1%), than in the $80,000- $99,999 range (10.9%), which was exactly equal to the under $20,000 range (10.9%). The US median income is about $43,000 a year. This income level is within the range that includes the largest proportion of respondents in this study (U.S. DOC, 2001).

Table 5

<table>
<thead>
<tr>
<th>Variables</th>
<th>Respondents</th>
<th>N= 165</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under $20,000</td>
<td></td>
<td>18</td>
<td>10.9%</td>
</tr>
<tr>
<td>$20,000-$39,999</td>
<td></td>
<td>36</td>
<td>21.8%</td>
</tr>
<tr>
<td>$40,000-$59,999</td>
<td></td>
<td>41</td>
<td>24.8%</td>
</tr>
<tr>
<td>$60,000-$79,999</td>
<td></td>
<td>32</td>
<td>19.4%</td>
</tr>
<tr>
<td>$80,000-$99,999</td>
<td></td>
<td>18</td>
<td>10.9%</td>
</tr>
<tr>
<td>$100,000 and over</td>
<td></td>
<td>20</td>
<td>12.1%</td>
</tr>
</tbody>
</table>
Education levels were very high amongst respondents (Table 6). More than half of them were college graduates, with 39.6% being graduates, and 24% having done postgraduate or professional work. While 18.2% only completed some college, 15.9% were at least high school graduates, and only 1.8% completed only some high school. The US average shows only about 8% completing postgraduate work, so this study had a large number of consumers in the postgraduate/graduate category. The college graduate and some college categories were very close to the US average (U.S. DOC, 2001).

Table 6

Demographic Characteristics of Respondents - Education

<table>
<thead>
<tr>
<th>Variables</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N= 164</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Some high school</td>
<td>3</td>
</tr>
<tr>
<td>High school graduate</td>
<td>26</td>
</tr>
<tr>
<td>Some college</td>
<td>30</td>
</tr>
<tr>
<td>College Graduate</td>
<td>65</td>
</tr>
<tr>
<td>Postgraduate/Professional</td>
<td>40</td>
</tr>
</tbody>
</table>
In addition to a majority of the respondents being single (Table 7), the majority also had no children living in the household (66.5%). While 23.2% of the respondents had at least one child in the household, only 7.9% had two. The US average shows 32% of households have at least one child under 18 which is about equal to respondents’ households which had at least one child (U.S. DOC, 2001).

Table 7
Demographic Characteristics of Respondents- Number of Children in Household

<table>
<thead>
<tr>
<th>Variables</th>
<th>Respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>N= 164</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>109</td>
<td>66.5%</td>
</tr>
<tr>
<td>One</td>
<td>38</td>
<td>23.2%</td>
</tr>
<tr>
<td>Two</td>
<td>13</td>
<td>7.9%</td>
</tr>
<tr>
<td>Three</td>
<td>2</td>
<td>1.2%</td>
</tr>
<tr>
<td>Four or More</td>
<td>2</td>
<td>1.2%</td>
</tr>
</tbody>
</table>
One-Way ANOVA Analysis Results

In this section, the influence of each demographic variable on perceived current economic conditions, perceived future economic conditions, importance of fashion, and apparel expenditures are discussed. The demographic variables are: gender, age, marital status, race, income, education, and number of children. The analysis was completed using one-way Analysis of Variance (ANOVA). For each analysis, one independent demographic variable was selected and studied for its influence on the dependent variable under consideration. A significant influence of a demographic variable on a dependent variable means that the dependent variables differ according to the different classes or scales of the demographic variables. The significance level was set at p<.05. If any significant influences were found, means plots were created to show differences, and post hoc tests were also completed to see which pairs differ significantly in terms of the dependent variables.

If the Levene’s statistic was not violated, p >.05, then homogeneity of variance could be assumed and the robust ANOVA was used. If the robust ANOVA was significant, post hoc comparisons were completed using either LSD for three or less groups, or Tukey HSD for more than three groups. If the Levene’s statistic was violated, p<.05, then homogeneity of variance could not be assumed and the Welch F was used instead. If the Welch F was significant, post hoc comparisons were completed using Games-Howell. The results of the One-way ANOVA are presented in Table 8.
Table 8

Results of the One-way ANOVA for Each Dependent Variable

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Current Economic Perceptions</th>
<th>Future Economic Perceptions</th>
<th>Importance of Fashion</th>
<th>Apparel Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>F(1,163) =.101 p=.751, p&gt;.05</td>
<td>F(1,163) =1.59 p=.209, p&gt;.05</td>
<td>F(1,74) =.096* p=.758, p&gt;.05</td>
<td>F(1,163) =1.575 p=.211, p&gt;.05</td>
</tr>
<tr>
<td>Age</td>
<td>F(4,160) =1.95 p=.105, p&gt;.05</td>
<td>F(4,160) =3.11 p=.017, p&lt;.05*</td>
<td>F(4,57) =5.08* p=.001, p&lt;.05**</td>
<td>F(4,58) =1.116* p=.358, p&gt;.05</td>
</tr>
<tr>
<td>Marital Status</td>
<td>F(3,161) =.60 p=.616, p&gt;.05</td>
<td>F(3,161) =1.73 p=.162, p&gt;.05</td>
<td>F(3,161) =2.58 p=.566, p&gt;.05</td>
<td>F(1,157) =5.874 p=.016, p&lt;.05*</td>
</tr>
<tr>
<td>Race</td>
<td>F(2,161) =.054 p=.948, p&gt;.05</td>
<td>F(4,159) =2.15 p=.077, p&gt;.05</td>
<td>F(4,159) =.74 p=.565, p&gt;.05</td>
<td>F(4,159) =1.854 p=.121, p&gt;.05</td>
</tr>
<tr>
<td>Income</td>
<td>F(5,159) =.47 p=.802, p&gt;.05</td>
<td>F(5,159) =1.09 p=.371, p&gt;.05</td>
<td>F(5,159) =1.22 p=.300, p&gt;.05</td>
<td>F(5,159) =.530 p=.753, p&gt;.05</td>
</tr>
<tr>
<td>Education</td>
<td>F(4,159) =.535 p=.710, p&gt;.05</td>
<td>F(4,159) =.862 p=.488, p&gt;.05</td>
<td>F(3,160) =3.905 p=.010, p&lt;.05*</td>
<td>F(4,159) =1.389 p=.240, p&gt;.05</td>
</tr>
<tr>
<td># of Children</td>
<td>F(4,159) =1.817 p=.128, p&gt;.05</td>
<td>F(4,3) =.520* p=.729, p&gt;.05</td>
<td>F(4,159) =1.223 p=.303, p&gt;.05</td>
<td>F(4,159) =1.748 p=.142, p&gt;.05</td>
</tr>
</tbody>
</table>

Note: Statistics shown in this table are after demographic categories were combined and retest of statistics were done.

* Degrees of freedom are significantly lower for ANOVA’s that used the Welch F statistic, compared to those that used the robust ANOVA F statistic.

*p<.05, **p<.01
Demographic variables influence on current economic perceptions.

Race (F(4,159) =2.584, p<.05) was the only demographic variable that had a significant influence on consumers’ current perceptions of the economy. The Tukey HSD post hoc test was completed, since homogeneity of variance was assumed, and there were more than three groups of race being investigated. The post hoc test shows that the two groups that differ significantly are Hispanic and other. This difference in means of the two groups is also displayed in Figure 3. The “other” category of consumers’ race had a more positive perception of the economy than the Hispanic consumers. This could be because the other category had a significantly higher income than the Hispanic consumers, so their perceptions of current conditions may be higher because their income is larger. This may be attributed to the small number of people who answered in those two categories. The Hispanic and other categories only had a total of 4 people who fell into each of those categories, so the opinions of those few respondents weighed heavily on the mean of those groups.

According to these findings gender, age, marital status, income, education, and number of children were not significant influencers of consumers’ current perceptions of economic conditions.
Figure 3. Means plot of influence of race on perceived outlook of current economic conditions.
Demographic variables influence on future economic perceptions.

Since there was only one participant over the age of 65, the 65 and over category was collapsed into the 55-64 age category to make that category 55 and over. Age was found to be the only demographic variable that had a significant influence on consumers’ future perceptions of the economy. Results indicate that consumers’ future economic perceptions differ by age, $F(4,160) = 3.11$, $p<.05$. Tukey’s HSD post hoc test was completed, since homogeneity of variance was assumed. The post hoc test shows that the age pairs that differ significantly are 18-24 and 55 and over. This difference in means of the two groups is also displayed in figure 4.

Consumers in the 18-24 age category had more positive perceptions of future economic conditions than did the consumers in the 55 and over age range. There was not much research found on consumers’ current and future economic perceptions to support this finding. Age can reflect learning through life experiences. Older consumers may have experienced or learned things in their lives that may affect how they perceive future economic conditions. They may also have experienced better times in the past, but based on today’s situation, they may not anticipate the future will be as good. Older consumers may also be anticipating retirement, have lower incomes, be more conservative and may be less mobile and active, and this could affect their perceptions of future conditions. There were large numbers of participants in each category, so unbalanced categories should not be a factor.
Figure 4. Means plot of influence of age on perceived outlook of future economic conditions.
According to these findings, gender, marital status, race, income, education, and number of children were not significant influencers of consumers' future perceptions of economic conditions.

**Demographic variables influence on importance of fashion.**

Age and education were both found to have significant influence on consumers' importance of fashion. Results indicate that consumers' importance of fashion differs by age, $F(4,57) = 5.08$, $p < .05$, and by education, $F(4,159) = 4.382$, $p < .05$. The Games-Howell post hoc test was completed for age, since homogeneity of variance could not be assumed. The post hoc test shows that the age pairs that differ significantly are 18-24 and 45-54, and 25-34 and 45-54. These differences in means of the two groups are also displayed in Figure 5. Consumers in the 18-24 age category, had a significantly higher importance of fashion rating than consumers in the 45-54 age range. Also consumers 25-34 had a higher importance of fashion rating than consumers 45-54.

Norton and Park (1986) found age to be one of the most important demographic variables for determining expenditures and importance; with importance declining as you get older, as found in this study. Younger consumers may be more fashion forward and trendy than older consumers so this may be one reason fashion is more important to them. Younger consumers may also lead more active lives, which may require them to keep up their appearance more, as well as trying to make their place in the world and attracting a significant other and friends.
Figure 5. Means plot of influence of age on importance of fashion.
Older consumers may not keep up with trends as much, because they are comfortable with their self perceptions and perceptions of others, while younger adults may still be developing self perceptions, and perceptions of others. Older consumers may also be more interested in classic pieces, and again as they are preparing for retirement, they may not be as concerned about fashion as they are about comfort and long lasting items. It was surprising that there was no difference between participants in the 18-24 age range and 55 and over, and 25-34 age range and 55 over.

Tukey’s HSD post hoc test was completed for education, since homogeneity of variance was assumed, and there were more than three groups of education. The post hoc test shows that the education pairs that differ significantly are some high school and postgraduate/professionals. This difference in means of the two groups is also displayed in Figure 6. Surprisingly, participants who completed some high school had a higher importance of fashion rating than postgraduate/professionals. Consumers with more education usually have higher incomes and can purchase more, but this does not mean that fashion is more important to them just because they can purchase more. The number of ‘some high school’ participants was only three. However, the responses of those three participants may have weighed heavily on responses.

According to findings gender, marital status, race, income, and number of children were not significant influencers of consumers’ importance of fashion.
Figure 6. Means plot of influence of education on importance of fashion.
Demographic variables influence on apparel expenditures.

Marital status was found to be the only demographic variable that had a significant influence on consumers’ future perceptions of the economy. Results indicate that consumers’ apparel expenditures differ by marital status, (F(3,7)=8.247, p<.05). The Games-Howell post hoc test was completed, since homogeneity of variance can be assumed. The post hoc test shows that the marital status pairs that differ significantly are single and widowed. This difference in means of the two groups is also displayed in Figure 7. Widowed participants’ apparel expenditures were lower than single consumers. There were only 4 widowed participants, so this may have an effect on the level of significance. Also widowed participants may have less income as a result of being widowed, and may not be as able to purchase apparel as they once did, or they may not think apparel purchases are as important to them anymore if they are not trying to attract a new significant other as compared with their younger single and divorced counterparts.

According to the findings, gender, age, race, income, and number of children were not significant influencers of consumers’ apparel expenditures.

However, Most studies show that clothing is income elastic meaning income has a significant affect on the demand for clothing. Income is usually the most predictive demographic variable especially in time series analysis, but income alone is less effective than socioeconomic models or models that combine socioeconomic and demographic variable such as this model (Norton &
Park, 1986). Engel’s Law, the theoretical basis for this study, also argues that income is not a significant predictor of expenditures on apparel.
Figure 7. Means plot of influence of marital status on apparel expenditures
Retest of Statistics

Due to the small number of participants in certain demographic categories, and the effect of the small numbers on the statistical results, it was decided to combine certain demographic categories. In marital status, widowed and divorced were combined with married to create a new category ‘ever married.’ In race, Hispanic, Asian, and other were combined. Lastly, in education, the three respondents in ‘some high school,’ were combined with ‘high school’ to create ‘high school or less.’ The significant ANOVA’s for race on current expenditures, education on importance of fashion, and marital status on apparel expenditures were once again tested to determine if these demographics were still significant.

Race influence on current economic expenditures.

After combining the Hispanic, Asian, and other categories and rerunning the ANOVA test, it was found that race was not a significant influencer of consumers’ perceptions of current economic conditions. Before combining the categories other and Hispanic significantly differed from each other.

Education influence on importance of fashion.

In the first test, it was found that education was a significant influencer of importance of fashion and the groups that differed were ‘some high school’ and ‘postgraduate/professional.’ After combining the three ‘some high school’ participants with ‘high school graduates’ and rerunning the ANOVA test, it was still found that education was significant influencer of importance of fashion,
F(4,159)=3.905, p<.05. The post hoc tests showed that ‘high school graduate or less’ and ‘postgraduate/professional’ are the two groups that differ significantly. This difference in means of the two groups is also displayed in Figure 8. Participants who completed ‘some high school’ had a higher importance of fashion rating than ‘postgraduate/professionals.’ This relationship was surprising since the high-fashion involved consumer usually spends more money on apparel and considers apparel purchases important to them (Tigert, Ring, & King, 1976; Traylor, 1981). Kim (1998), and Norton and Park (1986), found that income is the most significant predictor of apparel expenditures, and consumers with higher education usually have a higher income, but higher ability to purchase may not mean more importance of fashion. Priorities of consumers with some high school may also just be different than those of the postgraduate/professional consumers.
Figure 8. Means plot of influence of education on importance of fashion.
Marital status influence on apparel expenditures.

In the first test, it was found that marital status was a significant influencer of apparel expenditures and the groups that differed were single and widowed. After combining the four widowed participants and the three divorced participants to married to create 'ever married' and rerunning the ANOVA test, it was found that marital status was still a significant influencer of importance of fashion, F(1,157)=5.874, p<.05. The Games-Howell post hoc tests could not be run because there were only two groups, ever married and single. Single consumers have higher apparel expenditures than married consumers. This difference in means of the two groups is displayed in Figure 9. Nelson (1989) also found that single consumers purchase more apparel for their individual selves than married consumers. This could be because married consumers already have a significant other and they may not be purchasing large amounts of clothes to impress anyone. Married consumers also may buy for others in their household including their spouse and children, therefore allocating less money for their personal apparel expenditures.

Although it has been found that family size has an influence on apparel expenditures, no studies were found to support the influence of marital status on apparel expenditures. Norton and Park (1986) also found that age is one of the most important variables in determining apparel expenditures, with younger consumers purchasing more than older consumers. If age is used as an indicator of whether the participants were married, then it might be possible to say that the majority of younger participants were single and therefore purchase
more apparel, while the majority of the older consumers were married and therefore purchased less. Most studies show that clothing is income elastic, meaning income has a significant affect on the demand for clothing. Income is usually the most predictive demographic variable, especially in time series analysis, but income alone is less effective than socioeconomic models or models that combine socioeconomic and demographic variable such as the model used in this study (Norton & Park, 1986). Engle’s Law, the theoretical basis for this study, argues that income is not a significant predictor of expenditures on apparel and this is supported by the findings of this study.
Figure 9. Means plot of marital status on apparel expenditures.
**Regression Analysis**

Linear regression equations were used to determine if there were any correlations between the dependent variable of apparel expenditures and the independent variables of consumers’ current and future economic perceptions, and importance of fashion. If so, are the independent variable(s) significant predictors of apparel expenditures?

A simple linear equation was used to investigate the relationship between current economic perceptions (x1) and current expenditures (Y1), future economic perceptions (x2) and future expenditures (Y2), and importance of fashion (x3) and average expenditures (Y3). The unstandardized regression equation is:

\[ \hat{Y} = a + bx \]

Where:

\( \hat{Y} \) = the predicted value of Y for a given value of x

b = the slope of the regression line and represents the change in Y associated with one unit change in x

a = the Y intercept, or the value of \( \hat{Y} \), when is \( x = 0 \)

The three unstandardized linear equations contained the following variables:

\[ Y_1 = X_1 \]

\[ Y_2 = X_2 \]

\[ Y_3 = X_3 \]
The variables of current and future economic perceptions, importance of fashion, and apparel expenditures were determined by the following questionnaire items:

**Current economic perceptions.**

This study used four questions as determinant variables of the current perceptions of economic conditions, as follows:

1. Generally speaking, do you think now is a good time or bad time for people to buy major household items such as furniture, major appliances, and televisions?
2. Are you better off, the same, or worse off financially as you were a year ago?
3. Now looking at business conditions in the country as a whole do you think that now we are having good times financially or bad times financially?
4. Do you think that now the country as a whole will have continuous good times or bad times (periods of widespread unemployment and depression)?

**Future economic perceptions.**

This study used four questions as determinant variables of the future perceptions of economic conditions, as follows:

1. In about a year from now, do you think that it will be a good time or bad time for people to buy major household items such as furniture, major appliances, and televisions?
2. Now looking ahead, do you think in one year from now you and your household will be better off, worse off, or just about the same as now financially?

3. How do you think business conditions will be in a year from now, do you think that now we will be having good times financially or bad times financially?

4. Looking ahead, do you think that the country as a whole during the next 12 months will have continuous good times or bad times (periods of widespread unemployment or depression)?

**Importance of fashion.**

This study used six questions as determinant variables of the importance of fashion, as follows:

1. I spend a lot of money on clothes and accessories.
2. It's important to be well dressed.
3. I'd spend my money on clothes sometimes before I'd spend it on other things I really need.
4. It is important for me to be a fashion leader.
5. I want to be one of the first to try new fashion trends.
6. I am not as concerned about fashion as I am about modest prices and wear ability

**Apparel expenditures.**

This study uses one question as the determinant variable of current apparel expenditures, as follow:
1. In general do you spend more, about the same, or less money on apparel as compared to a year ago?

This study uses one question as the determinant variable of future apparel expenditures, as follow:

1. Now looking ahead, do you plan to spend more, the same, or less on apparel in the next year than you do now?

This study uses one question as the determinant variable of average expenditures, as follow:

1. Do you spend more money on apparel than the average consumer?

These three individual variables of apparel expenditures also make up a combined variable of combined apparel expenditures.

Regression Analysis Results

*Current economic perceptions.*

It was found that current economic perceptions are a significant predictor of consumers’ current apparel expenditures. Current economic perceptions explain about 4.8% of the variance in current apparel expenditures, which is statistically significant, $F(1,163)= 8.189, p<.01$. Current economic perceptions make a significant contribution to the prediction of consumers’ current apparel expenditures ($p<.01$). The unstandardized regression equation can be written as follows:

$$\hat{Y} = 2.040 + .332 \text{current}$$
For each additional level of increase in consumers’ current economic perceptions, current apparel expenditures increases .332 levels.

**Future economic perceptions.**

Future economic perceptions are also a significant predictor of consumers’ future apparel expenditures. Current economic perceptions explain about 11.6% of the variance in future apparel expenditures, which is statistically significant, F(1,163)= 21.344, p<.001. Future economic perceptions make a significant contribution to the prediction of consumers’ future apparel expenditures (p<.001). The unstandardized regression equation can be written as follows:

\[ \hat{Y} = 2.034 + 0.399\text{future} \]

For each additional level of increase in consumers’ future economic perceptions, future apparel expenditures increases .399 levels.

**Importance of fashion.**

Importance of fashion is also a significant predictor of consumers’ average apparel expenditures. Importance of fashion explains about 32.2% of the variance in average apparel expenditures, which is statistically significant, F(1,162)= 76.924, p<.001. Importance of fashion makes a significant contribution to the prediction of consumers’ average apparel expenditures (p<.001). The unstandardized regression equation can be written as follows:

\[ \hat{Y} = 0.824 + 0.750\text{importance} \]

For each additional level of increase in consumers’ importance of fashion, average apparel expenditures increase .750 levels.
**Combined prediction of future expenditures.**

Stepwise regression equations were used to examine how current economic perceptions ($x_1$), future economic perceptions ($x_2$), and importance of fashion combined affect current expenditures ($y_1$); how current economic perceptions ($x_1$), future economic perceptions ($x_2$), and importance of fashion combined predict future expenditures ($y_2$); and how current economic perceptions ($x_1$), future economic perceptions ($x_2$), and importance of fashion combined affect average expenditures ($y_3$). When significant variables are combined, they can sometimes predict a larger percentage of the variance in the dependent variable. Knowing the best combination of variables allows for better predictions of apparel expenditures for all interested parties. The stepwise regression equations contained the following variables:

\[ \hat{y}_1 = x_1 + x_2 + x_3 + x_1x_2 + x_2x_3 + x_1x_3 + x_1x_2x_3 \]
\[ \hat{y}_2 = x_1 + x_2 + x_3 + x_1x_2 + x_2x_3 + x_1x_3 + x_1x_2x_3 \]
\[ \hat{y}_3 = x_1 + x_2 + x_3 + x_1x_2 + x_2x_3 + x_1x_3 + x_1x_2x_3 \]

It was found that current economic perceptions and importance of fashion ($x_1x_3$) together are better significant predictors of consumers' current apparel expenditures than current perceptions alone. Current economic perceptions and importance of fashion explain about 9.3% of the variance in current apparel expenditures, which is statistically significant, $F(1,163) = 16.700$, $p<.001$. The pairwise variables of current economic perceptions and importance of fashion make a significant contribution to the prediction of consumers' current apparel expenditures.
expenditures (p<.001). The unstandardized regression equation can be written as follows:

\[ \hat{Y} = 2.352 + 0.088x_{1x3} \]

For each additional level of increase in consumers’ current economic perceptions and importance current apparel expenditures increase .088 levels.

Current economic perceptions, future economic perceptions, and importance of fashion \((X_1X_2X_3)\), are better predictors of consumers’ future apparel expenditures, than future perceptions alone. Together they explain about 16.9% of the variance in future apparel expenditures, which is statistically significant, \(F(1,163)=21.344, p<.001\). Current economic perceptions, future economic perceptions, and importance of fashion makes a significant contribution to the prediction of consumers’ future apparel expenditures \((p<.001)\).

The unstandardized regression equation can be written as follows:

\[ \hat{Y} = 2.680 + .0221x_{1x2x3} \]

For each additional level of increase in consumers’ current and future economic perceptions and importance of fashion, future apparel expenditures increase .022 levels.

Importance of fashion was the only significant predictor of consumers’ average apparel expenditures. Importance of fashion results are discussed above in the linear regression results.

These findings are supported by our literature, theory, and research model. Since economic perceptions and sentiment have not been used to predict consumer purchase behavior of non-durables literature was very limited.
Kim (1998) found that income alone can not predict expenditures as well as when combined with other predictor variables. In 1955, Loeb used Engel’s law as a way to predict consumer expenditures. He concluded that predicting consumer expenditures requires an estimate of not only future disposable income, but estimates of other economic as social factors as well. Understanding consumers’ lifestyles, as well as basic economic principles, can help us better understand purchase decisions and purchase behavior (Lindquist and Sirgy, 2003). This study includes personal financial economic conditions as an economic variable in determining consumers perceptions of the economy, but it also combines personal financial conditions with buying conditions, business conditions, and overall economic conditions to get a better gauge of economic conditions than income alone.

Research also supports that current and future perceptions of the economy are strong indicators of consumer purchasing of non-durables such as apparel in this study (Bell, 2002). Further, research also indicated there was a twelve-month lag between the sentiment, or changing perceptions, and a change in purchase behavior of the non-durable goods (Bell, 2002). Since current or perceived economic conditions have significant effects on apparel expenditures in this study, it also shows that a significant portion of participants in this study do not just think of apparel as a necessity good, but as more of a luxury or moderate luxury good. If apparel was thought of as a necessity good like food, no matter how consumers perceive the economy, expenditures on apparel would not differ significantly, but since expenditures on apparel do differ significantly based on
perceptions of the economy apparel can be look at as more of a luxury or something we don’t need in large amounts, just want.

Clothing has been considered to be a social good in many studies (Horn & Gurel, 1981; Ryan, 1966). Most clothing studies dealing with demand and expenditures on apparel ignore the importance of fashion to individuals and the social nature of clothing (Norton & Park, 1986). This social nature may contribute to the consumption and expenditure differences in individuals, and can also contribute to stock effects, explaining why clothing may appear to be a luxury good.

The Theory of Reasoned Action by Shim, Morris, and Morgan (1989), when used to predict attitude towards purchasing clothing, included fashion importance as well as other social factors because involvement with products was found to lead to greater perception of attribute differences, and perception of greater product importance. These highly fashion involved consumers consider apparel purchases important to them, supporting inclusion of importance of fashion as an important social factor along with economic factors. When combined, these factors provide a stronger predictor variable than any of the three alone as show in our stepwise regression results.
Table 9
Linear Regression Coefficients for the Determinants of the Perception of Apparel Expenditures

<table>
<thead>
<tr>
<th>Determinants</th>
<th>Unstandardized Coefficient (R)</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>2.040</td>
<td>5.353</td>
<td>.000</td>
</tr>
<tr>
<td>Current Economic Perceptions (X1)</td>
<td>0.332</td>
<td>2.862</td>
<td>.005*</td>
</tr>
<tr>
<td>(Constant)</td>
<td>2.034</td>
<td>7.050</td>
<td>.000</td>
</tr>
<tr>
<td>Future Economic Perceptions (X2)</td>
<td>0.399</td>
<td>4.620</td>
<td>.000**</td>
</tr>
<tr>
<td>(Constant)</td>
<td>0.824</td>
<td>3.468</td>
<td>.001</td>
</tr>
<tr>
<td>Importance of Fashion (X3)</td>
<td>0.750</td>
<td>8.771</td>
<td>.000**</td>
</tr>
</tbody>
</table>

Note. \( R^2 = .048 \) for current economic perceptions; \( R^2 = .116 \) for future economic perceptions; \( R^2 = .322 \) for importance of

\*p<.01 **p<.001
Table 10

Stepwise Regression Coefficients for the Determinants of the Perception of Apparel Expenditures

<table>
<thead>
<tr>
<th>Determinants</th>
<th>Unstandardized Coefficient (R)</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>2.352</td>
<td>11.794</td>
<td>.000</td>
</tr>
<tr>
<td>X1X3</td>
<td>0.088</td>
<td>4.087</td>
<td>.000*</td>
</tr>
<tr>
<td>(Constant)</td>
<td>2.680</td>
<td>20.710</td>
<td>.000</td>
</tr>
<tr>
<td>X1X2X3</td>
<td>0.022</td>
<td>5.754</td>
<td>.000*</td>
</tr>
<tr>
<td>(Constant)</td>
<td>0.824</td>
<td>3.468</td>
<td>.001</td>
</tr>
<tr>
<td>Importance of Fashion (X1)</td>
<td>0.750</td>
<td>8.771</td>
<td>.000*</td>
</tr>
</tbody>
</table>

Note. R² = .093 for X1X3; R² = .169 for X1X2X3; R² = .322 for importance of fashion.

*p<.001
Examination of Null Hypotheses

This section discusses the results of the examination of each null hypothesis of the study. The decision to reject, or to fail to reject the null hypothesis is based on the findings of the statistical analysis. Tables 11-15 contain the results of the decisions for each hypothesis. The significance level was set at the .05 level for the decision of whether to reject or fail to reject the null hypotheses.

_Hypothesis 1._

Hypothesis 1: There is no significant influence of demographic variables of (a) gender, (b) age, (c) marital status, (d) race, (e) income, (f) education, and (g) number of children, on consumers’ perceived outlook of current economic conditions.

For hypothesis 1, no sub-hypotheses were rejected. The decision was made to fail to reject all of the hypotheses because they were not found to be significant influencers of consumers’ perceived outlook of current economic conditions.

_Hypothesis 2._

Hypothesis 2: There is no significant influence of demographic variables of (a) gender, (b) age, (c) marital status, (d) race, (e) income, (f) education, and (g) number of children, on consumers’ perceived outlook of future economic conditions.

For hypothesis 2, 2b was rejected because age is a significant influencer of consumers’ perceived outlook of future economic conditions. The decision
was made to fail to reject the other hypotheses because they were not found to be significant influencers of consumers' perceived outlook on future economic conditions.

**Hypothesis 3.**

Hypothesis 3: There is no significant influence of demographic variables of (a) gender, (b) age, (c) marital status, (d) race, (e) income, (f) education, and (g) number of children, on consumers’ importance of fashion.

For hypothesis 3, 3b and 3f were rejected because age and education are significant influencers of consumers’ importance of fashion. The decision was made to fail to reject the other hypotheses because they were not found to be significant influencers of consumers’ importance of fashion.

**Hypothesis 4.**

Hypothesis 4: There is no significant influence of demographic variables of (a) gender, (b) age, (c) marital status, (d) race, (e) income, (f) education, and (g) number of children, on consumers’ apparel expenditures.

For hypothesis 4, 4c was rejected because marital status is a significant influencer of consumers’ apparel expenditures. The decision was made to fail to reject the other hypotheses because they were not found to be significant influencers of consumers’ perceived outlook of future economic conditions.

**Hypothesis 5.**

Hypothesis 5: Consumers’ apparel buying expenditures are not affected by their perceived outlook of current economic conditions.
Hypothesis 5 was rejected because consumers’ apparel buying expenditures’ are affected by their perceived outlook on current economic conditions.

**Hypothesis 6.**

Hypothesis 6: Consumers’ apparel buying expenditures are not affected by their perceived outlook on future economic conditions.

Hypothesis 6 was rejected because consumers’ apparel buying expenditures are affected by their perceived outlook on future economic conditions.

**Hypothesis 7.**

Hypothesis 7: Consumers’ apparel buying expenditures are not affected by their importance of fashion.

Hypothesis 7 was rejected because consumers’ apparel buying expenditures are affected by their importance of fashion.
### Table 11

**Summary of Hypothesis Testing Results: Hypothesis 1**

<table>
<thead>
<tr>
<th>Null Hypotheses</th>
<th>Results of the Statistical Test</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 1a</td>
<td>F(1,163) = 0.101 p = 0.751, p &gt; 0.05</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables gender on consumers’ perceived outlook of current economic conditions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypothesis 1b</td>
<td>F(4,160) = 1.95 p = 0.105, p &gt; 0.05</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables age on consumers’ perceived outlook of current economic conditions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypothesis 1c</td>
<td>F(3,161) = 0.60 p = 0.616, p &gt; 0.05</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables marital status on consumers’ perceived outlook of current economic conditions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypothesis 1d</td>
<td>F(2,161) = 0.054 p = 0.948, p &gt; 0.05</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables race on consumers’ perceived outlook of current economic conditions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypothesis 1e</td>
<td>F(5,159) = 0.47 p = 0.802, p &gt; 0.05</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables income on consumers’ perceived outlook of current economic conditions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypothesis 1f</td>
<td>F(4,159) = 0.535 p = 0.710, p &gt; 0.05</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables education on consumers’ perceived outlook of current economic conditions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypothesis 1g</td>
<td>F(4,159) = 1.817 p = 0.128, p &gt; 0.05</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables number of children on consumers’ perceived outlook of current economic conditions.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Table 12

**Summary of Hypothesis Testing Results: Hypothesis 2**

<table>
<thead>
<tr>
<th>Null Hypotheses</th>
<th>Results of the Statistical Test</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 2a</td>
<td>$F(1,163) = 1.59$ $p = .209$, $p &gt; .05$</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>Hypothesis 2b</td>
<td>$F(4,160) = 3.11$ $p = .017$, $p &lt; .05$</td>
<td>Reject</td>
</tr>
<tr>
<td>Hypothesis 2c</td>
<td>$F(3,161) = 1.73$ $p = .162$, $p &gt; .05$</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>Hypothesis 2d</td>
<td>$F(4,159) = 2.15$ $p = .077$, $p &gt; .05$</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>Hypothesis 2e</td>
<td>$F(5,159) = 1.09$ $p = .371$, $p &gt; .05$</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>Hypothesis 2f</td>
<td>$F(4,159) = .862$ $p = .488$, $p &gt; .05$</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>Hypothesis 2g</td>
<td>$F(4,3) = .520$ $p = .729$, $p &gt; .05$</td>
<td>Fail to reject</td>
</tr>
</tbody>
</table>
### Table 13

**Summary of Hypothesis Testing Results: Hypothesis 3**

<table>
<thead>
<tr>
<th>Null Hypotheses</th>
<th>Results of the Statistical Test</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hypothesis 3a</strong></td>
<td>$F(1,74) = .096$ $p = .758$, $p &gt; .05$</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables gender on consumers' importance of fashion</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hypothesis 3b</strong></td>
<td>$F(4,57) = 5.08$ $p = .001$, $p &lt; .05$</td>
<td>Reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables age on consumers' importance of fashion</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hypothesis 3c</strong></td>
<td>$F(3,161) = 2.58$ $p = .056$, $p &gt; .05$</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables marital status on consumers' importance of fashion</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hypothesis 3d</strong></td>
<td>$F(4,159) = .74$ $p = .565$, $p &gt; .05$</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables race on consumers' importance of fashion</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hypothesis 3e</strong></td>
<td>$F(5,159) = 1.22$ $p = .300$, $p &gt; .05$</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables income on consumers' importance of fashion</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hypothesis 3f</strong></td>
<td>$F(3,160) = 3.905$ $p = .010$, $p &lt; .05$</td>
<td>Reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables education on consumers' importance of fashion</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hypothesis 3g</strong></td>
<td>$F(4,159) = 1.223$ $p = .303$, $p &gt; .05$</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables number of children on consumers' importance of fashion</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 14

**Summary of Hypothesis Testing Results: Hypothesis 4**

<table>
<thead>
<tr>
<th>Null Hypotheses</th>
<th>Results of the Statistical Test</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hypothesis 4a</strong></td>
<td>F(1,163) = 1.575, p = .211, p &gt; .05</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables gender on consumers’ apparel expenditures.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hypothesis 4b</strong></td>
<td>F(4,58) = 1.116, p = .358, p &gt; .05</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables age on consumers’ apparel expenditures.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hypothesis 4c</strong></td>
<td>F(1,157) = 5.874, p = .016, p &lt; .05</td>
<td>Reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables marital status on consumers’ apparel expenditures.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hypothesis 4d</strong></td>
<td>F(4,159) = 1.854, p = .121, p &gt; .05</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables race on consumers’ apparel expenditures.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hypothesis 4e</strong></td>
<td>F(5,159) = .530, p = .753, p &gt; .05</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables income on consumers’ apparel expenditures.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hypothesis 4f</strong></td>
<td>F(4,159) = 1.389, p = .240, p &gt; .05</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables education on consumers’ apparel expenditures.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hypothesis 4g</strong></td>
<td>F(4,159) = 1.748, p = .142, p &gt; .05</td>
<td>Fail to reject</td>
</tr>
<tr>
<td>There is no significant influence of demographic variables number of children on consumers’ apparel expenditures.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 15

Summary of Hypotheses Testing Results: Hypothesis 5-7

<table>
<thead>
<tr>
<th>Null Hypotheses</th>
<th>Results of the Statistical Test</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hypothesis 5</strong> Consumers’ apparel buying expenditures are not affected by their perceived outlook of current economic conditions.</td>
<td>$t = 2.862$ $R^2 = .048$ $p = .005, p &lt; .01$</td>
<td>Reject</td>
</tr>
<tr>
<td><strong>Hypothesis 6</strong> Consumers’ apparel buying expenditures are not affected by their perceived outlook of future economic conditions.</td>
<td>$t = 4.620$ $R^2 = .116$ $p = .000, p &lt; .001$</td>
<td>Reject</td>
</tr>
<tr>
<td><strong>Hypothesis 7</strong> Consumers’ apparel buying expenditures are not affected by their importance of fashion.</td>
<td>$t = 8.771$ $R^2 = .322$ $p = .000, p &lt; .001$</td>
<td>Reject</td>
</tr>
</tbody>
</table>
**Summary of the Chapter**

This chapter presented the characteristics of the sample with number and percentage frequencies. Then, the results of the one-way ANOVA analysis were examined to determine how consumers’ current perceptions, future perceptions, importance of fashion, and expenditures differ based on the demographic categorical variables of this study. Post hoc tests were completed for the significant ANOVA’s and differences in those selected demographic were presented in mean plots. The regression analysis was then used to see what percentage of variance in consumers’ apparel expenditure could be explained by current and future perceptions of the economy, and importance of fashion. The findings were presented and followed by discussion. A summary table of all findings and the results of the hypotheses testing were also presented.
This chapter includes a brief summary of the problems and procedures, followed by a summary of findings. Conclusions and recommendations based up on the research findings are also presented.

Summary of the Problems and Procedures

With consumer spending accounting for over sixty-five percent of the Gross Domestic Product in the United States, consumers greatly affect the economy, as well as the retail sector. The consumer, rather than business or government, has become the dominant factor in shaping the course of the aggregate U.S. economy (Curtin, 1982). The main problem this study was designed to investigate was: How do consumers’ perceptions of the economy affect spending in the apparel retail sector?

The purpose of this study was to examine whether the economy, as perceived by consumers, has any affect on the apparel purchase expenditures of consumers, and if so how personal factors such as gender, age, income, educational attainment, race, and marital status contribute to their perceptions and decisions.

After conducting a focus group it was found that the importance a person places on fashion could be an important predictor of apparel expenditures. A research model based upon Engel’s Law and The Theory of Reasoned Action
was formed using consumers’ current economic perceptions, future economic perceptions, and importance of fashion as predictors of apparel expenditures. Demographic variables were also included to see if demographics had any significant influence on current and future perceptions, importance of fashion, and/or apparel expenditures.

A four-page questionnaire was designed for the survey. A total of 30 questions were arranged into three sections: I. Economic Situations, II. Apparel Shopping Behaviors, and III. General Demographic Information. The information about the consumers’ perceptions of the economy, importance of fashion, and apparel expenditures was obtained by asking respondents a number of questions concerning demographics, perceptions of personal financial conditions, business conditions, buying conditions, overall economic conditions, expenditure data, and information to gauge how much importance they place on apparel.

Data for this study were obtained by administering the survey, using either a paper survey, or an online survey to consumers in the stratified market of Roanoke, VA. The online survey was sent to over 60 employees of a local corporate bank who were offered points towards their bonus reviews from management for completing the survey. It was also sent to a list serve of professionals and students at Virginia Western Community College in Roanoke, as well as two other list serves of over 200 people in the Roanoke metro area. Paper surveys were administered at a nail and hair salon as well as at a vendor fair. Various incentives were offered to consumers for completing the survey.
There were a total of 165 respondents to the survey. The responses were collected, coded, and analyzed using SPSS. One-way ANOVA was performed to determine how consumers’ current perceptions, future perceptions, importance of fashion, and expenditures differ based on the demographic categorical variables of this study. Post hoc tests were completed for the significant ANOVA’s and differences in those demographic variables were presented in mean plots. The regression analysis was then be used to determine percentage of variance in consumers’ apparel expenditure that could be explained by current and future perceptions of the economy, and importance of fashion.

**Summary of Findings**

Age was found to be the only demographic variable that had a significant influence on consumers’ future perceptions of the economy. The post hoc test shows that the age pairs that differ significantly are 18-24 and 55 and over. Consumers in the 18-24 age category had higher perceptions of future economic conditions than did the consumers in the 55 and over age range.

Age and education were both found to have a significant influence on the importance consumers’ placed on fashion. The post hoc test completed for age shows that the age pairs that differ significantly are 18-24 and 45-54, and 25-34 and 45-54. Consumers in the 18-24 age category, placed significantly more importance of fashion than consumers in the 45-54 age range. Also consumers of ages 25-34 had a higher importance of fashion rating than consumers of ages 45-54.
The post hoc tests for education showed that ‘high school graduate or less’ and ‘postgraduate/professional’ are the two groups that differ significantly. Participants who completed ‘some high school’ had a higher importance of fashion rating than ‘postgraduate/professionals.’

Marital status was the only demographic variable that had a significant influence on consumer’s future perceptions of the economy. Single consumers have higher apparel expenditures than married consumers.

It was found that current economic perceptions are a significant predictor of consumers’ current apparel expenditures. Current economic perceptions explain about 4.8% of the variance in current apparel expenditures, which is statistically significant, $F(1,163)= 8.189, p<.01$.

Future economic perceptions are a significant predictor of consumers’ current apparel expenditures. Future economic perceptions explain about 11.6% of the variance in future apparel expenditures, which is statistically significant, $F(1,163)= 21.344, p<.001$.

Importance of fashion is a significant predictor of consumers’ average apparel expenditures. Importance of fashion explains about 32.2% of the variance in average apparel expenditures, which is statistically significant, $F(1,162)= 76.924, p<.001$.

Stepwise regression equations were used to examine: how current economic perceptions ($x_1$), future economic perceptions ($x_2$), and importance of fashion ($x_3$) combined affect current expenditures ($Y_1$); how current economic perceptions ($x_1$), future economic perceptions ($x_2$), and importance of fashion ($x_3$)
combined predict future expenditures (Y2); and, how current economic perceptions (x1), future economic perceptions (x2), and importance of fashion (x3) combined affect average expenditures (Y3).

It was found that current economic perceptions and importance of fashion (X1X3) together are better significant predictors of consumers' current apparel expenditures than current perceptions alone. Current economic perceptions and importance of fashion explain about 9.3% of the variance in current apparel expenditures, which is statistically significant, F(1,163)= 16.700, p<.001.

Current economic perceptions, future economic perceptions, and importance of fashion (X1X2X3) together are better predictors of consumers' future apparel expenditures than future perceptions alone. Together they explain about 16.9% of the variance in future apparel expenditures, which is statistically significant, F(1,163)= 21.344, p<.001.

Importance of fashion was still the only significant predictor of consumers' average apparel expenditures.
Conclusions

The following conclusions are based on the findings of this study:

1. Age can have a significant influence on consumers’ future economic perceptions. Younger consumers have more positive perceptions of future economic conditions than older consumers.

2. Age can also have a significant influence on consumers’ importance of fashion. Younger consumers may place higher importance on fashion than do older consumers.

3. Education may have a significant influence on consumers’ importance of fashion. Consumers with less education rank fashion higher than consumers with higher levels of education.

4. Marital status may influence consumers’ apparel expenditures. Married consumers may not purchase as much apparel per-person as single consumers.

5. About 4.8% of the variance in current expenditures can be explained by current economic perceptions.

6. About 11.6% of the variance in future apparel expenditures can be explained by future economic perceptions.

7. About 32.2% of the variance in average apparel expenditures can be explained by importance of fashion. Consumers’ importance of fashion is a significant predictor of consumers’ average apparel expenditures.

8. It was found that current economic perceptions and importance of fashion (X1X3) together are better predictors of consumers’ current apparel expenditures.
expenditures than current perceptions alone, explaining about 9.3% of the variation.

9. Current economic perceptions, future economic perceptions, and importance of fashion (X1X2X3), are better predictors of consumers’ future apparel expenditures than future perceptions alone, explaining about 16.9% of the variation.

**Recommendations/ Implications**

This information should be of great use to researchers, marketers, product development firms, and supply managers. This data can help them understand how consumers use economic perceptions and information to make purchase decisions. The following recommendations are based on the findings and conclusions of the study:

1. To get a true estimate of the influence of demographics on apparel expenditures, actual expenditure dollar amounts may be needed. Absolute expenditures on clothing may be higher for consumers with higher incomes and more education, but the data available for this study did not answer these questions.

2. It may be helpful to also do ANOVA’s for individual questions that were used to determine consumers’ current and future perceptions of economy. This could show if a demographic factor such as race has any influence on how a consumer perceives their financial situation, business conditions, buying conditions, and overall economic conditions, which
were all individual parts of their overall perceptions of economic conditions. This would provide a much more detailed study of perceptions of each factor of overall economic conditions.

3. If consumers were actually able to track their actual apparel expenditures from last year, this year, and next year, and compare these with their perceived expenditures, researchers would have a truer gauge of what consumers are really spending on apparel and they would be able to compare perceptions with actual spending data to see how accurate consumer perceptions are in the expenditure area.

4. Researchers should also track perceptions of the economy along with economic data using economic indicators to determine the extent to which consumer perceptions of the economy are in line with real economic data. They could then compare the perceptions and real data with demographic variables to see which group’s perceptions matched the closest with real economic data. This would give a better gauge of which groups of consumers are following economic conditions more closely.

5. Researchers could also use real economic indicators to track the economy for the last ten years, and then compare these data to consumers’ expenditures of apparel provided by the Consumers Expenditures Survey to see if real economic conditions had any effect on consumers’ expenditures on apparel. They could also use their findings to make predictions of future apparel expenditures, along with future economic predictions.
6. These data would be most useful to business leaders, product developers, and forecasters. Businesses, product developers, and forecasters can vary their apparel supply based on current and future economic perceptions, also realizing that some consumers will still buy based on their importance of fashion. Knowing this, it would still be a good idea to gauge their target consumers’ importance of fashion. Based on the results of the study combining perceptions of current and future economic conditions, along with importance of fashion ratings, better predictions can be made about consumers’ apparel purchase expenditures. Marketers are then better able to use this information at the beginning stages of the marketing management process to help them meet their consumers’ needs and wants.

7. It can help economists and consumer educators determine if consumers are able to make smarter buying decisions if they are exposed to the right economic information. Consumers are often encouraged to buy in periods of poor economic conditions to help stimulate the economy, but that is not often in the consumers’ best interest, especially when the items purchased are luxury goods and necessities, which apparel is often thought to be.
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Appendix A

Questionnaire: Economic Perceptions and Apparel Expenditures
Economic Perceptions and Apparel Expenditures

This questionnaire is designed to help us gather information about consumer’s perceptions of the economy and how it may affect their buying expenditures of apparel. This is an anonymous survey and your answers will not be shared with anyone. However if you are interested in being included in a random drawing for a $50 Hecht’s gift card, and a $50 Best Buy gift card please provide your e-mail address or name and phone number at the end of this questionnaire, then tear off the information to ensure anonymity and submit with questionnaire.

The questionnaire is broken up into 3 sections. Please answer each and every question to the best of your ability. Do not leave any questions blank. Please feel free to contact us for any questions about this questionnaire: Adria Woods at adriaw@vt.edu or 540-818-7001. Thank you!

Section I- Economic Situation

The following questions are intended to gauge your perceptions of the economy. Please circle only one answer.

1. In general do you spend more, about the same, or less money on apparel as compared to a year ago?
   A. spend a lot more
   B. spend a little more
   C. spend the same
   D. spend less
   E. spend a lot less

2. Now looking ahead, do you plan to spend more, the same, or less on apparel in the next year than you do now?
   A. spend a lot more
   B. spend a little more
   C. spend the same
   D. spend less
   E. spend a lot less

3. In general do you spend more, about the same, or less on apparel than the average person?
   A. spend a lot more
   B. spend a little more
   C. spend the same
   D. spend less
   E. spend a lot less

4. During a period of poor economic times, spending excessive amounts of money of clothes is not good.
   A. strongly agree
   B. agree
   C. neither agree nor disagree
   D. disagree
   E. strongly disagree

5. In a period of rising prices, spending excessive amounts of money on clothes is not a good idea.
   A. strongly agree
   B. agree
   C. neither agree nor disagree
   D. disagree
   F. strongly disagree
   G.
6. items such as furniture, major appliances, and televisions.
   A. good time
   B. somewhat good time
   C. good and bad time
   D. somewhat bad time
   E. bad time

7. In about a year from now do you think that it will be a good or bad time for people to buy major household items such as furniture, major appliances, and televisions
   A. good time
   B. somewhat good time
   C. good and bad time
   D. somewhat bad time
   E. bad time

8. Are you better off, the same, or worse off financially as you were a year ago?
   A. lot better off
   B. little better off
   C. the same
   D. worse off
   E. lot worse off

9. Now looking ahead, do you think in one year from now you and your household will be better off, worse off, or just about the same as now financially?
   A. lot better off
   B. little better off
   C. the same
   D. worse off
   E. lot worse off

10. Now looking at business conditions in the country as a whole do you think that now we are having
    A. Good times financially
    B. Somewhat good times financially
    C. Good and bad times financially
    D. Somewhat bad times financially
    E. Bad times financially

11. How do you think business conditions will be in a year from now
    A. Good times financially
    B. Somewhat good times financially
    C. Good and bad times financially
    D. Somewhat bad times financially
    E. Bad times financially

12. Do you think that now the country as a whole is having continuous good times or bad times (periods of widespread unemployment and depression)?
    A. good times
    B. somewhat good times
    C. good and bad times
    D. somewhat bad times
    E. bad times

13. Looking ahead, Do you think that the country as a whole during the next 12 months will have continuous good times or bad times (periods of widespread unemployment or depression)?
    A. good times
    B. somewhat good times
    C. good and bad times
    D. somewhat bad times
    E. bad times
Section II- Apparel Shopping Behaviors

The following statements address your importance of fashion. To what extent do you agree or disagree with the following statements. Please only circle one letter for each statement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>agree</th>
<th>Neither agree or disagree</th>
<th>disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I spend a lot of money on clothes and accessories.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>2. It’s important to be well dressed.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>3. I’d spend my money on clothes sometimes before I’d spend it on other things I really need.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>4. It is important for me to be a fashion leader</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>5. I want to be one of the first to try new fashions.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>6. I am more concerned about fashion that I am about modest prices and wear ability.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
</tbody>
</table>

Section III- General Demographic Information

This section with ask you general information about yourself. Please circle only one answer for each question.

1. What is your approximate age?
   A. 18-24
   B. 25-34
   C. 35-44
   D. 45-54
   E. 55-64
   F. 65 and over

2. What is your gender?
   A. Male
   B. Female

3. Indicate your marital status.
   A. Single
   B. Married
   C. Widowed
   D. Divorced

4. What is your race?
   A. Caucasian
   B. African-America/Black
   C. Hispanic
   D. Asian/Pacific Islander
   E. Other
5. Please approximate your yearly household income before taxes.
   F. Under $20,000
   G. $20,000- $39,999
   H. $40,000- $59,999
   I. $60,000-79,999
   J. $80,000-$99,999
   K. $100,000 and over

6. What is the last grade you completed in school?
   A. Some high school
   B. High school graduate
   C. Some college
   D. College graduate
   E. Postgraduate/professional

7. Including yourself, how many persons are in your household.
   A. One
   B. Two
   C. Three
   D. Four
   E. Five or more

8. Please indicate the number of children in your household under 18.
   A. None
   B. One
   C. Two
   D. Three
   E. Four or more

9. What is your current work status.
   A. Work outside home full time.
   B. Work outside home part time
   C. Do not work outside home
   D. Self-employed

10. What is your present occupation?
    A. Professional/technical
    B. Manager/official/proprietor
    C. Clerical
    D. Sales
    E. Crafts/Trade
    F. Operator
    G. Laborer
    H. Service worker
    I. Retired
    J. Homemaker
    K. Student
    L. Unemployed
    M. Other

11. Who usually makes most of the apparel purchases in your household?
    A. You
    B. Your spouse
    C. Your parents
    D. others
Appendix B

IRB Human Subjects Approval
DATE: January 20, 2005

MEMORANDUM

TO: Irene E. Leech Apparel, Housing & Resource Mgt 0410
Adria Woods

FROM: David Moore


I have reviewed your request to the IRB for exemption for the above referenced project. I concur that the research falls within the exempt status. Approval is granted effective as of January 19, 2005.

Virginia Tech has an approved Federal Wide Assurance (FWA00000572, exp. 7/20/07) on file with OHRP, and its IRB Registration Number is IRB00000667.

cc: File
Department Reviewer LuAnn Gaskill NE 0410
Appendix C

Variables of Perceptions
The variables of current and future economic perceptions, importance of fashion, and apparel expenditures were determined by the following questionnaire items:

**Current economic perceptions.**
1. Generally speaking, do you think now is a good time or bad time for people to buy major household items such as furniture, major appliances, and televisions?
2. Are you better off, the same, or worse off financially as you were a year ago?
2. Now looking at business conditions in the country as a whole do you think that now we are having good times financially or bad times financially?
3. Do you think that now the country as a whole will have continuous good times or bad times (periods of widespread unemployment and depression)?

**Future economic perceptions.**
1. In about a year from now, do you think that it will be a good time or bad time for people to buy major household items such as furniture, major appliances, and televisions?
2. Now looking ahead, do you think in one year from now you and your household will be better off, worse off, or just about the same as now financially?
3. How do you think business conditions will be in a year from now, do you think that now we will be having good times financially or bad times financially?

4. Looking ahead, do you think that the country as a whole during the next 12 months will have continuous good times or bad times (periods of widespread unemployment or depression)?

**Importance of fashion.**

1. I spend a lot of money on clothes and accessories.

2. It's important to be well dressed.

2. I'd spend my money on clothes sometimes before I'd spend it on other things I really need.

3. It is important for me to be a fashion leader.

4. I want to be one of the first to try new fashion trends.

5. I am not as concerned about fashion as I am about modest prices and wear ability

**Apparel expenditures.**

1. In general do you spend more, about the same, or less money on apparel as compared to a year ago?

2. Now looking ahead, do you plan to spend more, the same, or less on apparel in the next year than you do now?

3. Do you spend more money on apparel than the average consumer?
Vita

Adria Woods was born April 13, 1978 in Bridgeport Connecticut. She moved to Virginia at a young age and graduated from Covington High School in 1996.

She received a Bachelor’s degree in Merchandising and Marketing with a Minor in Dance from Virginia Commonwealth University in 2001. From 2001-2002 she was employed as a retail brand manager before coming to Virginia Polytechnic Institute and State University in Fall 2002. She completed the requirements for the Master of Science in Housing, Interior Design and Resource Management with a focus in Resource Management in Spring 2005. While at Virginia Polytechnic Institute and State University she was employed as a Graduate Teaching Assistant for AHRM 2404 Consumer Rights, and a Graduate Research Assistant for Virginia Cooperative Extension, the Journal of Housing and Society, and the Virginia Tech Consortium on Energy Restructuring.

Adria played an active role in the graduate community at Tech, serving at the Vice President of the Black Graduate Students Organization for two years. She also was a organizational representative for the Graduate Student Assembly and the Black Organizations Council. Adria holds leadership roles as an active member in Alpha Kappa Alpha Sorority, and while at Tech was inducted into Kappa Omicron Nu, and Alpha Epsilon Lambda honor fraternities. She was one of the nine charter members of the Graduate School’s campus-wide Alpha Epsilon Lambda Honor Fraternity selected by the Dean of the graduate school,
based on above average academics and outstanding leadership in the graduate community.