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**THE SMART SHOPPING CONSTRUCT:
SCALE DEVELOPMENT AND VALIDATION**

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

Kelly Green Atkins
December 2008

ACKNOWLEDGEMENTS

I wish to thank all those who helped me complete my Doctor of Philosophy Degree. First, I would like to thank Charlotte and W.J. Green, my Mom and Dad, who instilled the love for reading and education in me at a young age and encouraged me to persevere and strive for excellence. I am also thankful for Gilbert and Joanne Atkins, my in-laws, who encouraged and supported me in any way they could. And for my sister, Sonya, who listened to my challenges and offered advice and consolation as needed.

I also would like to thank special friends, Stacia Couch, Archana Kumar, Kate Harper, Sarah Wilhoit, Marna Holland, Tamera Caldwell, and Nancy Coppenbarger for their contributions to my graduate work. My graduation is possible because they assisted me in various and numerous ways. In addition, I am thankful for my Bible study group and for their continued prayer support and encouragement throughout the last four years.

I would like to thank my committee chair, Dr. Kim, for the way she has driven me to do more than I could have done without her. She has been a source of inspiration and motivation during my entire graduate program. I also have the utmost respect and appreciation for the other members of my committee: Dr. Fairhurst, Dr. Ladd, and Dr. Costen. Thank you for your guidance and support.

Finally, I would like to thank John Atkins, my husband, who has given up so much over the last 5 ½ years. He has supported, encouraged, and believed in me even when I didn't believe in myself. He has willingly given up our second income in addition to most of our time together and has always comforted me by reminding me that this was just for "a season" of our lives together. Thank each of you and to God be the glory!

ABSTRACT

This study was designed to gain a better understanding and conceptualization of the term smart shopping. The specific research objectives were to: (a) investigate consumers' perceptions of the term smart shopping; (b) develop a measure of smart shopping; and (c) validate the measure of smart shopping.

A comprehensive literature review was used to identify existing smart shopping theories and to identify opportunities for expanding on the existing meanings of the term. To obtain consumers' perceptions of the term smart shopping, two focus group interviews and fifteen face-to-face in-depth interviews were employed for initial item generation and instrument development. Scale development consisted of a pilot test on a convenience sample of undergraduate students for initial scale refinement ($n = 100$), and a pretest ($n = 237$) and main study ($n = 1474$) from a consumer panel member list through a market research company for scale purification and validation. The statistical analyses were conducted separately for the purchase stages (i.e., pre-purchase, purchase, post-purchase) and product categories (i.e., clothing, grocery, electronics). Significant differences were found in each stage among the three product categories.

To compete in today's changing retail environment with shifting consumer socioeconomic patterns and preferences, retailers must decide on unique positioning strategies. This study conceptualized and tested the term smart shopping from a broader perspective than previous studies. Gaining a better understanding of the smart shopper will enable retailers to segment this consumer group more accurately. Managerial implications and directions for future research based on the findings are provided.

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CHAPTER I

INTRODUCTION

Dramatic changes are taking place in the U.S. marketplace. Socioeconomic changes such as the aging consumer population, the increasing numbers of dual-income families and single-parent households, the pervasive presence of time poverty, and the thriving technological innovations are shifting consumer shopping patterns (Crutsinger, 2006; Kim, Sullivan, & Forney, 2007). Consumers are shopping less frequently, visiting fewer stores per trip, and spending less per purchase (Reynolds, Ganesh, & Luckett, 2002). Furthermore, consumers are shopping at the closest stores or shopping during slow traffic times to reduce the total shopping time required (Alreck & Settle, 2002). Focused on the functional aspects of shopping such as task completion and product acquisition, these consumers want convenient locations and ease of shopping in addition to low prices (Poloian, 2003).

In a 2003 poll of consumers regarding reasons for *not* shopping regularly at value grocers (mass merchandisers, warehouse, and big box stores), participants indicated that the value grocers were too far away (64%), too crowded (13%), had too long and slow checkout processes (8%), and items were too hard to find quickly (4%) (Frank, Mihas, Narasimhan, & Rauch, 2003). In a similar study conducted two years later, dislike of overcrowding increased from 13% to 21% (Back, Haveron, Narasimhan, Rauch, & Sneader, 2005). These reasons for *not* shopping at value grocers seem to be connected to consumers' perceptions of excessive time and energy spent traveling to or shopping at these value stores. The results of these consumer polls appear to indicate that the benefits

of reduced prices do not always outweigh the costs of increased time and effort involved in making purchases

Wal-Mart has responded to these types of consumer complaints about the functionality of value retailer formats by experimenting with a new store format (i.e., Neighborhood Market) that is more similar to traditional grocery stores and only about a quarter of the size of a typical Wal-Mart supercenter. These restructured stores reduce customers' expenditure of time and energy with convenient locations and smaller square footage stores, which enable customers to make quicker shopping trips (Barta, Martin, Frye, & Woods, 1999; Frank et al., 2003). Dollar store retailers are another retail format that has recently received much positive attention because of the ways they meet consumer needs. A rising number of consumers are shopping at dollar stores to receive low prices, good name brand product selections, and convenient store locations while reducing the amount of time and energy needed for their shopping activities (Koch, 2005; "Low prices, treasure hunts build dollar empire," 2003; Silverstein & Roche, 2006).

In addition to the functional aspects of shopping that are focused on task completion and product acquisition, hedonic aspects are associated with the emotional benefits of shopping. Pine and Gilmore (1999) proposed that consumers desire traditional products and services (e.g., low prices, good selection), yet they are increasingly desiring "a series of memorable events." This desire for memorable events indicates that consumers are seeking emotional or hedonic benefits from their shopping experiences in addition to task completion.

Marketing in “the experience economy” requires a focus on customer experiences instead of the traditional features-and-benefits approach used by traditional marketing methods (Schmitt, 1999). Examples of experiential retailers are restaurants such as the Bubba Gump Shrimp Company and Rainforest Cafe, specialty stores such as Build-a-Bear Workshop and Bass Pro Shops, and grocers such as Whole Foods Market and Stew Leonard’s. These retailers provide more than a meal or a product; they transform their retail spaces into unique experiences that engage the customer in personal ways. Hedonic experiences are derived from attractive displays, unique product selections, and interactive environments that engage customers’ senses.

These trends and changes in the marketplace are creating consumer demand for better outcomes (e.g., satisfaction, positive feelings) in exchange for their participation in shopping activities (Poloian, 2003; Reynolds et al., 2002). Today’s busy consumers want shopping trips that minimize the costs and maximize the benefits associated with the shopping experience. The results of such shopping experiences are consumers who feel smart about their purchases although the term smart shopping has historically been defined as achieving monetary saving (Garretson & Burton, 2003; Schindler, 1989; Shimp & Kavas, 1984). In short, retailers must begin to compete for today’s “smart” shopper who places importance on both price and non-price dimensions of shopping experiences.

Purpose of the Study

The purpose of this study is to gain a better understanding and conceptualization of the term smart shopping through the use of qualitative and quantitative methods. To

conceptualize smart shopping, it is important to consider the various concepts surrounding the term. A comprehensive literature review will identify existing smart shopping concepts and theories, uncover the current academic definitions of the term smart shopping, and identify opportunities for expanding upon the existing meanings of the term. Consumers' perceptions of the term smart shopping will be further understood through the use of focus group and face-to-face in-depth interviews. Finally, a pilot test, pretest, and main study will be conducted to develop and validate a scale measuring smart shopping activities and behaviors.

Contributions of the Study

This study is important for both theory and practice. Its contributions include: (a) providing an empirically-tested measure of smart shopping; (b) identifying ways of meeting the needs of smart shoppers; and (c) suggesting methods of marketing to smart shoppers.

To compete in today's challenging retail environment where consumers' socioeconomic patterns and preferences are shifting, retailers must decide on unique positioning strategies. Gaining a better understanding of the smart shopper will enable retailers to segment smart shoppers more accurately and create more effective positioning strategies that have the potential to increase market share in this competitive environment.

Regarding theory, this study can assist academics in understanding how today's consumer uses the term smart shopping. Although the term smart shopping has primarily been defined in academe by monetary savings, this does not necessarily reflect the way

today's consumer uses the term. As a result, a more comprehensive definition of smart shopping will contribute to current consumer behavior theories.

CHAPTER II

LITERATURE REVIEW

The purpose of this study is to gain a better understanding and conceptualization of the term smart shopping through examining popular culture, a comprehensive review of literature, and consumer interviews. This chapter provides a brief examination of the term smart shopping in the popular press and a comprehensive literature review related to the theoretical framework of the study, which is based upon the foundations of economic theory, consumer efficiency, and the consumer decision-making process.

Smart Shopping in the Popular Press

The terms smart shopper and smart shopping can be seen in the popular press on newscasts, websites, and bookshelves. Articles on smart shopping discuss topics such as information gathering, planning, preparation, organization, and shopping enjoyment. In addition, they give tips on comparison shopping, saving time, saving money, and getting referrals from other shoppers (electronically or via word of mouth). For example, a book search on www.amazon.com included one book entitled “Tips of Smart Shopping” (Gross & Stone, 2002) and another book that stated “Smart shopping doesn’t always mean buying the cheapest item...” (Wallner & Maticic, 2005, p. 13).

An online search of *Home & Garden Television* (HGTV) included two episodes on smart shopping in 2002 (i.e., “Being a Smart Shopper” and smart shopping) (www.hgtv.com). The tips in these HGTV episodes on saving time and money included comparison shopping, making and sticking to a shopping list, and buying more than one of a product you love. In a recent magazine article, Hamilton-Wright (2007) emphasized

the importance of enjoyment in the smart shopping experience. She reminded shoppers of the recreational aspect of smart shopping and of the balance between finding price savings and enjoying the experience.

The nationally-known magazine, *Consumer Reports*, published by an expert, independent, non-profit organization, has included articles on how to “shop smart” since 1992. One such article discussed automobile fuel efficiency and how to save money and energy (“Drive smart, save money,” 2004), and another discussed product reliability and brand repair histories (“Buy reliable, fix smart,” 2002). The response to these smart shopping articles was so positive that the editors of *Consumer Reports* now publish a magazine entitled *ShopSmart*. The magazine touts, “you can rely on *ShopSmart* to tell the truth and help you make the smart choice every time” (“NOT your typical magazine,” 2007, p. 2). These articles indicate that shopping activities include the expenditure of time, money, and energy and often include emotional benefits from the shopping experience itself.

In a search of academic literature on the topic smart shopping, the following studies were uncovered: Garretson and Burton (2003) studied coupon and sale-prone consumers; Langer (1997) examined brand loyalty; Schindler (1998, 1989) studied smart-shopper feelings related to price promotions; and Shimp and Kavas (1984) analyzed coupon usage and the theory of reasoned action. Each of these studies placed a heavy emphasis on monetary savings related to smart shopping. This focus on price and price promotions presents an opportunity to expand the constructs of smart shopping costs and benefits beyond monetary savings.

Theoretical Framework

The theoretical framework of this study is based upon economic theory, consumer efficiency theory, and the consumer decision-making process. This section of the study will provide an examination of economic theory, identify the main components of consumer efficiency theory (i.e., costs and benefits), and discuss the consumer decision-making process.

Economic Theory

The study of economics is concerned with how individuals, companies, governments, and other organizations within our society make choices and how those choices impact the way the society's resources are used (Stiglitz, 1997). Similarly, consumption economics is the study of the choice-making processes of consumers where the desire to satisfy their wants and needs exceeds their resources (Cochrane & Bell, 1956).

The problem of choice is the central issue in consumer economics (Cochrane & Bell, 1956). The conditions of this problem are such that each consumer has (a) a finite income, (b) varied and infinite wants to be satisfied, and (c) a price to pay for each good or service. Given these conditions, consumers cannot purchase all the desired goods and services because of resource scarcity (i.e., limited resources); therefore, some combination of the available goods and services must be selected. As a result, consumers must make tradeoffs and select some combination of goods and services limited by the constraints of time, money, and energy (Stiglitz, 1997).

Utility has been defined as the psychological benefits, such as pleasure and satisfaction, that consumers derive from the goods or services they consume (Cochrane & Bell, 1956). The basic utility model says that the evaluation of a particular choice alternative is a function of the benefit of the alternative (Hansen, 1972). Hansen (1972) elaborated to say that the alternative with the highest evaluation will be selected.

According to economic theory, consumers are rational and make choices that maximize their total utility (Cochrane & Bell, 1956). Maximizing total utility is accomplished by choosing the most affordable combination of goods and services that will provide the greatest benefit (Bade & Parkin, 2007).

Rational consumers are viewed as those who weigh costs and benefits involved in each decision by taking into account all costs and not just direct expenditures (Kahneman, 2000). Further, rational consumers are also thought to seek to maximize utility (benefits received) and make decisions that accomplish this goal. This depiction of the rational consumer suggests a robot-like consumer who calculates the allocation of scarce resources for goods and services to ensure the greatest yield of utility (Boyes & Melvin, 2008). This depiction of the rational consumer accurately describes the result of consumer choice even if the actual process is not robotic.

A concept related to economic utility is ‘warm glow.’ The term warm glow is in reference to kindness or altruism that comes from doing something that is believed to be good; it is a happiness factor (Andreoni, 1990). Warm glow is incorporated into economic theory as a benefit of the expenditure of resources. One current example of consumers desiring warm glow is consumer social responsibility. Many of today’s

consumers are purchasing green products (i.e., products that have less detrimental effects on the environment) for the warm glow it gives them. If regular and green products are compared under traditional economic theories in terms of quality or price alone, the regular products might more effectively maximize total utility; however, when warm glow is the desired outcome of the green consumer, purchasing green products maximizes his/her total utility.

Bargain hunting (shopping to save money) has recently been overtaken by “treasure hunting” (not necessarily about lowest price). Treasure hunters seek good quality, low prices, and the emotional benefits of “the find” (Silverstein, 2006). The treasure hunter’s desire for the satisfaction of “the find” can be compared to the economic desire for warm glow. “The find” is a happiness factor that provides greater utility than merely the usefulness of product.

Consumers make everyday choices to minimize costs and maximize benefits because resources are scarce, and because they desire positive benefits from the expenditure of their resources. Further, many consumers make decisions (e.g., purchasing a fuel-efficient car, telling others about sale prices) for the warm glow or positive feelings that are a result of doing something good. Today’s smart shoppers can be viewed as desiring a warm glow from minimizing the costs and maximizing the total utility of their purchases of goods and services.

Consumer Efficiency

Traditional consumer efficiency literature describes shopping activities in terms of performing necessary functions at a minimal cost (Ingene, 1984). Downs (1961)

discussed the theory of consumer efficiency wherein the consumer sought to minimize consumption costs (e.g., money, time, energy) relative to outputs or benefits received (e.g., goods, information, pleasure) on a specified shopping trip. Other researchers also described consumer efficiency as the tradeoff between sacrifices and benefits (Dodds, Monroe, & Grewal, 1991; Payne & Holt, 2001) or between input and output (Ingenie, 1984).

Costs

Purchase costs have been explained with many different variables. Downs (1961) separated purchase costs into the *monetary costs* (i.e., price) and *non-monetary costs* (i.e., time, energy). In his study, monetary costs included the cost of goods and transportation and any income foregone by time spent shopping. Time costs involved traveling and parking, traveling from car to store, traveling between stores, and selecting and purchasing goods from each store. Energy costs included ‘basic’ energy expenditures (e.g., related to the normal amount of time and energy involved) and ‘extra’ energy expenditures (e.g., energy used to carry packages or assemble products once purchased).

In 1964, Bender extended the concept of consumer purchase costs by separating total purchase costs into *prime costs* (actual price of the goods) and *secondary costs* (all other costs of acquisition). He described the secondary costs as: price (e.g., installation charges, sales taxes) time (e.g., travel time, searching time), and psychological factors (e.g., frustration, annoyance). He considered the total purchase-costs to be made up of prime and secondary purchase-costs. While some consumers in Bender’s study were not heavily influenced by the secondary purchase-costs, others were influenced by these costs

because they understood that the secondary costs frequently exceeded the prime cost (price) of the goods. In both Downs' (1961) and Bender's (1964) studies, the primary cost of goods was monetary.

In a later study, Murphy and Enis (1986) conceptualized costs on two dimensions: *effort* and *risk*. Effort included the amount of money, time and energy the consumer spent to purchase a product. Risk was an assessment of the consequences of making a buying mistake. Unlike previous studies, their study grouped the consumer costs of time, money, and energy into a category labeled effort.

In addition to previous cost discussions, Swinyard (1997) described consumers' payment for purchases in terms of *opportunity costs* (e.g., the cost of pursuing one choice over another) and *psycho-social costs* (e.g., stress, anxiety and uncertainty). The author proposed that customers wanted to "get their money's worth" by receiving appropriate benefits for the costs of the purchase (Swinyard, 1997, p. 254). In another study, Bell, Teck-Hua, and Tang (1998) separated the total cost of a shopping trip into *fixed costs* (independent of the shopping list) and *variable costs* (dependent upon the shopping list). They reported that variable costs changed among trips because the shopping list differed for each trip. Through the empirical results of their study, they found that both fixed (i.e., travel costs) and variable costs (i.e., goods on the shopping list) played significant roles in consumers' store choice. For example, store location (fixed cost) and pricing format (variable cost) were both factors in consumers' store choice.

In review, shopping costs identified in the consumer efficiency literature can be classified as monetary costs (price) and non-monetary costs (time and effort); prime and secondary costs; effort and risk; opportunity costs and psychological costs; and fixed and variable costs. These studies represent many different ways in which consumer costs can be divided. In each, consumers desired to reduce the costs spent on the purchase although the definition of costs differed among studies.

Benefits

Purchase benefits have also been explained with many different variables. Downs (1961) defined benefits or returns of a shopping trip as the goods, information, and pleasure received from a shopping trip and proposed that consumers minimized costs by maximizing benefits. Other researchers reported benefits that consumers desire from their shopping experiences as: products that perform as expected (Swinyard, 1997), information (Ingene, 1984), pleasure from shopping (Babin, Darden, & Griffin, 1994; Tauber, 1972), “the right goods at the right time in the right place for the right price” (Ingene, 1984, p. 32), low price (Zeithaml, 1988), “whatever I want in a product” (Zeithaml, 1988, p. 13), and convenience (Keeney, 1999). Kim and Kang (1997) argued that shopping benefits include the quality, price, and the return on the investment of time and effort expended to purchase the products. These arguments indicate that multiple shopping benefits are likely to be received from a shopping trip. For example, one benefit of a shopping trip to an outlet mall might be receiving low prices on products, but an additional benefit might include obtaining pleasure from taking the shopping trip with friends.

Researchers have categorized shopping benefits into *utilitarian benefits* (i.e., rational, functional, task-related) and *hedonic benefits* (i.e., emotional, fun, enjoyment) (Hirschman & Holbrook, 1982; Kim & Kang, 1997; Kim et al., 2007; Mathwick, Malhotra, & Rigdon, 2001; Sweeney & Soutar, 2001). In the next sections, utilitarian and hedonic aspects are discussed to provide a clearer understanding of the desired shopping outcomes.

Utilitarian Aspect

The benefits or returns of a shopping trip can have utilitarian value. Utilitarian value has been associated with decision utility or the task-related and rational aspect of shopping (Batra & Ahtola, 1991) such as the accomplishment of productive work or “shopping as work” (Carsky & Dickinson, 1995; Sherry, McGrath, & Levy, 1993). A consumer obtains utilitarian shopping value when the necessary product is obtained; the utilitarian value is increased as the product is obtained with less effort (Griffin, Babin, & Modianos, 2000).

Academic research using the term smart shopping has primarily related to the utilitarian benefits of price and price promotions: coupon and sale-prone consumers (Garretson & Burton, 2003); price promotions (Schindler, 1989, 1998); and coupon usage (Shimp & Kavas, 1984). This emphasis on monetary savings excludes other utilitarian benefits such as saving time and effort. In addition, the emphasis on utilitarian benefits in the smart shopping literature presents a substantial opportunity to expand smart shopping benefits to include the hedonic benefits of accomplishing a task.

Hedonic Aspect

Consumers receive hedonic benefits from shopping experiences that go beyond the utilitarian accomplishment of a task. Hedonic benefits have been described as subjective, intangible benefits of shopping such as fun, enjoyment of the product, and feelings of pleasure evoked by the product (Hirschman & Holbrook, 1982). The hedonic aspect of shopping reflects the potential entertainment and emotional worth of a shopping trip and may include feelings such as arousal, satisfaction, and entertainment (Holbrook & Hirschman, 1982).

Schindler (1989) used “smart shopping feelings” to describe the ego-related aspect (i.e., self concept) of consumer emotions and excitement generated by price promotions. Jin and Sternquist (2004) investigated enjoyment as an aspect of price savings. They found that consumers’ hedonic responses were caused by price savings because “the bargain may be a source of pride, excitement, increased sensory involvement, and accomplishment” (p. 3). Mano and Elliott (1997) evaluated the hedonic value consumers received from smart purchases in which consumers felt responsible for finding bargains. In addition, Kim et al. (1997) examined shopping outputs (utilitarian, hedonic, overall value) and argued that purchases resulted in both utilitarian and hedonic benefits for the consumer. Contrary to the traditional expectation that hedonic value was driven by enjoying an attractive atmosphere or relaxing while shopping, Kim and Kang’s (1997) study indicated that hedonic shopping value was driven by making purchases at low prices.

In each of the studies mentioned, the hedonic shopping experiences that were exciting, fascinating, or desirable were a function of a utilitarian activity (i.e., monetary savings). Though the hedonic benefits of smart shopping have been discussed less frequently than the utilitarian benefits in the smart shopping literature, smart shopping does appear to include a desirable hedonic benefit component that appeals to many shoppers.

Consumer Decision-Making Process

Consumers are forced to make important decisions on the products and services they use on a daily basis. Their decisions are made from a set of alternatives that vary in size from one decision to the next (Bettman, Luce, & Payne, 1998). To assist in making decisions regarding their purchases, consumers utilize various sources of available information (i.e., memory, external sources) (Coupey, Bodur, & Brinberg, 1998).

Consumers often rely on heuristics in decision-making. Heuristics can be defined as “shortcuts, retrieved from memory, for acquiring and evaluating information” (Coupey, 1994, p. 83). When a heuristic is not available for a particular decision, consumers may opportunistically process information in order to construct a heuristic for that particular decision. Coupey (1994) found that consumers constructed and restructured decision information into a form that was easier for them to understand in order to evaluate alternatives. For example, a consumer may compute the price per unit of a product to evaluate one retailer’s unit price against a competing retailer.

Consumers also use external sources of information for their decision-making. External sources, such as the Internet, provide consumers with a vast amount of

information, enable them to obtain information from many sources, and enable them to receive it in a variety of formats (Coupey et al., 1998). Rapid technological change and new communication mediums such as the Internet have enhanced the consumer decision-making process (Bettman et al., 1998).

Researchers agree that consumers typically go through a series of steps in their decision-making process (Coupey et al., 1998). Blackwell et al. (2005) depicted the Consumer Decision-Process Model with several decision stages: need recognition, search for information, pre-purchase alternative evaluation, purchase, consumption, and post-purchase alternative evaluation, and divestment. In the *need recognition* stage, consumers perceive a disparity in their desired and actual states, which activates the decision process. In the *search for information* stage, the consumer searches his/her memory (i.e., internal search) or acquires information from outside sources (i.e., external search). In the third stage, *pre-purchase alternative evaluation*, the consumer evaluates and narrows down the options. The *purchase* stage explains the acquisition of the desired item or an acceptable substitute for the item, followed by the *consumption* stage. In the *post-purchase alternative evaluation* stage, the consumer evaluates the item based upon the satisfaction of the consumption experience. Finally, the remains of the unconsumed product are disposed of in the *divestment* stage (Blackwell et al., 2005).

Consumer decision-making can further be examined based upon individual decision-making styles. Previous consumer literature has characterized consumer styles in three ways: the psychographic/lifestyle approach (Darden & Ashton, 1974), the

consumer typology (Reynolds et al., 2002; Stone, 1954) and the consumer characteristics approach (Sproles & Kendall, 1986; Westbrook & Black, 1985).

Using the psychographic/lifestyle approach, Darden and Ashton (1974) interviewed suburban housewives and identified seven distinct preference groups based upon lifestyle: the apathetic shopper, the demanding shopper, the quality shopper, the fastidious shopper, the stamp preferer, the convenient location shopper, and the stamp haters. They found differences in lifestyle among supermarket attribute preference groups. For example, the stamp preferer chose supermarkets offering trading stamps and competitive prices. The authors proposed that the lifestyle and shopping orientations of the seven groups were valuable for understanding store patronage.

Employing the consumer typology approach, Reynolds, Ganesh, and Luckett (2002) examined traditional mall and factory-outlet mall shoppers to derive shopper typologies based upon retail attribute importance. The 16 retail attributes employed included items such as cleanliness of mall, friendliness of employees, and availability of parking. Five shopper groups were revealed through cluster analyses for the traditional mall (i.e., basic shoppers, apathetic shoppers, destination shoppers, enthusiasts, and serious shoppers) and six groups were revealed for the outlet mall (i.e., basic shoppers, apathetic shoppers, destination shoppers, enthusiasts, serious shoppers, and brand seekers). The authors proposed that understanding the types of shoppers at the retail outlets and the retail attributes the shoppers valued were important in creating competitive strategies.

In their consumer characteristics approach to consumer decision-making styles, Sproles and Kendall (1986) defined consumer decision-making style as “a mental orientation characterizing a consumer’s approach to making choices” (p. 268). Through extensive examination of decision-making, the authors identified eight consumer decision-making styles: perfectionist, brand conscious, novelty, recreational, price-conscious, impulsive, confused by overchoice, and habitual (Sproles & Kendall, 1986). These eight characteristics of decision-making are measured through a Consumer Styles Inventory.

As this review of literature indicates, there are many facets of consumer decision-making that shape buying and consumption behavior. Consumer decision-making is an important subject for academics and retailers, because it can be used to analyze, segment and target consumer groups through identifying their needs in the different decision-making stages. Three consumer decision-making stages (i.e., pre-purchase, purchase, and post-purchase) will be examined reflective of Blackwell et al.’s (2005) Consumer Decision-Process Model, because they most specifically depict the activities and outcomes associated with this study.

Chapter Summary

The researcher has examined the term smart shopping in popular culture and proposed a theoretical framework for conceptualizing smart shopping based upon a comprehensive review of literature. The popular culture smart shopping articles included references to information gathering, planning, preparing for the shopping trip, organizing, comparison shopping, saving time, saving money, getting referrals from other shoppers,

and receiving enjoyment from the shopping trip. Upon examination, the smart shopping activities included the expenditure of time, money, and energy and often discussed the emotional benefits from the shopping experience itself.

The theoretical framework of the study is based upon the foundations of economic theory, consumer efficiency, and the consumer decision-making process. Related to economic theory, consumers make everyday choices to minimize costs and maximize benefits because resources are scarce and they desire positive benefits from the expenditure of their resources. Further, many consumers make decisions (e.g., purchasing a fuel-efficient car; telling others about sale prices) for the warm glow or positive feelings that result from doing something good.

Downs' (1961) seminal paper on consumer efficiency discussed the theory wherein the consumer sought to minimize consumption costs (e.g., money, time, energy) relative to outputs or benefits received (e.g., goods, information, pleasure) on a specified shopping trip. Purchase costs have been explained with many different variables such as *monetary costs* (i.e., price) and *non-monetary costs* (i.e., time, energy) (Downs, 1961). Shopping benefits have also been explained with several different variables. The main two benefits discussed in this study will be *utilitarian benefits* (i.e., rational, functional, task-related) and *hedonic benefits* (i.e., emotional, fun, enjoyment) (Hirschman & Holbrook, 1982; Kim et al., 2007; Mathwick et al., 2001; Sweeney & Soutar, 2001).

Blackwell et al. (2005) depicted the Consumer Decision-Process Model with several decision stages: need recognition, search for information, pre-purchase alternative evaluation, purchase, consumption, and post-purchase alternative evaluation, and

divestment. Specific to this study, three decision-making stages (i.e., pre-purchase, purchase, and post-purchase) will be examined as they depict activities and outcomes expected to be associated with smart shopping.

While this review of academic literature has been valuable in conceptualizing the components of smart shopping, consumers' perceptions of the subject are necessary. A better understanding and defining of the term can be further enhanced by including consumers' descriptions of smart shopping.

CHAPTER III

METHODS

This study was designed to accomplish three objectives: (a) to investigate consumers' perceptions of the term smart shopping; (b) to develop a measure of smart shopping; and (c) to validate the measure of smart shopping.

The first section of this chapter will present the research process following the rigorous guidelines of Churchill (1979). The second section presents the research design of the qualitative inquiry in the form of focus group interviews and face-to-face in-depth interviews. The third section describes the conceptual framework of smart shopping that is the result of the qualitative analyses. The fourth section discusses measure development in terms of initial item generation and instrument development. The final section presents the quantitative methods used in the pilot test, pretest, and main study.

The Research Process

The research process for this study involved several data collection efforts, each building on the previous step(s) (see Figure 1). These steps were chosen to follow the rigorous guidelines articulated by Churchill (1979). Churchill's steps included: (a) specify the domain of the construct, (b) generate sample of items, (c) collect data, (d) purify the measure, (e) collect data, (f) assess reliability with new data, (g) assess construct validity, and (h) develop norms (1979).

The first step of Churchill's (1979) suggested procedure for developing better measures, specifying the domain of the construct, was accomplished via an academic literature review and a review of popular consumer periodicals and websites. These

Churchill's (1979) Suggested steps for developing better measures

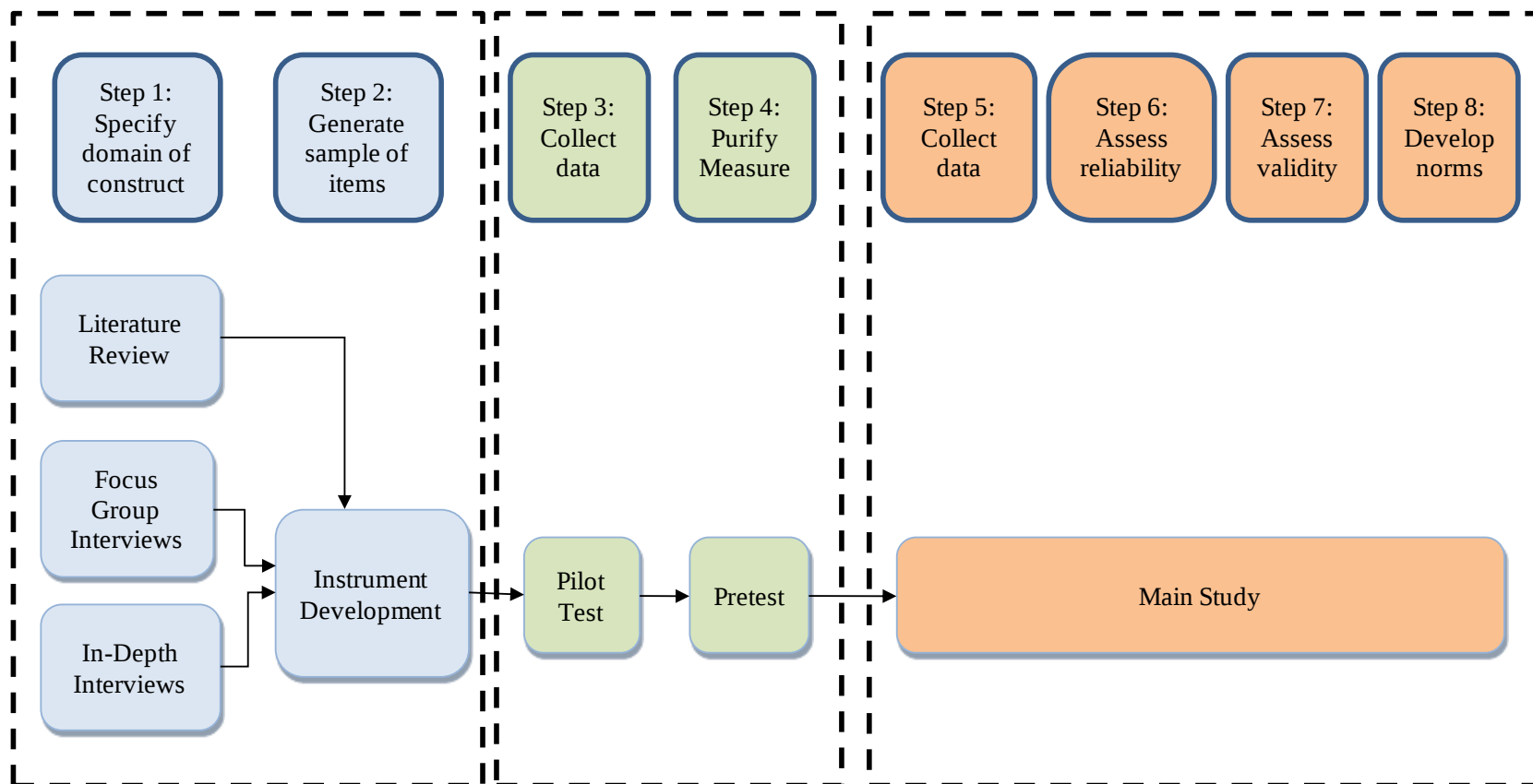


Figure 1 Smart Shopping Research Process

reviews were conducted to identify existing concepts related to the term smart shopping and to examine existing smart shopping theories. Step two, generating a sample of items, was accomplished via the literature review, focus group interviews, and face-to-face in-depth interviews. Focus group interviews were used because they are particularly effective in the exploratory stages of research efforts at generating a range of opinions about a specific topic (Morgan, 1988). Face-to-face in-depth interviews were used to obtain a depth of information about the consumers' view of smart shopping (Morrison, Haley, Sheehan, & Taylor, 2002). The literature review was combined with the interview analyses and both were utilized in instrument development.

Steps three (collecting data) and four (purifying the measure) were accomplished by collecting and analyzing data generated from a pilot test and a pretest. The pilot test and pretest data were examined to determine whether the individual scale items belonged to the domain of the concept and to evaluate the internal consistency of the items. Steps five (collecting data), six (assessing reliability), seven (assessing validity), and eight (developing norms), were conducted with the main study data.

Qualitative Inquiry

Employing qualitative methods in the exploratory stages of this study gave the researcher the opportunity to gather and incorporate everyday consumers' views and perspectives into the proposed smart shopping model. Consumers' perspectives helped to more clearly define the term smart shopping beyond the current focus on price and price promotions.

Qualitative research is an interpretive, naturalistic approach to the world that attempts to understand and interpret what meanings people ascribe to phenomena (Denzin & Lincoln, 2005). The qualitative approach can assist in developing a deeper understanding of the nuances of phenomena. Qualitative research was described by Strauss and Corbin (1998) as “the nonmathematical process of interpretation, carried out for the purpose of discovering concepts and relationships in raw data and then organizing these into a theoretical explanatory scheme” (p. 11). In this study, the researcher is seeking to understand what the term smart shopping means to consumers and how they feel about their smart shopping trips. Thus, qualitative methods are uniquely designed to explore this topic.

Focus group methodology and face-to-face in-depth interviews were employed in this study. The focus group interviews were analyzed with an ethnographic summary and the face-to-face in-depth interviews were subjected to an inductive coding procedure. The results of the two interview methods were combined with the review of literature for instrument development.

Focus Group Interviews

Focus group interviews were chosen as the first data collection technique for this exploratory or preliminary study because this method allows the researcher to gather a broad range of customer perceptions about the topic in a relatively short period of time (Gibbs, 1997; Krueger, 1994; Morgan, 1988). Focus groups are a form of group interviewing; however, it is the interaction within the group that produces insightful data (Morgan, 1988). The goal of the focus group interviews in this study was to identify

information regarding: (a) meanings associated with the term “smart shopping” and (b) activities or behaviors involved in making a person feel like a smart shopper.

The focus group interviews in this study were not used as a self-contained method, but as “preliminary research to prepare for specific issues in a larger project” (Morgan, 1988, p. 24). This method suited the present study, because the term smart shopping needed to be explored more thoroughly to prepare for the large-scale main study.

The participants were selected from a convenience sample of graduate students, faculty, and staff members in the Retail, Hospitality, and Tourism Management (RHTM) department at a major southeastern university. Ideally, the focus group should bring together six to twelve individuals who share the experience of interest (Fern, 2001; Krueger, 1994; Morgan, 1988). The target audience of the focus group interview was general consumers; therefore the invitation for participation was emailed to all faculty, staff, and graduate students in the RHTM department. In his textbook on consumer behavior, Solomon defined a consumer as “a person who identified a need or desire, makes a purchase, and/or disposes of the product” (2002, p. 528). For the purpose of this study, general consumers were all individuals over age 18 that purchase goods. This sample population was chosen to provide the most general applicability to the population at large.

The focus group interviews were scheduled during lunchtime and food was provided. Lunchtime was chosen because there were fewer scheduling conflicts with the classes being taught and it did not take university employees away from their regular

work. Food was provided based upon the recommendation of Krueger (1994) who proposed that the presence of food “tends to promote conversation and communication within the group” (p. 109).

The focus group session was held in the RHTM conference room because Krueger (1994) and Morgan (1988) suggested a room that is familiar, easy to access, and provides a large conference table and comfortable chairs where participants could make eye contact with all other participants and the moderator. The location of focus group interviews “is dictated by its accessibility and acceptability to the respondents” (Fern, 2001, p. 164). Only two focus group interviews were conducted in the interest of time and because, according to Krueger (1994), the first two groups provide the most new information even when additional focus groups are conducted. Further, the focus group interviews were followed by face-to-face in-depth interviews; therefore, the researcher felt that additional focus groups were not essential.

Because of the size of the room, voluntary participation, and the nature of the study, the first focus group consisted of nine participants and the second consisted of eight participants. The recommended size of the focus group interviews is 6 to 12 participants (Fern, 2001; Krueger, 1994; Morgan, 1988). Fewer than 6 participants limits the total range of experiences of the group and more than 12 participants limits each individual’s opportunity to share insights (Krueger, 1994).

The two focus group interviews were structured to create homogeneity in terms of group composition. Homogeneity helps the participants feel comfortable about sharing their individual perspectives without feeling shy or intimidated by others in the group.

Group composition affects compatibility, cohesiveness, and the group process; the more the individuals identify with the group and the more they are attracted to other group members, the more cohesive the group will be (Fern, 2001). Fern (2001) proposed that homogeneous groups should spend more time interacting with one another and should be more compatible and cohesive than heterogeneous groups.

Other researchers reported that homogenous groups may not reveal diverse opinions and experiences (Gibbs, 1997). Focus groups must have “sufficient variation among participants to allow for contrasting opinions” (Krueger, 1994, p. 77).

Heterogeneous groups “increase the diversity and range of positions taken on issues that are discussed” (Fern, 2001, p. 17); however, too much heterogeneity may stifle group discussion because the members are incompatible (Fern, 2001; Gibbs, 1997). As a result, within-group homogeneity and between-group heterogeneity is most desirable (Fern, 2001; Krueger, 1994).

The graduate student focus group consisted of eight females and one male, ranging in age from 21 to 50 years. The faculty/staff focus group, with ages ranging from 31 to 60 years, was made up of eight females. The two focus groups were heterogeneous between the groups in terms of age, job, and academic classification in that one consisted of graduate students and the other consisted of faculty/staff members. The faculty/staff group was homogeneous in terms of gender; the graduate student group was homogeneous in terms of role within the university (i.e., all graduate students).

The primary researcher moderated the focus group and an unbiased recorder took written notes. It is important that the moderator has adequate background knowledge of

the topic, uses mild, unobtrusive control over the group, respects the participants, and is self-disciplined to withhold his/her personal opinions (Fern, 2001; Gibbs, 1997; Krueger, 1994). It is also important that the recorder takes comprehensive notes during the discussion of participants' complete statements.

The researcher had classroom teaching experience that enabled her to moderate and facilitate the group discussion; further, she obtained adequate background knowledge of focus group interviewing through a review of focus group literature, websites, and books. In addition, the researcher had individual conversations with researchers experienced in focus group interviewing techniques.

The recorder was a professional researcher experienced in conducting focus group interviews with the Center for Business and Economic Research at a major southeastern university. In addition, the recorder had no association with the research topic, committee, or department. The recorder attempted to document participant statements as clearly as possible, but was forced to paraphrase when the discussion progressed quickly.

The interview began with welcoming the participants and introducing the moderator and note taker. Participants were asked to speak freely and share their individual points of view and were reminded that there was no right or wrong answer. Participants were assured that the researcher and recorder would maintain confidentiality and that their responses would only be used for research purposes. The researcher ensured that the participant names were not associated with their responses by giving each participant a number and referencing their responses with their unique number. In addition, since there were no video or audio recordings of the interviews, their

confidentiality was further assured; however, focus group confidentiality is challenging because there is always more than one participant in the group (Gibbs, 1997).

The researcher developed three open-ended questions for the focus group interviews (see Appendix A). The typical one-to-two hour time span of focus groups limits the number of topics that can be explored (Morgan, 1988), and subsequently the number of questions asked. For an exploratory study, Morgan (1988) suggested exploring only two or three topics. The open-ended focus group questions were derived from the popular culture and academic literature review about smart shopping. The review prompted the researcher to solicit the focus group participants' perceptions of the term smart shopping and the activities and behaviors involved in smart shopping.

Each of the three main questions was posed to the groups. Probing questions were used to elicit additional information when participants made vague comments. Probing questions helped provide more detailed responses (Krueger, 1994). Examples of the probing questions used in this study are located in Appendix A. These questions were asked, as necessary, for clarification or explanation. To insure "the questioning route is logical and complete" (Krueger, 1994, p. 55), the moderator asked the final question, "Have we missed anything?" Each focus group interview lasted approximately one hour; this was well within the guidelines of one-to-two hours prescribed by Morgan (1988) and Krueger (1994).

As suggested by Morgan (1988), the moderator and recorder had a debriefing, immediately after each focus group session. They discussed and summarized topics and

themes shared by the focus groups in addition to comparing field notes taken during each session.

Focus Group Interview Data Analyses

The researcher used an ethnographic approach to analyze the focus group data. The ethnographic approach relies more heavily on quotations from the group discussions rather than numerical descriptions of the data (Morgan, 1988). This approach was consistent with the two goals of the present focus group interviews (i.e., understanding the meaning associated with the term smart shopping and identifying the activities or behaviors involved in making a person feel like a smart shopper).

To gain a better understanding of the information gathered in the focus group interviews, the researcher reviewed the notes from each focus group and created response categories based upon prior knowledge, review of literature, and topics that emerged from the data. While participants shared a wide range of views, clear patterns emerged from the data. There were a total of 17 categories discovered during the data analysis (see Table 1). To be considered a category, the topic had to be discussed by more than one participant in both focus group interviews. Topics that were not discussed by both focus groups or by more than one participant were not included in the 17 categories.

Some response categories were generated based upon prior knowledge of the researcher as a consumer. For example, the information search category was generated through participant discussions about using the Internet to search for information combined with the researcher's prior experience conducting research prior to making a purchase. Other categories were generated from the literature. For instance, making

Table 1 Smart Shopping Categories and Illustrative Comments: Focus Group Interviews

Theme	Category	Illustrative Comments
Goals	Save Time	<i>If it saves time, yes, it's smart.</i>
	Save Money	<i>Looking for bargains</i>
	Enjoying the Experience	<i>I can spend hours in Target and enjoy it.</i>
	Focusing on Value	<i>The smart shopper weighs more on value than on price.</i>
Activities/Behaviors	Comparison Shopping	<i>Knowing what differs between retailers and prices.</i>
	Information Search	<i>It is all about the information search.</i>
	Marketplace Knowledge	<i>Knowing where to go to get what you want.</i>
	Making Tradeoffs	<i>I now I get better quality but then it costs more.</i>
	Waiting	<i>You wait. If you really want it, you'll go back.</i>
Feelings/Outcomes	Comparing Purchase with Friends	<i>Compared to other people, I get a better deal.</i>
	Comparing Purchase with Past Purchases	<i>We did better than last time.</i>
	Winning	<i>It is a great feeling- you feel like you won.</i>
	Hard Work	<i>It is way too much work.</i>
Importance	By Product	<i>Criteria changes based on the product... and how important it is to you.</i>
	By Price Range	<i>When buying big items, I'll care. Little items, no.</i>
Opposites of Smart Shopping	Emotional Shopping	<i>A smart shopper is not emotional.</i>
	Impulsive Shopping	<i>Smart shopping does not include a lot of impulsive buying.</i>

tradeoffs of costs and benefits was labeled as a category based on the finding that participants sacrificed price (cost) for time (benefit) and that they seek to obtain more (benefit) than they spend (cost). Additionally, new categories such as waiting emerged from the data based on the finding that participants must sometimes wait to make a smart purchase.

Thematic findings

The 17 categories discovered during the focus group interviews were further sorted into five smart shopping themes: (a) goals, (b) activities/behaviors, (c) feelings/outcomes, (d) importance, and (e) opposites of smart shopping (see Table 1). These themes are higher-level constructs into which the researcher organized the 17 categories.

Goals

The two most frequently mentioned goals of smart shopping were to save time and to save money. Participants felt that a smart shopper was “someone who saves money and time.” One participant said, “If it saves time, yes, it’s smart” and another said smart shopping was “looking for bargains.” Another goal discussed by the participants was enjoying the smart shopping experience. This goal is evidenced by one participant who said, “I can spend hours in Target and enjoy it.” Focusing on value was the last goal of smart shopping that was brought forth in both focus group interviews. This was explained by the participant who said, “The smart shopper weighs more on value than on price.”

Activities/Behaviors

Based upon the focus group interviews, there appeared to be five specific types of activities or behaviors in smart shopping: comparison shopping, information search, marketplace knowledge, making tradeoffs, and waiting. Participants said that comparison shopping was a smart shopping activity. Comparison shopping can be done by physically visiting two or more stores, by searching through sale papers, or through searching the Internet. One participant demonstrated the presence of comparison shopping with the statement that smart shopping meant, “Knowing what differs between retailers and prices.” Another participant described it as “product comparison.”

Information search was another activity involved in smart shopping. The participants discussed many different ways that they conducted information searches, but the consensus was that it was smart to do so. One participant stated, “It is all about the information search.”

Another smart shopping activity discussed during both focus group interviews was having marketplace knowledge. The marketplace knowledge discussions included knowing where to shop and knowing people to ask about specific purchases. One participant described marketplace knowledge as, “Knowing where to go to get what you want” and another said, “You select different stores for different activities.” In addition, participants discussed the fact that marketplace knowledge can be gleaned from other consumers. In reference to knowing people to ask, one participant said, “I had to rely on other people.”

The final smart shopping activities discussed were making tradeoffs and waiting. Even though the ways participants made tradeoffs differed, the presence of making tradeoffs in smart shopping was evident. Regarding making tradeoffs, one participant said, “I know I get better quality but then it costs more,” and another said “I will sacrifice price for time.” The concept of waiting was one topic that was not discovered in the review of literature. Regarding technology, one participant said, “In the beginning it is expensive, so smart shoppers wait.” Another said, “I browse then wait for sales.” Finally, one participant said, “You wait. If you really want it, you’ll go back.”

Feelings/Outcomes

The third theme from the focus group interviews included the feelings or outcomes associated with smart shopping. Categories included: comparing one’s purchase with friends, comparing purchase to past purchases, winning, and hard work. Examples of the first category (comparing purchase with friends) included, “Compared to other people, I get a better deal” and “I feel smart when I compare my shopping with others.” This category seems to exemplify the fact that participants got affirmation for their smart shopping by comparing their purchases with other shoppers. An example of the second category (comparing purchase to past purchases) was, “We did better than last time.” This category was another type of affirmation wherein the participant was always trying to make a “smarter” purchase. The third category of feelings or outcomes was winning. An example of the feeling of winning at smart shopping was, “It is a great feeling- you feel like you won.” Finally, the last category was labeled hard work. This category described negative feelings sometimes associated with smart shopping. An

example that was mentioned by both focus groups about smart shopping was, “It is way too much work.”

Importance

The fourth theme of smart shopping was the importance of the purchase. Participants discussed how the importance of the purchase differed by product and by price range. For example, one participant described importance by saying, “Criteria changes based on product ... and how important it is to you.” This quote depicts the way importance can differ by product category. Participants also indicated that importance changed based upon price range. An example was, “When buying big items, I’ll care. Little items, no.”

Opposites of Smart Shopping

The last theme uncovered in the focus group data was composed of things that were not a part of smart shopping. Participants of both focus group interviews mentioned that emotional shopping was not smart and that impulsive shopping was not smart. An example of the emotional shopping category was, “A smart shopper is not emotional.” An example of the discussion about impulsive shopping was that smart shopping does not include “a lot of impulsive buying.”

Outcome of Focus Group Interviews

The information gained from the focus group interviews provided a better understanding of the goals, activities, outcomes, importance, and opposites of smart shopping. This understanding was important, because it was utilized in the construction of scale items by providing insight into how the participants talked about the topic

(Morgan, 1988) and to develop a semi-structured list of questions for the face-to-face in-depth interviews (Hall & Rist, 1999; Morgan & Spanish, 1984).

Focus group interviews are an exploratory qualitative research technique that do not provide precise or absolute measures but instead provide directions for further research. The results of this study were used to generate smart shopping ideas for further testing and should not be generalized to the general population, because of the limited number of respondents involved in the study.

Face-to-Face In-Depth Interviews

After the focus group interviews, the researcher used face-to-face in-depth interviews in an attempt to more precisely understand the meaning that consumers gave to the term smart shopping. This method focuses on the words, thoughts, and opinions of the participants, which produces a depth of information regarding individuals' experiences (Morrison et al., 2002). Unlike the focus group interviews that provide a broad range of topics on the subject matter, face-to-face in-depth interviews provide further details about the topic of interest. Face-to-face interviews also provide a natural setting for the participants to talk more freely and truthfully and they are long enough for the participant to have sufficient opportunity to share meaningfully about the topic of interest (Morrison et al., 2002).

Advantages of in-depth face-to-face interviews include: the amount of information obtained, the moderator's control of the interview, no problem of group conformity, ability to observe contextual factors such as body language or tone of voice during the face-to-face interaction, and the ability to probe incomplete responses from

participants (Hall & Rist, 1999). In this study, the face-to-face interviews provided a deeper level of information about the term smart shopping and about the activities and feelings involved in smart shopping, which yielded a more clearly defined term. In addition, applying the two methods of interviewing (i.e., focus group and individual interviews) cross-validated the findings of the interviews (Morgan, 1988).

For the semi-structured, face-to-face in-depth interviews, the researcher recruited fifteen participants via telephone or email by using purposive sampling. Purposive sampling is a nonprobability sampling technique in which participants are selected based upon the researcher's judgment about the appropriate characteristics of the participant (Zikmund, 2003). Qualitative research, such as face-to-face in-depth interviews, seeks to purposefully select participants "that will best help the researcher understand the problem and the research question" (Creswell, 2003, p. 185). The researcher selected the sample of participants by approaching acquaintances, by telephone or email, briefly describing the university-based research project, and asking if the individual would be willing to give their input on smart shopping experiences.

Consumers who were willing to share their opinions about smart shopping were chosen as the purposive sampling criteria for this study and an interview location and date were arranged. Those consumers who felt they did not have anything to contribute to an interview about smart shopping declined to participate, but the researcher asked for a recommendation of someone else who might be interested in talking about his/her smart shopping experiences. Based upon quota sampling, a range of male and female respondents in a range of age groups living in four somewhat distant geographic locations

were selected. The purpose of this type of sampling is to enable various subgroups within the population to be represented in the sample of the study (Zikmund, 2003).

The smart shopping face-to-face interviewing ceased at fifteen interviews, because the sample size was sufficient for the exploratory study and because the data collection became redundant. Strauss and Corbin suggested that “data collection continues until theoretical saturation takes place” (1998, p. 292). Theoretical saturation is reached when no new information is being gained and any additional information might be so small as to add very little value to the study (Strauss & Corbin, 1998; Taylor, 1994). Theoretical saturation or redundancy is usually reached between 8 and 15 interviews (Morrison et al., 2002; Taylor, 1994). In addition to theoretical saturation or redundancy, Strauss and Corbin (1998) recognized the necessity of taking into consideration time and energy constraints as well as the availability of participants. The face-to-face interviews were held in the participants’ home or office, and lasted approximately one hour. The location and length of the interviews adhere to the recommendations made by qualitative researchers for conducting interviews in natural settings for 30 minutes to two hours (Morrison et al., 2002).

Participants’ demographic characteristics are summarized in Table 2. Ten of the participants were female; most were married; and all had some college education. Participants’ ages ranged from 20s to 60s and each resided in one of four geographic locations: Johnson City, TN; Atlanta, GA; Washington D.C.; or Charlotte, NC. The researcher chose the four geographic regions of the interviews to represent several rural and metropolitan locations in the eastern United States and for convenience.

Table 2 Sample Characteristics: In-Depth Interviews

Characteristic		Total Sample (%)
Age (years)	21-30	60
	31-40	33
	41-50	13
	51-60	7
	over 60	20
Gender	Male	33
	Female	67
Marital Status	Married	60
	Not married	40
# Children at home	0	67
	1	0
	2	20
	3	13
	more than 3	0
Level of Education	Some college	7
	College degree	67
	Masters degree	20
	Doctoral degree	7
Place of Residence	TriCities, TN	47
	Metro Charlotte, NC	27
	Metro Atlanta, GA	13
	Metro Washington, DC	13

Note: n = 15

The researcher prepared for conducting the face-to-face in-depth interviews in three ways: (a) by taking a graduate course focused on qualitative research methods; (b) by reviewing academic literature regarding conducting interviews; and (c) by conducting two practice interviews that were reviewed and evaluated by a notable qualitative researcher in the School of Advertising and Public Relations at a major southeastern university.

The face-to-face in-depth interviews were conducted based on a semi-structured interview schedule, which was followed in all interviews (see Appendix B). The researcher employed questions similar to those used in the focus group interviews; however, planned prompts or questions that beseeched the participants about their initial answers were used as needed “to give them the opportunity to consider and discuss phenomena that do not come readily to mind or speech” (McCracken, 1988, p. 35). All face-to-face in-depth interviews were conducted by the researcher, tape recorded, and transcribed verbatim by a professional transcriptionist.

The following safeguards, suggested by Creswell (2003), were employed to protect the rights of the participants: (a) the Institutional Review Board granted approval of the study before the interviews were conducted; (b) the objectives of the research project were articulated verbally and in written form to each participant; (c) written agreement to participate in the study was received from each participant; (d) participants were informed of data collection devices used; and (e) participants were assured confidentiality of their responses. No reference was made in oral or written reports, which otherwise could link participants to the study. The professional transcriptionist was

only given the tape recorded interviews labeled Participant A through Participant P. The audio tapes did not provide any further identifiers of the participants.

Face-to-Face In-Depth Interview Data Analyses

Once the interviews were transcribed, the data from the 15 face-to-face in-depth interviews were input into QDA Miner, a qualitative data analysis software program. This software program allowed the researcher to annotate, sort, and retrieve coded sections of text for studying patterns among codes. As suggested by Strauss and Corbin (1998), computer programs are extremely helpful in creating order out of a mountain of interview notes.

Strauss and Corbin's (1998) research methodology (i.e., open coding and axial coding) was used to analyze the face-to-face in-depth interviews. After obtaining a general sense of the interviews, the primary researcher, secondary researcher, and a colleague in the RHTM department began open coding. Open coding is accomplished by opening up the text and exposing the thoughts, ideas, and meanings contained in the interview data to assist in uncovering, naming, and developing concepts (Strauss & Corbin, 1998). To accomplish this, each of the three researchers read the fifteen interviews, naming and categorizing phenomena as she progressed, resulting in the initial smart shopping concepts (e.g., using coupons, purchasing in bulk). As each additional interview was analyzed, new concepts emerged.

Next, the researchers read through their notes, looking for commonalities in concepts identified in the coding (i.e., reading a magazine, conducting an Internet search). Similar concepts were clustered together in order to identify more abstract

categories of smart shopping (i.e., pre-purchase). Then these categories were sorted into subcategories (i.e., conducting research).

Finally, the categories and concepts that were taken apart during open coding were reassembled by identifying relationships among the categories during the process of axial coding (Strauss & Corbin, 1998). It is during the axial coding process that the researcher begins to identify how categories relate to one another. For example, the researcher of the present study discovered that the smart shopping activities and behaviors discussed in the face-to-face in-depth interviews could be separated into three phases: pre-purchase, purchase, and post-purchase. Smart shopping sub-categories such as conducting research and planning were obviously a part of pre-purchase activities, while positive feelings and satisfaction were a noticeable part of post-purchase evaluations.

Conceptualization of Smart Shopping

In line with Blackwell et al.'s (2005) Consumer Decision-Process Model, the participants of both focus groups and the face-to-face in-depth interviews made reference to smart shopping activities that could be separated into three phases of the model: (a) the pre-purchase stage (i.e., information search, comparison shopping, planning for purchase, and planning for sale purchases); (b) the purchase stage (i.e., making tradeoffs, getting convenience, getting the right product, saving money, saving time, and saving effort); and (c) the post-purchase stage (i.e., positive feelings, satisfaction, usefulness, getting rewards, and word of mouth) of smart shopping.

Conceptual Framework

Incorporating the literature review and results of the qualitative analyses, the original smart shopping model included smart shopping activities and outcomes (see Figure 2). Further, smart shopping activities were separated into pre-purchase activities and purchase activities while smart shopping outcomes represented post-purchase results. The participant responses related to the pre-purchase activities were then sorted into four sub-categories: information search, comparison shopping, planning for purchase, and planning for sale purchases. Consumer purchase activities were evaluated and sorted into six sub-categories: making tradeoffs, getting convenience, getting the right product, saving money, saving time, and saving effort. Post-purchase activities were sorted into five sub-categories: positive feelings, satisfaction, usefulness, getting rewards, and word of mouth.

The results of these coding processes contributed to the overall framework for conceptualizing smart shopping. Table 3 presents the three smart shopping categories separated into the sub-categories with examples of participant responses. An example, of one participant response in the pre-purchase category under the sub-category labeled planning for purchase was “I took time and waited for what I needed.” Examples of additional illustrative comments can be found in Table 3.

These smart shopping variables were consistent with economic theory (e.g., trade-offs, post-purchase evaluations reflecting warm glow) (Cochrane & Bell, 1956), consumer efficiency (e.g., minimizing costs of money, time, effort) (Downs, 1961), and the consumer decision-making process (e.g., pre-purchase, purchase, post-purchase)

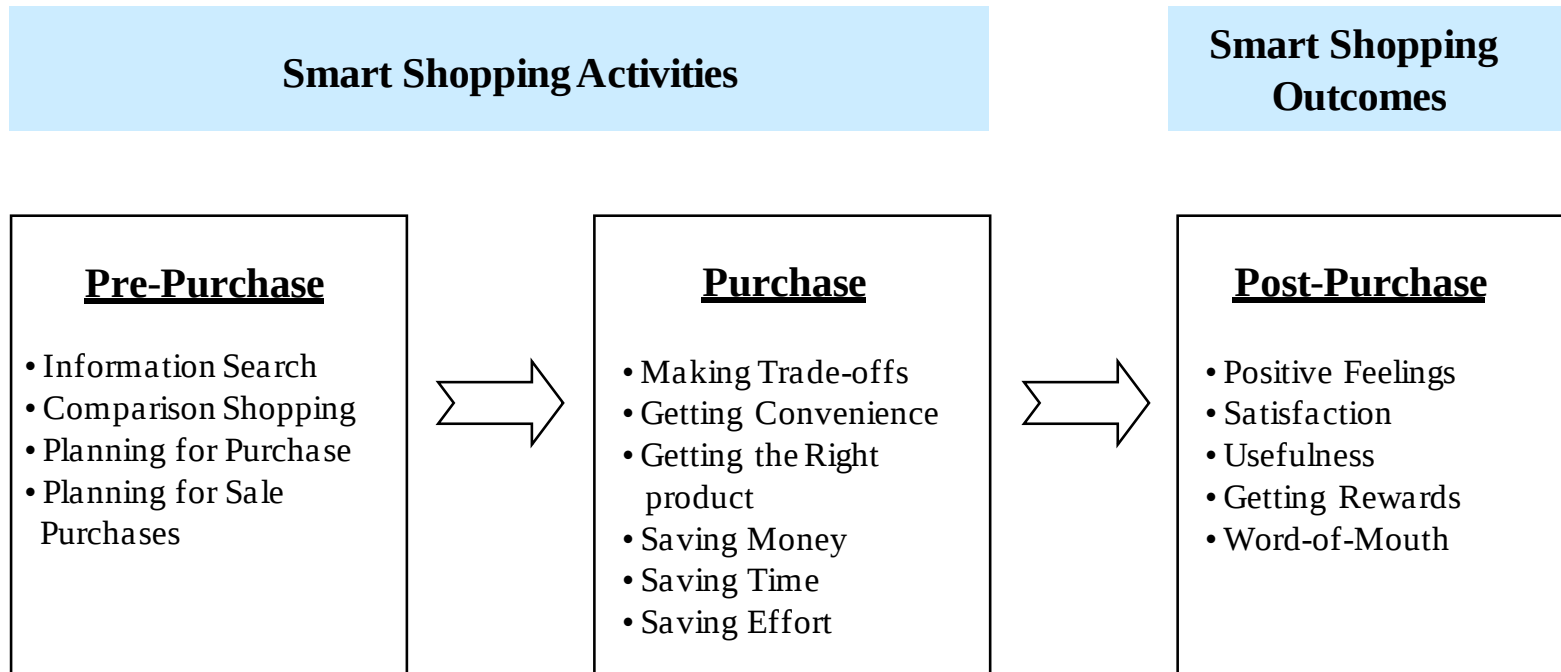


Figure 2 Smart Shopping Conceptual Framework

Table 3 Smart Shopping Categories and Illustrative Comments: In-Depth Interviews

Category	Sub-Category	Illustrative Comments
Pre-Purchase	Planning for Purchase	<i>I know what I'm willing to spend</i>
		<i>I took time and waited for what I needed</i>
	Information Search	<i>I read Consumer Reports magazine</i>
		<i>I use Internet to do research on the product</i>
		<i>I ask others about their experiences</i>
	Planning for Sale Purchases	<i>I go through the ads and making my list as I'm doing it</i>
		<i>I delayed my purchase until a sale was offered</i>
	Comparison Shopping	<i>Knowing what the competitors are offering</i>
		<i>I went to two different dealerships</i>
Purchase	Making Tradeoffs	<i>If you wait, you might get it at a better price</i>
		<i>It's better to pay more money and get more service</i>
		<i>I'll sacrifice a little selection, a little bit of money here and there for that convenience</i>
		<i>It takes a little time in the overall scheme of things, but the results of it are so beneficial</i>
	Saving Money	<i>Being able to get what I want at a price I'm willing to pay</i>
		<i>I'm looking at the cost per unit usually</i>
	Saving Time	<i>I think it is a wise use of time</i>
		<i>I go in there and it takes so much time</i>
	Saving Effort	<i>It is a pain in the neck to go up there</i>
		<i>Wal-Mart is just such a hassle</i>
	Getting Convenience	<i>TJ Maxx is closer to my house</i>
		<i>With my PDA, I'm more efficient in my work</i>
	Getting the Right Product	<i>I got exactly what I wanted</i>
		<i>This product was perfect for me</i>
Post-Purchase	Positive Feelings	<i>It was a wise use of money</i>
		<i>It gave me a sense of accomplishment</i>
		<i>We were excited</i>
	Satisfaction	<i>I am pleased, satisfied with my purchase</i>
		<i>I thought that was a very satisfying experience</i>
	Usefulness	<i>This was smart because it's got multiple uses</i>
		<i>I've gotten a lot of use out of it</i>
	Getting Rewards	<i>It was better than expected</i>
		<i>I got some extra things on it for free</i>
	Word of Mouth	<i>Two years later we'll still be talking about it</i>
		<i>You want to show other people the deal you got</i>
		<i>I can go home and brag about what I just got</i>

(Blackwell et al., 2005) and were utilized in developing measurement items.

Measure Development

Based upon the findings from the academic literature review and the qualitative interviews, the researcher constructed scale items to conceptualize smart shopping and borrowed existing measurement scales for validity-checking variables. The initial item generation and instrument development will be discussed next.

Initial Item Generation

The initial item generation from the qualitative interviews and review of academic literature produced 130 smart shopping scale items in three stages: 29 items for pre-purchase, 62 items for purchase, and 39 for post-purchase. To evaluate content and face validity, the researcher used the Delphi method by employing a knowledgeable group of experts (i.e., a professor and six graduate students specializing in consumer behavior).

The seven experts evaluated the 130 smart shopping measurement items based upon clarity of wording and upon the items' representation of smart shopping activities (e.g., information search, planning for purchase) or outcomes (e.g., satisfaction, usefulness). Although the Delphi method has garnered criticism as being unscientific and inaccurate, it has also received support from other studies that have successfully used the method for estimating and forecasting ("The delphi method," n.d.). The success of the method resides in the formation of group judgment when the group members are knowledgeable experts.

The experts were asked to make comments on the pool of items and wording revisions were made based upon their feedback. Scale items that were not clear, not

representative of the domain, or open for misinterpretation were eliminated or reworded. For example, the scale item, “I got everything I wanted from this purchase” was reworded to, “I got everything I expected from this purchase.” Also, “I waited a while until this product went on sale” was reworded to, “I waited until this product went on sale before making the purchase.” In addition, redundant or unnecessary items were eliminated. For example, the scale item, “I saved time making this purchase” was eliminated because it was redundant when compared to other statements such as, “In making this purchase, I used my time wisely.” After rewording and removing 67 redundant or unnecessary items, the remaining item pool consisted of 63 smart shopping items: 14 items for pre-purchase, 29 items for purchase, and 20 for post-purchase (see Tables 4, 5 & 6).

For validity-checking, the researcher adapted existing measures with good internal consistencies from the literature review. The five constructs employed for checking their relationships to the pre-purchase and purchase smart shopping stages were price-consciousness, convenience-seeking, marketplace knowledge, time-consciousness, and smart shopping (see Table 7).

For the assessment of price-consciousness, Alford and Biswas’ (2002) 3-item price-consciousness scale was adopted. This scale was also used by Lichtenstein, Ridgway, and Netemeyer (1993), Garretson and Burton (2003), and Burton, Lichtenstein, Netemeyer, and Garretson (1998) and has reported reliabilities of 0.84 and above. For convenience-seeking, Noble et al.’s (2006) 3-item convenience-seeking scale was adopted. The scale was previously used by Eastlick and Feinberg (1999) and reported

Table 4 Pre-Purchase Scale Items

Construct	Label	Scale Item
Information Search	InfoSearch1	I conducted research prior to making this purchase.
	InfoSearch2	I read a magazine such as Consumer Reports to get information for this purchase.
	InfoSearch3	I asked other people about their experience with this product prior to making this purchase.
Comparison Shopping	ComparisonShop1	Prior to making this purchase, I went to several different stores to find the specific product I wanted.
	ComparisonShop2	Prior to making this purchase, I compared products online.
	ComparisonShop3	Prior to making this purchase, I tried out several products to see which one I liked best.
	ComparisonShop4	Prior to making this purchase, I shopped around to see what options were available.
Planning for Purchase	Planning1	Before making this purchase, I waited until I found the right product.
	Planning2	I had an organized shopping plan before making this purchase.
	Planning3	I knew how much I was willing to spend prior to making this purchase.
	Planning4	I made a list of things I needed before making this shopping trip.
Planning for Sale Purchases	PlanningSale1	I prepared for this purchase by looking through sale advertisements.
	PlanningSale2	I delayed my purchase until it was offered at a price I was willing to pay.
	PlanningSale3	I waited until this product went on sale before making the purchase.

Table 5 Purchase Scale Items

Construct	Label	Scale Item
Making Tradeoffs	Tradeoff1	In making this purchase, I saved time but spent extra money.
	Tradeoff2	I sacrificed my time to save money on this purchase.
	Tradeoff3	I went to extra effort to save money on this purchase.
	Tradeoff4	I got the best price on this purchase for the least amount of effort.
Getting Convenience	Convenience1	Making this purchase was convenient for me.
	Convenience2	I made this purchase because it was convenient.
Getting the Right Product	RightProduct1	This purchase was exactly what I was looking for.
	RightProduct2	This purchase perfectly fit my needs.
	RightProduct3	I have gotten everything I expected from this purchase.
	RightProduct4	I got a good quality product from this purchase.
	RightProduct5	This product was exactly the style I wanted.
	RightProduct6	This purchase was a very good fit for me.
Saving Money	SavingMoney1	In making this purchase, I got what I wanted at a price I was willing to pay.
	SavingMoney2	I got a lower price on this purchase than normal.
	SavingMoney3	I got a reasonable price on this purchase.
	SavingMoney4	I found this purchase on sale.
	SavingMoney5	I used coupons to get a discount on this purchase.
	SavingMoney6	I went to a store where I could use coupons on this purchase.
	SavingMoney7	To save money, I bought a larger quantity of this product than normal.
	SavingMoney8	I bought extra of this product because it was a good price.
	SavingMoney9	I got a good deal on this purchase.
Saving Time	SavingTime1	In making this purchase, I used my time wisely.
	SavingTime2	It did not take much extra time to make this purchase.
	SavingTime3	I made this purchase as quickly as I could.
	SavingTime4	I didn't waste time making this purchase.
	SavingTime5	I was able to make this purchase quickly.
Saving Effort	SavingEffort1	Making this purchase was not a hassle.
	SavingEffort2	I did not spend extra effort on this purchase.
	SavingEffort3	I did not go out of my way to make this purchase.

Table 6 Post-Purchase Scale Items

Construct	Label	Scale Item
Positive Feelings	Feelings1	I feel good about this purchase.
	Feelings2	This purchase gave me a sense of pride.
	Feelings3	I am happy with this purchase.
	Feelings4	Making this purchase was exciting.
	Feelings5	The whole experience involved with this purchase was wonderful.
	Feelings6	This purchase was a really good experience.
	Feelings7	I had a fun experience making this purchase.
Satisfaction	Satisfaction1	I am satisfied with this purchase.
	Satisfaction2	This purchase gave me a feeling of satisfaction.
Usefulness	Usefulness1	This product has been really useful.
	Usefulness2	I have gotten a lot of use out of this product.
	Usefulness3	I use this purchase all the time.
	Usefulness4	I will be able to use this product multiple times.
Getting Rewards	GettingRewards1	This purchase was better than expected.
	GettingRewards2	This purchase has been a pleasant surprise.
	GettingRewards3	I received some extra benefits along with this purchase.
Word of Mouth	WordofMouth1	After making this purchase, I wanted to tell people about it.
	WordofMouth2	I have shared this purchase story with other people.
	WordofMouth3	I have bragged about this purchase.
	WordofMouth4	I am still talking to others about this purchase.

Table 7 Measurement Items for Validity-Checking: Pre-Purchase and Purchase

Construct	Scale Item	Reliability	Reference
Price-consciousness	•I am willing to go to extra effort to find lower prices. •The money saved by finding lower prices is usually worth the time and effort. •The time it takes to find lower prices is usually worth the effort.	0.90	Alford & Biswas (2002)
Convenience-seeking	•When I shop, I want to find what I'm looking for in the least amount of time. •I want to spend little effort when I shop. •I want to shop in the least amount of time.	0.76 males 0.82 females	Noble et al. (2006)
Marketplace Knowledge	•I am a knowledgeable consumer. •I know a lot about different types of stores. •I am usually well-informed about what is a reasonable price to pay for something.	0.79	Clark et al. (2001)
Time-consciousness	•I rarely think about how I'm using my time. (-) •I prefer to do things when I'm ready, not at set deadlines. (-) •I prefer not thinking about how I use my time. (-) •I prefer not to be late for appointments. •I like to make to-do lists to help sequence my activities. •I usually have a time schedule for everything. •I prefer to be able to plan in advance what tasks I need to do. •I often combine tasks to optimally use my time. •I usually feel pressed for time.	0.95	Kleijnen et al. (2007)

(-) denotes reverse coded scale items

Table 7 Continued

Construct	Scale Item	Reliability	Reference
Smart Shopping	•I keep abreast of when stores have sales. •I generally wait until an item is on sale before purchasing it. •I like to gather as much information as possible before going on a shopping trip. •I shop a lot for specials. •I often find top quality merchandise at reduced prices. •I spend a considerable amount of time and effort preparing for shopping trips. •At times I browse just to get information for future purchases.	0.91 Study 1 0.89 Study 2	Mano & Elliott (1997)

(-) denotes reverse coded scale items

reliabilities of 0.76 and above. For marketplace knowledge, Clark et al.'s (2001) 3-item scale reporting a reliability of 0.79 was adopted. For time-consciousness, Kleijnen et al.'s (2007) 9-item time-consciousness scale with a reliability of 0.95 was adopted.

For smart shopping, Mano and Elliott's (1997) 7-item smart shopping measure was adopted. This study reported reliabilities above 0.89. For hedonic shopping value, Babin et al.'s (1994) 11-item hedonic shopping value scale was adopted. The scale was also used by Babin and Darden (1995) and Griffin et al. (2000) and reported reliabilities of 0.77 and above. For utilitarian shopping value, Babin et al.'s (1994) 4-item utilitarian shopping value scale was adopted. The scale was also used by Babin and Darden (1995) and Griffin et al. (2000). This scale reported reliabilities of 0.76 and above.

Next, hedonic shopping value, utilitarian shopping value, satisfaction, and smart shopper self-perception were checked for their relationships with the post-purchase smart shopping stage (see Table 8). The validity-checking variables chosen for satisfaction and smart shopping required revisions of the scale items to meet the needs of this study. After careful consideration, the wording of Arora's (1985) satisfaction items was revised. Whereas the previous scale items were created regarding overall store purchases, this study was conducted for a specific smart shopping trip. This required rewording "I am very satisfied with most of my purchases at department stores" to "I am very satisfied with this purchase." The other two scale items required similar revisions. Arora's (1985) original 3-item satisfaction scale reported a reliability of 0.83.

For smart shopping, Burton, et al.'s (1998) 4-item smart shopper self-perception scale was adopted. The scale was also used by Garretson and Burton (2003) and reported

Table 8 Measurement Items for Validity-Checking: Post-Purchase

Construct	Scale Item	Reliability	Reference
Hedonic Shopping Value	• This shopping trip was truly a joy. • I continued to shop, not because I had to, but because I wanted to. • This shopping trip truly felt like an escape. • Compared to other things I could have done, the time spent shopping was truly enjoyable. • I enjoyed being immersed in exciting new products. • I enjoyed this shopping trip for its own sake, not just for the items I may have purchased. • I had a good time because I was able to act on the “spur-of-the-moment.” • During the trip, I felt the excitement of the hunt. • While shopping, I was able to forget my problems. • While shopping, I felt a sense of adventure. • This shopping trip was not a very nice time out. (-)	0.93	Babin et al. (1994)
Utilitarian Shopping Value	• I accomplished just what I wanted to on this shopping trip. • I couldn't buy what I really needed. (-) • While shopping, I found just the item(s) I was looking for. • I was disappointed because I had to go to another store(s) to complete my shopping. (-)	0.93	Babin et al. (1994)

(-) denotes reverse coded scale items

Table 8 Continued

Construct	Scale Item	Reliability	Reference
Satisfaction	• I am very satisfied with most of my purchases at department stores. I am very satisfied with this purchase. • I feel very comfortable with my recent purchase decisions. I feel very comfortable with this purchase decision. • I am confident that I generally make the right decisions. I am confident that I made the right decision.	0.83	Arora (1985)
Smart Shopper Self-Perception	• When I shop smartly, I feel like a winner. On this smart shopping trip, I felt like a winner. • When I go shopping, I take a lot of pride in making smart purchases. I took a lot of pride in making this smart purchase. • Making smart purchases makes me feel good about myself. Making this smart purchase made me feel good about myself. • I get a real sense of joy when I make wise purchases. I got a real sense of joy when I made this wise purchase.	0.94	Burton et al. (1998)

(-) denotes reverse coded scale items; **Bold** print denotes revised scale items

reliabilities of 0.87 and above. The wording of all four items in the smart shopper self-perception scale was revised to reference a specific shopping trip instead of shopping trips in general (see Table 8). For example, “When I shop smartly, I feel like a winner” was revised to “On this smart shopping trip, I felt like a winner.” The revised measurement items for satisfaction and smart shopping were reviewed by academic experts (i.e., a professor and six graduate students specializing in consumer behavior) to ensure clarity of reworded scale items and readability. A total of 49 randomly ordered items were used to measure these nine validity-checking constructs (see Table 8). All measurement items chosen from the literature reported good reliabilities (Cronbach’s alpha ranged from 0.76 to 0.95) established in previous studies.

Instrument Development

The initial survey instrument (see Appendix C) consisted of five sections: smart shopping activities, smart shopping outcomes, shopping trip outcomes (for validity checking), consumer characteristics (for validity checking), and demographic information. It was designed to be completed in 10-15 minutes.

The survey began by asking the participant to indicate which of the three product categories (i.e., clothing, grocery, electronics) they were thinking of when they made a “smart purchase” in a recent in-store shopping trip. Then they were asked, “Approximately how much money did you spend on this smart purchase?” This question was included both for a frame of reference for the participant and for possible future smart shopping analyses by amount of purchase.

The items in the first four sections were measured using a six-point Likert-type scale labeled: 1 = *strongly disagree*, 2 = *disagree*, 3 = *somewhat disagree*, 4 = *somewhat agree*, 5 = *agree*, and 6 = *strongly agree*. The 6-point scale was chosen for this study because it provides adequate variance and, as an even numbered scale, does not change the direction of the opinion, but does alter the intensity of the opinion held (Garland, 1991). The number of response categories used should be the number that are meaningful to the respondents (Viswanathan, Sudman, & Johnson, 2004). Further, the reasonable number of response alternatives falls between five and seven (Cox, 1980). For the purposes of scale development, the direction of the participants' opinion is the most important aspect and the 6-point scale was chosen because it provides the most meaningful number of responses for participants.

Information on the demographic and background characteristics of participants was also obtained in the last section of the questionnaire. This information was used for description purposes only. Open ended and forced-choice responses were used. They were asked their gender, ethnic group, marital status, age, education level, work status, approximate income, and number of children under 12 years of age living in the home.

Quantitative Methods

The smart shopping scale development process consisted of a pilot test for content analysis and initial scale refinement, a pretest for scale purification, and a main study for scale validation (see Figure 3). The pilot test was conducted on a convenience sample of undergraduate students. The data for the pretest and main study were obtained from a consumer panel member list through e-Rewards Market Research, an online survey

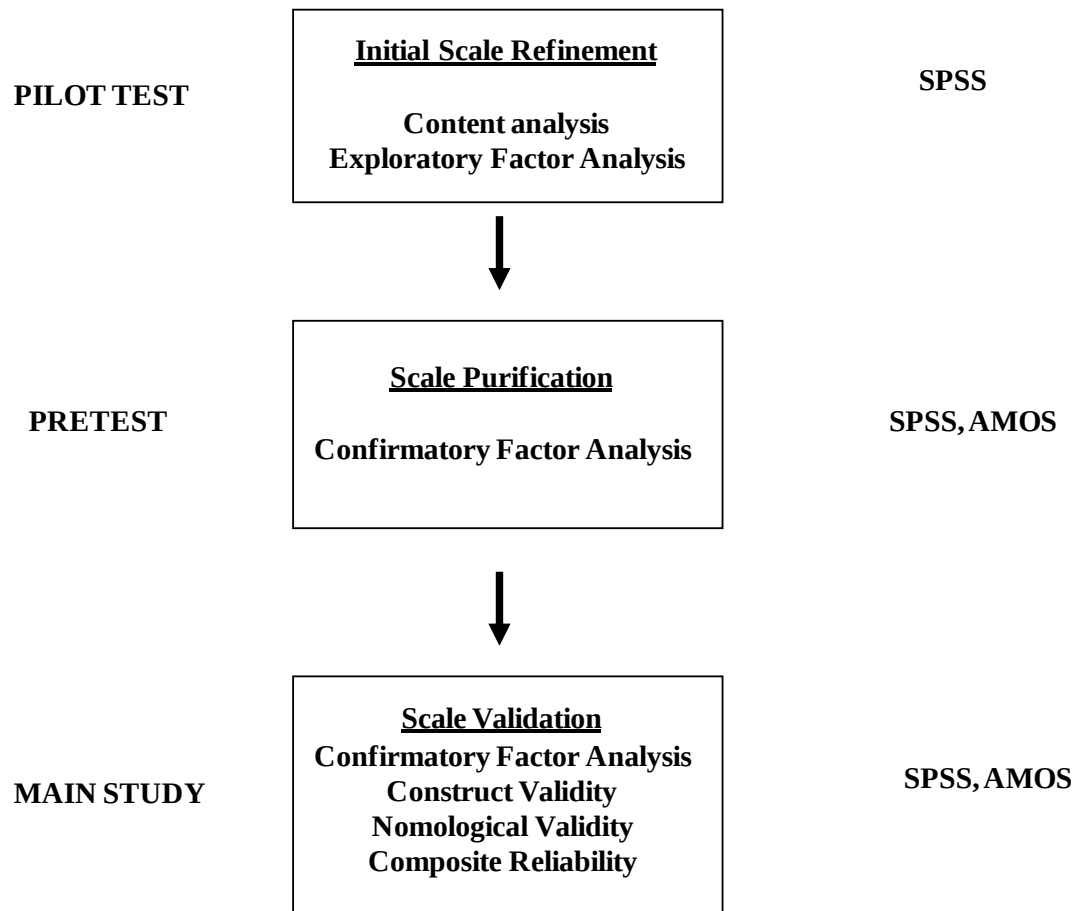


Figure 3 Smart Shopping Scale Development Process

agent. e-Rewards consists of about 3 million panel members that earn e-Reward currency for the time they spend answering market research surveys ("e-Rewards North American Consumer Panel," 2007). The online surveys provided an efficient use of time and money for the researcher and allowed participants to take the survey at their leisure and at their desired location while giving them as much time as they needed to answer each question.

Cobanoglu, Warde, and Moreo (2001) reported two advantages of web surveys: increased response rates and decreased costs. In a similar study of online and mail surveys, Deutskens, Jong, Ruyter, and Wetzels (2006) found that the results of online surveys were as generalizable as mail surveys and the data collection costs were decreased.

Pilot Test: Initial Scale Refinement

The population of interest in the pilot test was consumers who had purchased clothing, grocery, or electronics during a recent in-store shopping trip. To refine the measurement items generated from this study, the pilot test, consisting of 63 smart shopping items, was conducted on a convenience sample of undergraduate students majoring in Retail and Consumer Sciences at a major southeastern university.

Survey participants were given a self-administered questionnaire (see Appendix D) and asked to recall their most recent in-store shopping trip for clothing, grocery or electronics when they made what they would consider a smart purchase. In Section 1 of the survey, participants were asked to rate each statement related to smart shopping activities. In Section 2, participants were asked to rate each statement related to smart

shopping outcomes. In Section 3, general demographic information was solicited. The validity-checking variables were not used in the pilot test for scale refinement.

The purpose of the pilot test was to conduct exploratory factor analyses to examine factor patterns. Exploratory factor analyses (EFA) with principal component analysis as an extraction method and Varimax rotation with Kaiser normalization was conducted separately for the three stages: pre-purchase, purchase, and post-purchase. EFA is an applicable type of analysis because it is designed “for the situation where links between the observed and latent variables are unknown or uncertain” (Byrne, 2001, p. 5). Thus, the exploratory mode was used to determine how observed variables are linked to their underlying factors.

Items with factor loadings of 0.40 or above are assumed to have practical significance and were retained to reduce the risk of eliminating items that might be important (Hair, Anderson, Tatham, & William, 1995). Items cross-loading onto more than one factor were called into question. The resulting factors were given descriptive labels.

Item-total correlations were also examined for each set of smart shopping items. The reliability of each construct was assessed examining Cronbach’s alpha coefficient for a minimum acceptable reliability coefficient of 0.70 (Hair et al., 1995). Finally, pilot test survey results were examined for potential modification in the wording or instructions of the questionnaire.

Pretest: Scale Purification

The pretest was conducted for scale purification. The pretest sample was drawn from a pre-recruited consumer panel through an online survey agent. The sample frame was drawn from online consumers who had purchased clothing, grocery, or electronics in-store in the last three months and were age 18 or older. Participants younger than age 18 were excluded from the sample because they are not financially independent and because of limitations related to research involving human subjects under age 18.

In Section 1 of the survey (see Appendix E), participants were asked to recall their most recent in-store shopping trip for clothing, grocery or electronics when they made what they would consider a smart purchase. In Section 2, participants were asked to recall the in-store shopping trip they selected in Section 1 and rate each statement related to smart shopping outcomes. In Section 3, participants were asked to recall the in-store shopping trip they selected in Section 1 and rate each statement related to shopping outcomes. Section 4 asked participants to rate the statements that describe consumer characteristics regarding their in-store shopping trips *in general*. Finally, general demographic information was solicited in Section 5.

Before analyzing the pretest data, the demographic characteristics of the pretest participants was examined. Next, confirmatory factor analysis (CFA) was employed separately for the three stages: pre-purchase, purchase, and post-purchase to test scale convergence and to evaluate the factor loadings of the scale items. Factor loadings above 0.40 are assumed to have practical significance; therefore, items exhibiting factor loadings below 0.40 were subject to deletion. CFA was also used to assess acceptable fit

of the model through the use of comparative fit index (CFI), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), normative fit index (NFI), and root mean square error of approximation (RMSEA). In general, satisfactory models are indicated by GFI and AGFI values close to 1.00 (Byrne, 2001); NFI and CFI values greater than or equal to 0.90 (Hair et al., 1995); and RMSEA values less than or equal to 0.08 (Hair et al., 1995).

Main Study: Scale Validation

The main study was conducted for scale validation. The sample was drawn from a pre-recruited consumer panel through an online survey agent and consisted of consumers, age 18 or older, who had purchased clothing, grocery, or electronics in-store in the last three months.

At the beginning of the survey (see Appendix F), participants were asked to recall their most recent in-store shopping trip for clothing, grocery or electronics when they made what they would consider a smart purchase. They were then asked to indicate the type of product they were thinking of and questions in Sections 1, 2 and 3 were all answered in reference to the particular purchase they identified. In Section 1, they were asked to rate each statement related to smart shopping activities. In Section 2, participants were asked to rate each statement related to smart shopping outcomes. In Section 3, participants were asked to rate each statement related to shopping trip outcomes. Section 4 asked participants to rate the statements that describe consumer characteristics regarding their in-store shopping trips *in general*. Finally, general demographic information was solicited in Section 5.

First, descriptive characteristics of the sample were investigated. Second, statistical analyses (i.e., χ^2 and ANOVA) were conducted to detect any significant discrepancies in the demographic characteristics among the three product categories. The categories were considered significantly different if p -value < 0.05 . Third, tests for normality were conducted to measure variability (i.e., mean, minimum and maximum values, standard deviation, skewness, and kurtosis). High mean values for a six-point scale were those close to 5.0; pronounced kurtosis was defined by Byrne (2001) as ± 1.96 .

Next, CFA was employed to test the 3-factor models (pre-purchase, purchase, post-purchase). Path weights of the scale items were examined for significance (p -value < 0.05) and the modification indices (M.I.) were evaluated with the cut off value at 10.0 (Hair et al., 1995). Goodness-of-fit indices (i.e., χ^2 test, df , χ^2 ratio test, CFI, and RMSEA) were calculated and recommendations by Hair et al. (1995) were used for evaluation of model fit (i.e., CFI values greater than or equal to 0.90, RMSEA values less than or equal to 0.8). Factor loadings > 0.40 are assumed to have practical significance; therefore, this standard was used in determining which scale items to retain in the 3-factor model. Factor stability across the three different product categories was examined using tests of invariance through a multi-group analysis procedure with significant differences indicated by a p -value $< .05$.

Next, reliability of each latent construct was examined by assessing composite reliability (C.R.) for a minimum acceptable reliability coefficient of 0.70 (Hair et al., 1995). Reliability is a measure of internal consistency. It is the degree to which the

construct can produce consistent results across time (Hair et al., 1995) and the degree to which the measure is free from random error (Peter, 1979).

Validity Testing

Finally, validity is the degree to which an instrument accurately measures the construct it was designed to measure (Hair et al., 1995; Peter, 1981). Validity was measured in this study through construct and nomological validity.

Evidence of construct validity was measured through tests for convergent and discriminant validity with average variance extracted (AVE). Convergent validity is the degree to which a construct is related to (converges on) other constructs that it theoretically should also be similar to (Peter, 1981). High correlations should be evidence of convergent validity. Convergent validity was tested with AVE that indicates the amount of variance explained by the construct relative to the amount of variance that may be attributed to measurement error. To indicate that the measurement error is smaller than the variance captured by the construct and that the indicators are representative of the construct, the AVE should exceed 0.50 (Fornell & Larcker, 1981; Hair et al., 1995).

Discriminant validity is the degree to which a construct is not related to other constructs that it theoretically should not be correlated with (Peter, 1981). To show discriminant validity, the AVE for each construct should be greater than the squared correlation between that construct and any other construct (Fornell & Larcker, 1981).

Nomological validity assesses “the relationship between constructs purported to assess different (but conceptually related) constructs” (Peter, 1981, p. 138). Nomological validity was tested by correlating smart shopping scale responses with existing scales of

theoretically-related constructs. Statistically significant correlations produced a p-value > 0.05. Nine constructs that are believed to be related to the smart shopping construct developed in this study were selected from the literature for this purpose. Nomological validity was tested by correlating pre-purchase and purchase scale responses with: price consciousness (Alford & Biswas, 2002), convenience seeking (Noble et al., 2006), marketplace knowledge (Clark et al., 2001), time consciousness (Kleijnen et al., 2007), and smart shopping (Mano & Elliott, 1997; Reynolds et al., 2002). Nomological validity was also tested by correlating post-purchase scale responses with: hedonic shopping value (Babin et al., 1994), utilitarian shopping value (Babin et al., 1994), satisfaction (Arora, 1985), and smart shopper self-perception (Burton et al., 1998).

Price-consciousness is the degree to which the consumer focuses exclusively on paying low prices (Alford & Biswas, 2002; Lichtenstein et al., 1993). The price-consciousness scale (Alford & Biswas, 2002) includes the statement “The money saved by finding lower prices is usually worth the time and effort.” It is expected that there will be a correlation between price-consciousness and saving money. Therefore:

H₁: The correlation between the price-consciousness and saving money constructs will be positive.

Convenience-seeking is “the degree to which consumers strive for time saving in their shopping” (Noble et al., 2006, p. 181). The convenience-seeking scale includes the statement “I want to shop in the least amount of time.” A correlation between the convenience-seeking, saving time, and saving effort constructs was expected. Therefore:

H_{2a}: The correlation between the convenience-seeking and saving time constructs will be positive.

H_{2b}: The correlation between the convenience-seeking and saving effort constructs will be positive.

Marketplace knowledge is the consumer's level of knowledge of factors such as prices, stores, and shopping (Clark et al., 2001). The marketplace knowledge scale (Clark et al., 2001) includes the statement "I am usually well-informed about what is a reasonable price to pay for something." It is posited that there will be a positive correlation between the marketplace knowledge and information search constructs. Therefore:

H₃: The correlation between the marketplace knowledge and information search constructs will be positive.

Time-consciousness is one's predisposition to consider time a scarce resource and to plan its use carefully (Kleijnen et al., 2007). The time-consciousness scale (Kleijnen et al., 2007) includes the statement "I often combine tasks to optimally use my time." It is posited that there will be a correlation between the time-consciousness, saving time, and saving effort constructs. Therefore:

H_{4a}: The correlation between time-consciousness and saving time constructs will be positive.

H_{4b}: The correlation between the time-consciousness and saving effort constructs will be positive.

Mano and Elliott defined smart shopping as “a tendency for consumers to invest considerable time and effort in seeking and utilizing promotion-related information to achieve price savings” (1997, p. 504). The smart shopping scale (Mano & Elliott, 1997; Reynolds et al., 2002) includes the statement “I often find top quality merchandise at reduced prices.” It is posited that there will be a positive correlation between the smart shopping (as defined by Mano and Elliott, 1997) and saving money constructs. Therefore:

H₅: The correlation between the smart shopping and saving money constructs will be positive.

Hedonic shopping value reflects the potential entertainment and emotional worth of shopping. The hedonic shopping value scale (Babin et al., 1994) includes the statement “This shopping trip truly felt like an escape.” Hedonic shopping value is expected to be positively correlated with the satisfaction and getting rewards constructs. Therefore:

H_{6a}: The correlation between the hedonic shopping value and satisfaction constructs will be positive.

H_{6b}: The correlation between the hedonic shopping value and getting rewards constructs will be positive.

Utilitarian shopping value is task-related and rational. It is dependent upon whether the shopping task was accomplished (Babin et al., 1994). The utilitarian shopping value scale (Babin et al., 1994) includes the statement “I accomplished just what I wanted to on this shopping trip.” Utilitarian shopping value is expected to be positively correlated with usefulness. Therefore:

H₇: The correlation between utilitarian shopping value and usefulness constructs will be positive.

Satisfaction is “a post-choice evaluative judgment concerning a specific purchase decision” (Westbrook & Oliver, 1991, p. 84). The satisfaction scale (Westbrook & Oliver, 1991) includes the statement “I am very satisfied with most of my purchases.” Satisfaction (as defined by Westbrook and Oliver, 1991) is expected to be positively correlated with the getting rewards, satisfaction, and word of mouth constructs.

Therefore:

H_{8a}: The correlation between the satisfaction (as defined by Westbrook and Oliver, 1991) and satisfaction constructs will be positive.

H_{8b}: The correlation between the satisfaction (as defined by Westbrook and Oliver, 1991) and getting rewards constructs will be positive.

H_{8c}: The correlation between the satisfaction (as defined by Westbrook and Oliver, 1991) and word of mouth constructs will be positive.

Smart shoppers are not easily influenced by national advertising campaigns, are less impulsive in their decision-making, and make rational choices among brand alternatives without being influenced by national brand product images (Burton et al., 1998). The smart shopper self-perception scale (Burton et al., 1998) includes the statement “When I shop smartly, I feel like a winner.” Smart shopper self-perception is expected to be positively correlated with the usefulness construct. Therefore:

H₉: The correlation between the smart shopper self-perception and usefulness constructs will be positive.

Chapter Summary

Chapter III described methods employed to gain a better understanding and conceptualization of the term smart shopping. The research process suggested by Churchill (1979) was discussed. Qualitative methods were used to complete the focus group interviews, face-to-face in-depth interviews, initial item generation, and instrument development. The conceptual framework of smart shopping was proposed and the quantitative methods used for the pilot test, pretest, and main study were presented.

CHAPTER IV

RESULTS AND DISCUSSIONS

This chapter describes the data analyses conducted in the pilot test, pretest and main study. The pilot test was conducted for initial scale refinement with content analyses and exploratory factor analyses. Next, the pretest was conducted for scale purification through confirmatory factor analysis. Finally, the main study was conducted for scale validation through confirmatory factor analysis, construct validity, nomological validity, and composite reliability. The results of the data analyses will be presented in the pilot test for each stage (i.e., pre-purchase, purchase, and post-purchase). For the pretest and main study, the results will be present for each stage and for each product category (i.e., clothing, grocery, and electronics).

Pilot Test: Initial Scale Refinement

To refine the measurement items generated from this study, the pilot test consisting of 63 smart shopping items was conducted on a convenience sample of undergraduate students majoring in Retail and Consumer Sciences at a major southeastern university. A total of 100 usable surveys were collected; 80 from women and 20 from men, 93 percent of whom were between the ages of 19 and 23 years. The surveys were completed in 15 minutes on average.

The purpose of the pilot test was to conduct exploratory factor analyses (EFA) to examine factor patterns. Using data obtained from the student sample ($n = 100$), EFA with principal component analysis as an extraction method and Varimax rotation with Kaiser normalization was conducted separately for the three stages: pre-purchase,

purchase, and post-purchase. The exploratory mode is used to determine how observed variables are linked to their underlying factors.

Items with factor loadings of 0.40 or above were retained. Item-total correlations were also examined for each set of smart shopping items. The results identified four factors for the pre-purchase stage (see Table 9) accounting for 61.47% of the total variance, nine factors for the purchase stage (see Table 10) accounting for 73.35% of the total variance, and three factors for the post purchase stage (see Table 11) accounting for 58.91% of the total variance. The reliability of each construct was assessed using Cronbach's alpha coefficient. Coefficient alphas of the sixteen factors ranged from .559 to .916, indicating acceptable levels of reliability for an exploratory study.

The sixteen factors were each given a descriptive label after careful consideration of the statements included in each factor (see Tables 9, 10 & 11). The four factors identified in the pre-purchase stage were labeled as: comparison shopping (four scale items, $\alpha = 0.716$), information search (three scale items, $\alpha = 0.677$), planning for sale purchases (four items, $\alpha = 0.680$), and planning for purchase (three scale items, $\alpha = 0.653$). The purchase stage consisted of nine factors labeled as: saving money (six items, $\alpha = 0.786$), saving time (four items, $\alpha = 0.817$), saving effort (five items, $\alpha = 0.684$), right fit (three items, $\alpha = 0.742$), getting the right product (three items, $\alpha = 0.559$), making bulk purchases (two items, $\alpha = 0.852$), using coupons (two items, $\alpha = 0.825$), getting convenience (two items, $\alpha = 0.612$), and making tradeoffs (two items, $\alpha = 0.624$). The post-purchase stage consisted of three factors labeled as: positive feelings (seven items, $\alpha = 0.916$), word of mouth (six items, $\alpha = 0.874$), and usefulness (four scale items, $\alpha =$

Table 9 Pilot Test Rotated Component Matrix: Pre-Purchase

Scale Item	Comparison Shopping	Info Search	Planning for Sale Purchases	Planning for Purchases
Before making this purchase, I waited until I found the right product.	0.791			
Prior to making this purchase, I went to several different stores to find the specific product I wanted.	0.751			
Prior to making this purchase, I tried out several products to see which one I liked best.	0.655			
Prior to making this purchase, I shopped around to see what options were available.	0.630		0.314	
I read a magazine such as Consumer Reports to get information for this purchase.		0.753		
Prior to making this purchase, I compared products online.	0.356	0.744		
I conducted research prior to making this purchase.		0.709		0.341
I waited until this product went on sale before making the purchase.			0.874	
I delayed my purchase until it was offered at a price I was willing to pay.	0.339		0.724	
I prepared for this purchase by looking through sale advertisements.		0.331	0.534	0.327
I knew how much I was willing to spend prior to making this purchase.	0.351		0.490	
I made a list of things I needed before making this shopping trip.				0.833
I had an organized shopping plan before making this purchase.				0.772
I asked other people about their experience with this product prior to making this purchase.		0.472		0.539
Variance	17.651%	15.079%	14.700%	14.037%
Cronbach's alpha	0.716	0.677	0.680	0.653

Table 10 Pilot Test Rotated Component Matrix: Purchase

Scale Item	Saving Money	Saving Time	Saving Effort	Right Fit	Right Product	Bulk Purchase	Using Coupons	Getting Convenience	Tradeoffs
I got a good deal on this purchase.	0.888								
I got a reasonable price on this purchase.	0.834								
I got a lower price on this purchase than normal.	0.819								
I found this purchase on sale.	0.678				-0.332			0.302	
In making this purchase, I got what I wanted at a price I was willing to pay.	0.618				0.421				
In making this purchase, I saved time but spent extra money (-)	0.592							-0.441	
I made this purchase as quickly as I could.		0.814							
I didn't waste time making this purchase.		0.813							
I was able to make this purchase quickly.		0.795	0.329						
It did not take much extra time to make this purchase.		0.682	0.320						
I got the best price on this purchase for the least amount of effort.			0.808						
I did not go out of my way to make this purchase.			0.640						
Making this purchase was not a hassle.			0.603						
This purchase perfectly fit my needs.			0.477	0.412	0.326				
I did not spend extra effort on this purchase.			0.423						-0.367
I got a good quality product from this purchase.				0.897					
This purchase was a very good fit for me.				0.766	0.316				
I have gotten everything I expected from this purchase.				0.565	0.362				-0.347
This purchase was exactly what I was looking for.					0.836				
This product was exactly the style I wanted.	0.322				0.485	-0.431			
In making this purchase, I used my time wisely.		0.302			0.479				
I bought extra of this product because it was a good price.						0.886			
To save money, I bought a larger quantity of this product than normal.						0.818			
I used coupons to get a discount on this purchase.							0.875		
I went to a store where I could use coupons on this purchase.							0.855		
I made this purchase because it was convenient.								0.853	
Making this purchase was convenient for me.			0.417		0.411			0.613	
I sacrificed my time to save money on this purchase.									0.870
I went to extra effort to save money on this purchase.									0.707
Variance	12.930%	9.829%	8.432%	7.752%	7.620%	7.585%	6.931%	6.191%	6.074%
Cronbach's alpha	0.786	0.817	0.684	0.742	0.559	0.852	0.825	0.612	0.624

Table 11 Pilot Test Rotated Component Matrix: Post-Purchase

Scale Item	Positive Feelings	Word of Mouth	Usefulness	Satisfaction
This purchase was a really good experience.	0.900			
The whole experience involved with this purchase was wonderful.	0.896			
I had a fun experience making this purchase.	0.798			
This purchase gave me a feeling of satisfaction.	0.730	0.325		
This purchase has been a pleasant surprise.	0.694			
Making this purchase was exciting.	0.633	0.508		
I feel good about this purchase.	0.602		0.412	0.319
I have shared this purchase story with other people.		0.870		
I have bragged about this purchase.		0.850		
After making this purchase, I wanted to tell people about it.		0.749		0.369
I am still talking to others about this purchase.	0.307	0.711		
This purchase gave me a sense of pride.	0.442	0.504		0.476
This purchase was better than expected.	0.456	0.485	0.463	
I use this purchase all the time.			0.809	
I have gotten a lot of use out of this product.			0.803	
This product has been really useful.			0.747	
I will be able to use this product multiple times.			0.518	0.354
I am satisfied with this purchase.	0.319			0.723
I am happy with this purchase.	0.456			0.667
I received some extra benefits along with this purchase.	0.333	0.369		-0.424
Variance	25.650%	19.219%	14.039%	10.136%
Cronbach's alpha	0.916	0.874	0.728	0.333

0.728).

Items cross-loading onto more than one factor were called into question. Three scale items did not load strongly (< 0.40) onto any factor. These items were, “I am satisfied with this purchase;” “I am happy with this purchase;” and “I received some extra benefits along with this purchase.” Those these factors did not load strongly onto any factor, all items used in the pilot test were retained for the pretest because the researcher felt the sample size and the convenience sample of students may not have been truly representative of the general consumer population. In addition, a pretest on the general consumer population was conducted before the main study and the loadings would be examined again. In sum, the results of the factor analyses largely corroborated the previously identified model of smart shopping in Figure 2.

The pilot test results suggested further scale refinement by modifying the questionnaire wording and instructions. To establish whether a participant was in the population of interest in this study, the question, “Have you purchased clothing, grocery, or electronics in-store in the last 3 months?” was added to the questionnaire. Next, the open-ended questions, “Please indicate the store name where you made this “smart” purchase” and “Please give a brief description of your purchase and why you consider this a smart purchase” were added as a sequence of questions for cognitive recall of a specific smart shopping trip. Asking the participant to provide details about a particular experience has proven to improve recall accuracy; therefore, significantly more accurate responses can be obtained by using this format (Dillman, 2000). Finally, the stem of each

section was changed to improve the clarity of wording for the participant (see Appendices D & E for comparison of stems).

Pretest: Scale Purification

The pretest was conducted for scale purification. The sample was drawn from online consumers who had purchased clothing, grocery, or electronics in-store in the last three months and were age 18 or older.

Table 12 depicts the characteristics of the pretest participants. The sample ($n = 237$) consisted of responses to three product categories: 39% clothing ($n = 91$), 46% grocery ($n = 110$), and 15% electronics ($n = 36$). An inspection of the demographic characteristics of the pretest participants revealed representation in all age, ethnicity, marital status, and educational attainment categories. The age categories were fairly evenly distributed. Regarding ethnicity, 91.1% of the sample was Caucasian; half of the participants were married (50.2%); and almost half of the participants had a Bachelor's degree or higher. In addition, the gender was split fairly equally between females (59.1%) and males (40.9%).

First, confirmatory factor analysis (CFA) using AMOS with the maximum likelihood model was conducted separately for the three stages: pre-purchase, purchase, and post-purchase. CFA of the pre-purchase stage revealed seven items that had low factor loadings in the electronics product category; four items that had low factor loadings in the clothing product category; and one item that had a low factor loading in the grocery product category (see Table 13). The items with low factor loadings are depicted in the table with asterisks. Rather than eliminating these items, the researcher

Table 12 Pretest Sample Characteristics

Characteristic		Pretest Sample (%)
Gender	Female	59.1
	Male	40.9
Marital Status	Married	50.2
	Widowed	5.9
	Separated	2.1
	Divorced	13.1
	Single, never married	24.5
	Living in marriage-like relationship	4.2
Age	18-24	11.8
	25-34	18.6
	35-44	20.3
	45-54	19.4
	55-64	13.9
	65+	16
Race/Ethnicity	Caucasian/ White	91.1
	African American/ Black	5.1
	Asian or Pacific Islander	0.4
	Hispanic	3.0
	Native American	0.4
	Other	0
Educational Attainment	High school graduate or less	12.2
	Some college	30
	Associate's degree	10.1
	Bachelor's degree	29.5
	Graduate degree	18.1
	Other	0

Table 13 Pretest Factor Loadings: Pre-Purchase Stage

Pre-Purchase Construct	Label	Standardized Loadings			
		Clothing	Grocery	Electronics	Total (n = 237)
Information Search	InfoSearch1	0.925	0.572	1.476	0.8
	InfoSearch2	0.621	0.717	0.383*	0.612
	InfoSearch3	0.647	0.687	0.057*	0.616
Comparison Shopping	Comparison Shop1	0.508	0.792	0.559	0.631
	Comparison Shop2	0.774	0.742	0.682	0.817
	Comparison Shop3	0.366*	0.594	0.375*	0.293*
	Comparison Shop4	0.354*	0.505	0.778	0.49
Planning for Purchase	Planning1	0.389*	0.707	0.402	0.237*
	Planning2	0.609	0.674	0.205*	0.817
	Planning3	0.419	0.569	0.267*	0.431
	Planning4	0.744	0.289*	0.151*	0.727
Planning for Sale Purchases	Planning Sale1	1.053	0.609	0.322*	1.021
	Planning Sale2	0.333*	0.793	0.982	0.346*
	Planning Sale3	0.438	0.81	0.825	0.447

* Indicates items with factor loadings below 0.40

decided to keep the items because each item had reasonable factor loadings (> 0.40) for other product categories in the pre-purchase stage.

CFA of the purchase stage revealed twelve items that had low factor loadings in the electronics and clothing product categories and six items that had low factor loadings in the grocery product category (see Table 14). The items with low factor loadings are depicted in the tables with asterisks. The researcher decided to eliminate the items that had low factor loadings for all three product categories in the purchase stage because the items did not converge in any of the product categories. The eliminated items were SavingMoney5 (I used coupons to get a discount on this purchase.), SavingMoney6 (I went to a store where I could use coupons on this purchase.), SavingMoney7 (To save money, I bought a larger quantity of this product than normal.), and SavingMoney8 (I bought extra of this product because it was a good price.). In addition, the researcher chose to eliminate all four items of making tradeoffs construct because it had low factor loadings for all product categories on 3 of the 4 scale items; therefore, a total of eight items were eliminated from the pretest.

Upon the recommendation of a professor of statistics, an additional item for the getting convenience construct was added because three scale items are infinitely more valuable than two items. Peter (1979) advocates the use of a minimum of three scale items to assess reliability of a construct. The additional getting convenience item was developed by reassessing the face-to-face individual depth interview analyses, selecting two or three statements that pertained to the construct, and asking a panel of experts to choose the statement that would most appropriately represent the construct and add to the

Table 14 Pretest Factor Loadings: Purchase Stage

Purchase Construct	Label	Standardized Loadings			
		Clothing	Grocery	Electronics	Total (n = 237)
Making Tradeoffs	Tradeoff1	0.129*	-0.079*	0.089*	-0.111*
	Tradeoff2	0.086*	-0.493	-0.268*	-0.322*
	Tradeoff3	0.08*	0.104*	-0.116*	0.117*
	Tradeoff4	1.984	0.863	0.606	0.688
Getting Convenience	Convenience1	0.831	0.894	0.426	0.774
	Convenience2	0.276*	0.469	0.478	0.401
Right Product	RightProduct1	0.858	0.691	0.586	0.757
	RightProduct2	0.852	0.839	0.919	0.823
	RightProduct3	0.689	0.929	0.535	0.856
	RightProduct4	0.695	0.766	0.941	0.724
	RightProduct5	0.803	0.732	0.589	0.752
	RightProduct6	0.824	0.633	0.947	0.707
Saving Money	SavingMoney1	0.235*	0.895	0.224*	0.718
	SavingMoney2	0.798	0.641	1.102	0.56
	SavingMoney3	0.338*	0.929	0.375*	0.755
	SavingMoney4	0.678	0.428	0.524	0.371*
	SavingMoney5	0.294*	0.128*	0.185*	0.086*
	SavingMoney6	0.367*	0.174*	0.154*	0.124*
	SavingMoney7	0.207*	0.189*	0.137*	0.125*
	SavingMoney8	0.231*	0.279*	0.029*	0.151*
	SavingMoney9	0.699	0.896	0.322*	0.793
Saving Time	SavingTime1	0.345*	0.812	0.611	0.635
	SavingTime2	0.876	0.649	0.723	0.697
	SavingTime3	0.399	0.685	0.32*	0.472
	SavingTime4	0.593	0.808	0.636	0.695
	SavingTime5	0.74	0.741	0.554	0.711
Saving Effort	SavingEffort1	0.308*	0.84	0.316*	0.637
	SavingEffort2	0.613	0.73	0.746	0.537
	SavingEffort3	0.602	0.589	0.788	0.453

* Indicates items with factor loadings below 0.40

two existing getting convenience statements.

CFA of the post-purchase stage revealed that all items in all three product categories had factor loadings above 0.40; therefore all items were retained (see Table 15). In addition, upon the recommendation of a professor of statistics, an additional item for the satisfaction construct was added to create three scale items. The additional satisfaction scale item was developed the same as previously stated (i.e., by reassessing the individual depth interviews, selecting statements that pertained to the construct, and asking a panel of experts to choose the best statement).

Model fit was conducted separately for the three stages: pre-purchase, purchase, and post-purchase and for the three product categories (see Table 16). Measurement results were not within acceptable ranges for model fit; therefore the items in each construct were examined more closely in the main study. Since there were differences in model fit among the three product categories, the main study asked participants to think of a recent in-store shopping trip for a “smart purchase” of one of the three product categories (i.e., grocery, clothing, and electronics). Though this method will not allow the results to be applicable to smart shopping in general, it allows better model fit.

As a result of the analyses on the pretest data, 55 of the 63 smart shopping items were retained and two were added leaving 57 items in the smart shopping scale. The final scale items for the main study are organized by construct in Tables 17, 18 & 19.

Main Study: Scale Validation

The main study was conducted for scale validation. The sample was drawn from a pre-recruited consumer panel through an online survey agent. Participants were online

Table 15 Pretest Factor Loadings: Post-Purchase Stage

Post-Purchase Construct	Label	Standardized Loadings			
		Clothing	Grocery	Electronics	Total (n=237)
Positive Feelings	Feelings1	0.84	0.835	0.611	0.794
	Feelings2	0.667	0.752	0.639	0.73
	Feelings3	0.654	0.673	0.425	0.631
	Feelings4	0.802	0.781	0.667	0.782
	Feelings5	0.836	0.804	0.797	0.823
	Feelings6	0.835	0.786	0.666	0.798
	Feelings7	0.81	0.803	0.811	0.794
Satisfaction	Satisfaction1	0.769	0.709	0.594	0.71
	Satisfaction2	0.858	0.797	0.657	0.825
Usefulness	Usefulness1	0.776	0.668	0.568	0.824
	Usefulness2	0.822	0.75	0.799	0.646
	Usefulness3	0.747	0.606	0.947	0.517
	Usefulness4	0.567	0.707	0.502	0.553
Getting Rewards	Getting Rewards1	0.799	0.821	0.74	0.8
	Getting Rewards2	0.723	0.833	0.797	0.803
	Getting Rewards3	0.56	0.545	0.645	0.515
Word of Mouth	Word of Mouth1	0.833	0.811	0.692	0.82
	Word of Mouth2	0.898	0.956	0.765	0.914
	Word of Mouth3	0.891	0.955	0.813	0.903
	Word of Mouth4	0.84	0.78	0.625	0.79

Table 16 Pretest Model Fit Statistics

Stage and Category		CFI	GFI	AGFI	NFI	RMSEA
Pre-Purchase	Clothing (n=91)	0.872	0.849	0.771	0.762	0.094
	Grocery (n=110)	0.881	0.847	0.770	0.797	0.098
	Electronics (n=36)	0.673	0.671	0.513	0.527	0.159
	Total (n=237)	0.887	0.893	0.829	0.845	0.094
Purchase	Clothing (n=91)	0.761	0.687	0.618	0.609	0.098
	Grocery (n=110)	0.829	0.693	0.624	0.727	0.103
	Electronics (n=36)	0.455	0.513	0.408	0.329	0.172
	Total (n=237)	0.847	0.778	0.724	0.775	0.082
Post-Purchase	Clothing (n=91)	0.842	0.705	0.608	0.765	0.128
	Grocery (n=110)	0.786	0.687	0.579	0.731	0.154
	Electronics (n=36)	0.711	0.630	0.514	0.511	0.131
	Total (n=237)	0.842	0.769	0.689	0.808	0.123

Table 17 Pre-Purchase Summary of Scale Items

Construct	Label	Scale Item
Information Search	InfoSearch1	I conducted research prior to making this purchase.
	InfoSearch2	I read a magazine such as Consumer Reports to get information for this purchase.
	InfoSearch3	I asked other people about their experience with this product prior to making this purchase.
Comparison Shopping	Comparison Shop1	Prior to making this purchase, I went to several different stores to find the specific product I wanted.
	Comparison Shop2	Prior to making this purchase, I compared products online.
	Comparison Shop3	Prior to making this purchase, I tried out several products to see which one I liked best.
	Comparison Shop4	Prior to making this purchase, I shopped around to see what options were available.
Planning for Purchase	Planning1	Before making this purchase, I waited until I found the right product.
	Planning2	I had an organized shopping plan before making this purchase.
	Planning3	I knew how much I was willing to spend prior to making this purchase.
	Planning4	I made a list of things I needed before making this shopping trip.
Planning for Sale Purchases	PlanningSale1	I prepared for this purchase by looking through sale advertisements.
	PlanningSale2	I delayed my purchase until it was offered at a price I was willing to pay.
	PlanningSale3	I waited until this product went on sale before making the purchase.

Table 18 Purchase Summary of Scale Items

Construct	Label	Scale Item
Getting Convenience	Convenience1	Making this purchase was convenient for me.
	Convenience2	I made this purchase because it was convenient.
	Convenience3	Convenience was a benefit of making this purchase.
Getting the Right Product	RightProduct1	This purchase was exactly what I was looking for.
	RightProduct2	This purchase perfectly fit my needs.
	RightProduct3	I have gotten everything I expected from this purchase.
	RightProduct4	I got a good quality product from this purchase.
	RightProduct5	This product was exactly the style I wanted.
	RightProduct6	This purchase was a very good fit for me.
Saving Money	SavingMoney1	In making this purchase, I got what I wanted at a price I was willing to pay.
	SavingMoney2	I got a lower price on this purchase than normal.
	SavingMoney3	I got a reasonable price on this purchase.
	SavingMoney4	I found this purchase on sale.
	SavingMoney9	I got a good deal on this purchase.
Saving Time	SavingTime1	In making this purchase, I used my time wisely.
	SavingTime2	It did not take much extra time to make this purchase.
	SavingTime3	I made this purchase as quickly as I could.
	SavingTime4	I didn't waste time making this purchase.
	SavingTime5	I was able to make this purchase quickly.
Saving Effort	SavingEffort1	Making this purchase was not a hassle.
	SavingEffort2	I did not spend extra effort on this purchase.
	SavingEffort3	I did not go out of my way to make this purchase.

Table 19 Post-Purchase Summary of Scale Items

Construct	Label	Scale Item
Positive Feelings	Feelings1	I feel good about this purchase.
	Feelings2	This purchase gave me a sense of pride.
	Feelings3	I am happy with this purchase.
	Feelings4	Making this purchase was exciting.
	Feelings5	The whole experience involved with this purchase was wonderful.
	Feelings6	This purchase was a really good experience.
	Feelings7	I had a fun experience making this purchase.
Satisfaction	Satisfaction1	I am satisfied with this purchase.
	Satisfaction2	This purchase gave me a feeling of satisfaction.
	Satisfaction3	This purchase has been satisfying.
Usefulness	Usefulness1	This product has been really useful.
	Usefulness2	I have gotten a lot of use out of this product.
	Usefulness3	I use this purchase all the time.
	Usefulness4	I will be able to use this product multiple times.
Getting Rewards	GettingRewards1	This purchase was better than expected.
	GettingRewards2	This purchase has been a pleasant surprise.
	GettingRewards3	I received some extra benefits along with this purchase.
Word of Mouth	Word of Mouth1	After making this purchase, I wanted to tell people about it.
	Word of Mouth2	I have shared this purchase story with other people.
	Word of Mouth3	I have bragged about this purchase.
	Word of Mouth4	I am still talking to others about this purchase.

consumers who had purchased clothing, grocery, or electronics in-store in the last three months and were age 18 or older.

First, the sampling procedures will be discussed, followed by general descriptive characteristics of the sample. Next, preliminary data analyses are reported and CFA is employed to test the proposed models. Goodness-of-fit statistics of the models are assessed with χ^2 tests, χ^2 ratio; degrees of freedom (*df*), CFI, and RMSEA. Finally, validity testing is conducted with construct and nomological validity and reliability of the data is reported.

Sampling Procedures

The participants in the main study consisted of consumer panelists of e-Rewards who received an e-mail invitation to complete a survey hosted by the University of Tennessee on a survey link. An example of the main study survey instrument is provided in Appendix F. Participants were first asked, “Have you purchased clothing, groceries or electronics in- store in the last three months?” This screening question was used to prevent potential poor recall of purchases made less recently than three months. If the participants answered “no” to this question, the survey was stopped and they exited the survey link. Participants who responded affirmatively were allowed to proceed with the survey.

Next, survey participants were asked to indicate the type of product they were thinking of. The data analysis revealed that 488 participants (33.1%) chose the clothing product category, 751 participants (50.9%) chose the grocery category, and 235 participants (15.9%) chose the electronics category. Participants then completed the

survey with reference to the particular purchase they identified. The survey was designed so that participants were required to answer each question before proceeding to the next.

Descriptive Statistics

Prior to the statistical analysis of the main study, descriptive characteristics of the sample were investigated. A total of 2231 people accessed the survey link. Two people did not complete the survey because of a server malfunction; 574 people abandoned the survey before completing it; 85 were not qualified to take the survey; 1570 participants completed the online survey. After 74 duplicate participants, 19 participants with non-varying responses (i.e., the same response was provided for all questions), and four participants under age 18 were removed, there remained 1474 usable surveys.

The characteristics of the current sample should be similar to the e-Rewards consumer panel and the total U.S. demographics. Table 20 presents the demographic characteristics of the current sample compared to the e-Rewards panel ("e-Rewards North American Consumer Panel," 2007) and to the general U.S. population ("U.S. Census Bureau American Community Survey," 2006). An inspection of the characteristics of the current sample revealed representation in all age, ethnicity, marital status, and education categories. The age categories were fairly evenly distributed with a mean age of 46 years. With respect to ethnicity, 83.7% was Caucasian. Almost half of the participants were married (49.2%) and almost 48 percent of the participants had a Bachelor's degree or higher. The sample was fairly equally divided between males (43%) and females (57%).

An overview of the participant characteristics by product category can be found in Table 21. Statistical analyses (i.e., χ^2 and ANOVA) were conducted to detect differences

Table 20 Main Study Sample Characteristics

Characteristic		Main Study Sample (%)	e-Rewards Panel (%)**	Total U.S. Population (%)*
Gender	Female	57.2	49.5	50.8
	Male	42.8	50.5	49.2
Marital Status	Married	49.2	59.0	50.4
	Widowed	4.5	1.6	6.4
	Separated	2.3	1.5	2.3
	Divorced	14.0	9.5	10.5
	Single, never married	22.0	23.1	30.5
	Living in marriage-like relationship	8.0	5.3	NR
Age	18-24	9.0	30.2	9.6
	25-34	18.7		13.3
	35-44	21.7	23.6	14.7
	45-54	19.6	22.9	14.5
	55-64	15.6	14.2	10.9
	65+	15.5	9.1	12.4
Race/Ethnicity	Caucasian/ White	83.7	74.5	73.9
	African American/ Black	6.5	9.1	12.4
	Asian or Pacific Islander	3.5	5.9	4.5
	Hispanic	5.3	6.6	14.8
	Native American	0.5	0.8	0.8
	Other	0.4	3.0	6.3
Educational Attainment	High school graduate or less	13.6		46.12
	Some college	27.8		19.5
	Associate's degree	10.7		7.4
	Bachelor's degree	29.5		17.1
	Graduate degree	17.0		9.9
	Other	1.4		NR

* Source: U.S. Census Bureau 2006 American Community Survey

** Source: e-Rewards 2007

Table 21 Main Study Characteristics by Product Category

Characteristic		Clothing (N = 488)	Groceries (N= 751)	Electronics (N = 235)
Gender	Female	66.2%	58.7%	33.6%
	Male	33.8%	41.3%	66.4%
Marital Status	Married	51.4%	47.7%	49.4%
	Widowed	4.5%	5.3%	1.7%
	Separated	2.3%	2.5%	1.7%
	Divorced	11.5%	16.4%	11.9%
	Single, never	22.3%	19.8%	28.1%
	Living in marriage-like relationship	8.0%	8.3%	7.2%
Age Category	18-24	9.2%	7.7%	12.3%
	25-34	21.5%	15.8%	21.7%
	35-44	20.3%	22.0%	23.8%
	45-54	19.1%	22.1%	12.8%
	55-64	17.4%	14.9%	14.0%
	65+	12.5%	17.4%	15.3%
Race/Ethnicity	Caucasian/ White	82.6%	86.3%	77.9%
	African American/ Black	7.8%	5.3%	7.7%
	Asian or Pacific Islander	3.5%	2.8%	6.0%
	Hispanic	5.7%	4.5%	6.8%
	Native American	0.2%	0.7%	0.9%
	Other	0.2%	0.4%	0.9%
Educational Attainment	High school graduate or less	11.1%	16.1%	11.1%
	Some college	29.1%	27.7%	25.5%
	Associate's degree	11.5%	9.9%	11.5%
	Bachelor's degree	28.9%	29.6%	30.6%
	Graduate degree	17.6%	15.4%	20.9%
	Other	1.8%	1.3%	0.4%

in participant characteristics among the product categories. As shown in Table 22 and 23, there were significant group differences (p -value < 0.05) in the gender and age category among the product categories. No significant group differences were found in race/ethnicity, marital status, or educational attainment. Further invariance testing was conducted to investigate whether the gender and age groups differed within the product categories. Appendix G presents the model fit in the unconstrained and constrained rows and the χ^2 difference in the difference rows for age category and gender in each product category and stage. The group comparison illuminated differences in men and women within the grocery, clothing, and electronics categories. The group comparison also reported differences in age categories within the clothing and electronics categories. This indicates that the results may be from differences between groups rather than differences between product categories.

Preliminary Statistical Analysis

Descriptive statistics of the main study are provided in Appendices H and I. Mean, minimum and maximum values, standard deviation, skewness, and kurtosis were calculated using SPSS to measure variability. Every item obtained the full range of answers (from 1 to 6). Variables marked with an asterisk had relatively high mean values for a six-point scale (i.e., close to 5.0), relatively low standard deviation values, and pronounced kurtosis (as defined by Byrne (2001) as ± 1.96).

Many of the smart shopping scale items appear to be non-normal because of high mean values or pronounced kurtosis. This problem could be a result of the survey design. All participants were told to think of a recent smart purchase and three sections of the

Table 22 Main Study Sample Comparison: Chi-Square Test

Characteristic	Pearson Chi-Square		
	Value	<i>df</i>	<i>p</i> -value
Gender	70.197	2	0.000*

*Significant at $p < 0.05$

Table 23 Main Study Sample Comparison: ANOVA

Characteristic	Sum of Squares	<i>df</i>	Mean Square	F	<i>p</i> -value
Marital Status	8.254	2	4.13	0.90	0.408
Age Category	25.154	2	12.58	5.29	0.005*
Race/Ethnicity	1.750	2	0.88	1.31	0.269
Educational Attainment	10.753	2	5.38	2.83	0.060

*Significant at $p < 0.05$

survey refer to the question, “Recall your most recent in-store shopping trip for clothing, groceries, or electronics when you made what you would consider a smart purchase.” As a result of the survey design, it is expected that the responses of the sample to the smart shopping scale items would be higher (i.e., 6 = strongly agree) than the population in general. The assumption of normality presumes that the samples are drawn from populations that are normally distributed (Kerlinger & Lee, 2000); however the sample in this study was not drawn from a normally distributed population.

Scale Validation

Scale validation activities began with the data from the main study (n = 1474). Scale validation was conducted for a 3-factor model (pre-purchase, purchase, and post-purchase); that is, the scale for each decision-making stage was tested. Confirmatory factor analysis (CFA) using AMOS 16.0 was used to identify the overall factor structure of the shopping items.

CFA was conducted to examine the psychometric properties of each model. AMOS 16.0 was run allowing all smart shopping constructs (exogenous latent variables) to correlate with each other and with all smart shopping scale items (endogenous observed variables) loading on their appropriate construct (latent variable). The maximum likelihood estimation was used because it is the best estimation procedure for this theory-based model (Hair et al., 1995).

The magnitude of item error variances, the prevalence of large modification indices, and significance of residual covariation indicated potential items for deletion from the pool of smart shopping items. Results of the three item-analysis techniques

along with goodness-of-fit indices (χ^2 test, df , χ^2 ratio test, CFI, and RMSEA) and standardized loadings were considered collectively in determining which scale items to retain in the 3-factor model. These techniques resulted in retention of 56 of 57 items in the clothing product category, 55 of 57 items in the grocery product category, and 55 of 57 items in the electronics product category. The details of this process will be discussed in the pre-purchase, purchase, and post-purchase results.

Pre-purchase Results

The original pre-purchase model was a 4-factor structure composed of information search, comparison shopping, planning for purchases, and planning for sale purchases (see Figure 4). The data were analyzed separately for the three product categories (i.e., clothing, grocery, and electronics) in the pre-purchase stage.

Clothing

First, path weights of the scale items were examined for significance. All items in the pre-purchase model for the clothing product category were found to be significant (significant at $p < 0.05$). In reviewing the parameters in the Covariance section of the AMOS output, the parameters within the same construct representing covariance between the error terms e1 and e2, e4 and e5, e6 and e7, e8 and e10, e9 and e11, and e12 and e13 were higher than the modification indices (M.I.) cut off value of 10.0 (Hair et al., 1995). Each of these item pairs with high M.I. was modified with covariance arrows between the pairs. This reparameterization of the measurement model resulted in acceptable fit as can be seen in goodness-of-fit statistics for the original pre-purchase model in Table 24. The covariance between e3 and e14 was higher than the M.I. cut off value of 10.0; therefore,

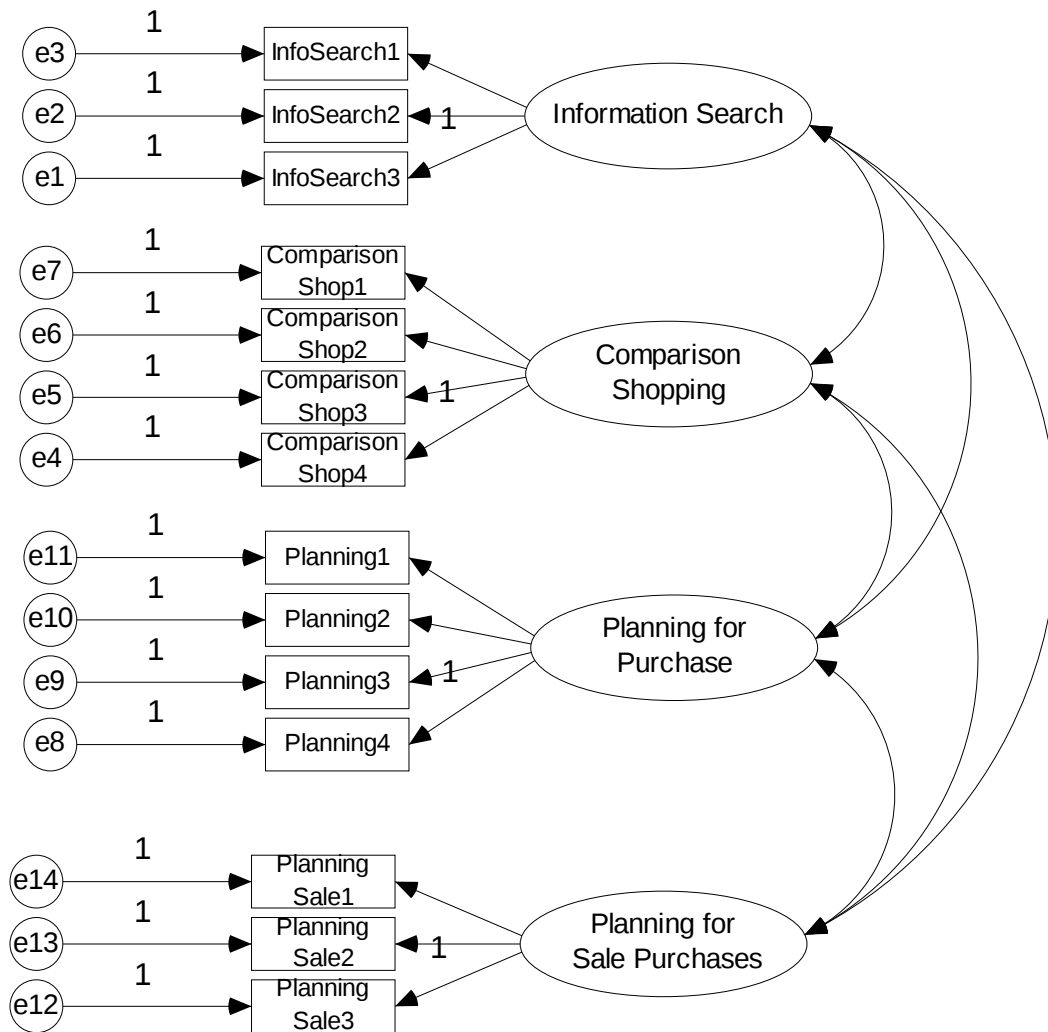


Figure 4 Original Measurement Model: Pre-Purchase

Table 24 Main Study Goodness-of-Fit Statistics: Pre-Purchase

Goodness-of-Fit Measures	Original Model Fit			Final Model Fit		
	Clothing	Grocery	Electronics	Clothing	Grocery	Electronics
CFI	0.902	0.866	0.928	0.917	0.909	0.954
Chi-Square	289.1	572.5	144	239.4	341.6	93.4
Degrees of Freedom	65	68	67	56	41	49
Chi-Square Ratio	4.447	8.419	2.149	4.275	8.333	1.905
RMSEA	0.084	0.099	0.07	0.082	0.099	0.062

PlanningSale1 (I prepared for this purchase by looking through sale advertisements) was moved to the information search construct.

Next, the correlation between constructs was examined. The correlation between information search and comparison shopping was 0.851 and the correlation between planning purchases and planning sale purchases was 0.834 therefore both pairs were combined to create a 2-factor model. Finally, the standardized loadings were examined (see Table 25) and the item Planning3 (I knew how much I was willing to spend prior to making this purchase) was dropped from the pre-purchase clothing model because it loaded at 0.379. This loading was well below the minimum acceptable factor loading of 0.40 (Hair et al., 1995). The 2-factor model consisted of information search (with 8 items) and planning (with 5 items). The final pre-purchase clothing model consisting of thirteen observed variables represent acceptable fit: CFI = 0.917; $\chi^2 = 239.4$; $df = 56$; χ^2 ratio = 4.275; RMSEA = 0.082 (see Table 23). The final pre-purchase clothing model is presented in Figure 5.

Reliability of each latent construct was examined by assessing composite reliability (C.R.) (see Table 26). The C.R. of information search was 0.818 and that of planning was 0.654. The commonly used threshold value of acceptable reliability is 0.70; however, values below this threshold are often accepted if the research is exploratory (Hair et al., 1995) as is the present study.

Grocery

First, path weights of the scale items were examined for significance. All items in the pre-purchase model for the grocery product category were found to be significant. In

Table 25 Main Study Standardized Loadings: Pre-Purchase

Construct	Label	Scale Item	Standardized Loadings		
			Clothing	Grocery	Electronics
Information Search	InfoSearch1	I conducted research prior to making this purchase.	0.85	0.745	0.765
	InfoSearch2	I read a magazine such as Consumer Reports to get information for this purchase.	0.506	0.46	0.449
	InfoSearch3	I asked other people about their experience with this product prior to making this purchase.	0.551	0.479	NA
	ComparisonShop1	Prior to making this purchase, I went to several different stores to find the specific product I wanted.	0.573	0.627	0.63
	ComparisonShop2	Prior to making this purchase, I compared products online.	0.736	0.609	0.65
	ComparisonShop3	Prior to making this purchase, I tried out several products to see which one I liked best.	0.472	0.605	0.435
	ComparisonShop4	Prior to making this purchase, I shopped around to see what options were available.	0.486	0.568	0.731
	PlanningSale1	I prepared for this purchase by looking through sale advertisements.	0.589	0.625	0.649
Planning	Planning1	Before making this purchase, I waited until I found the right product.	0.562	0.758	0.738
	Planning2	I had an organized shopping plan before making this purchase.	0.499	NA	0.516
	Planning3	I knew how much I was willing to spend prior to making this purchase.	NA	0.422	0.429
	Planning4	I made a list of things I needed before making this shopping trip.	0.604	NA	NA
	PlanningSale2	I delayed my purchase until it was offered at a price I was willing to pay.	0.494	0.712	0.527
	PlanningSale3	I waited until this product went on sale before making the purchase.	0.456	0.692	0.612

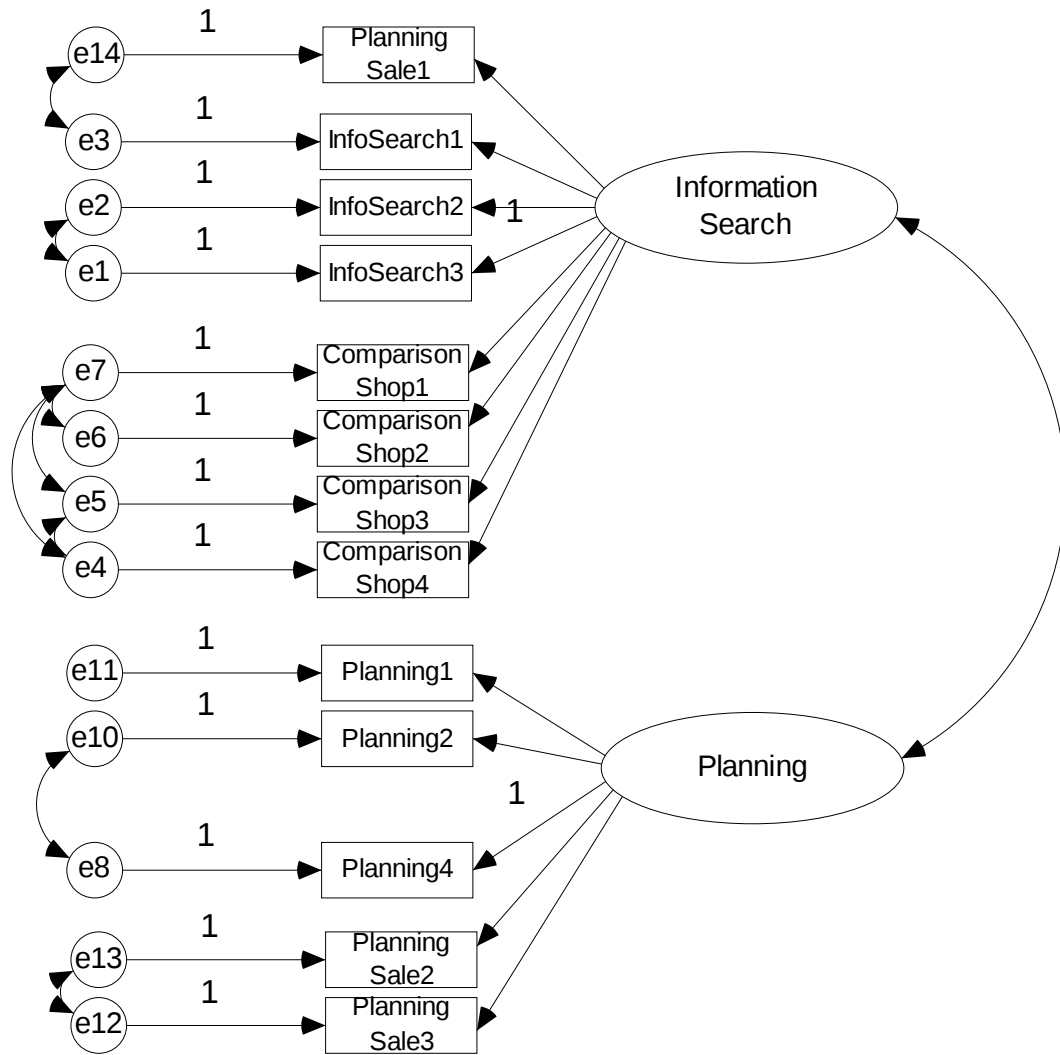


Figure 5 Final Pre-Purchase Model: Clothing

Table 26 Main Study Composite Reliability: Pre-Purchase

Construct	Product Category	Composite Reliability
Information Search	Clothing	0.818
	Groceries	0.812
	Electronics	0.814
Planning	Clothing	0.654
	Groceries	0.747
	Electronics	0.704

reviewing the parameters in the Covariance section, the parameters within the same construct representing covariance between the error terms e1 and e2, e8 and e10, and e13 and e14 were higher than the M.I. cut off value. Each of these item pairs with high M.I. was modified with covariance arrows between the pairs. This reparameterization of the measurement model resulted in acceptable fit as can be seen in goodness-of-fit statistics for the original pre-purchase grocery model in Table 24. The covariance between e3 and e14 was higher than the M.I. cut off value of 10.0; therefore, PlanningSale1 (I prepared for this purchase by looking through sale advertisements) was moved to the information search construct.

Next, the correlation between constructs was examined. The correlation between information search and comparison shopping was 1.157 and the correlation between planning purchases and planning sale purchases was 0.880; therefore, both pairs were combined to create a 2-factor model. Finally, the standardized loadings were examined (see Table 25) and the items Planning2 (I had an organized shopping plan before making this purchase) and Planning4 (I made a list of things I needed before making this shopping trip) were dropped from the pre-purchase grocery model because they loaded at 0.386 and 0.279 respectively. The 2-factor grocery model consisted of information search (with 8 items) and planning (with 4 items). The final pre-purchase grocery model consisting of twelve observed variables represents mediocre fit: CFI = 0.909; $\chi^2 = 341.6$; $df = 41$; χ^2 ratio = 8.333; RMSEA = 0.099 (see Table 23). The final pre-purchase grocery model is presented in Figure 6.

The C.R. of information search was 0.812 and the C.R. of planning was 0.747

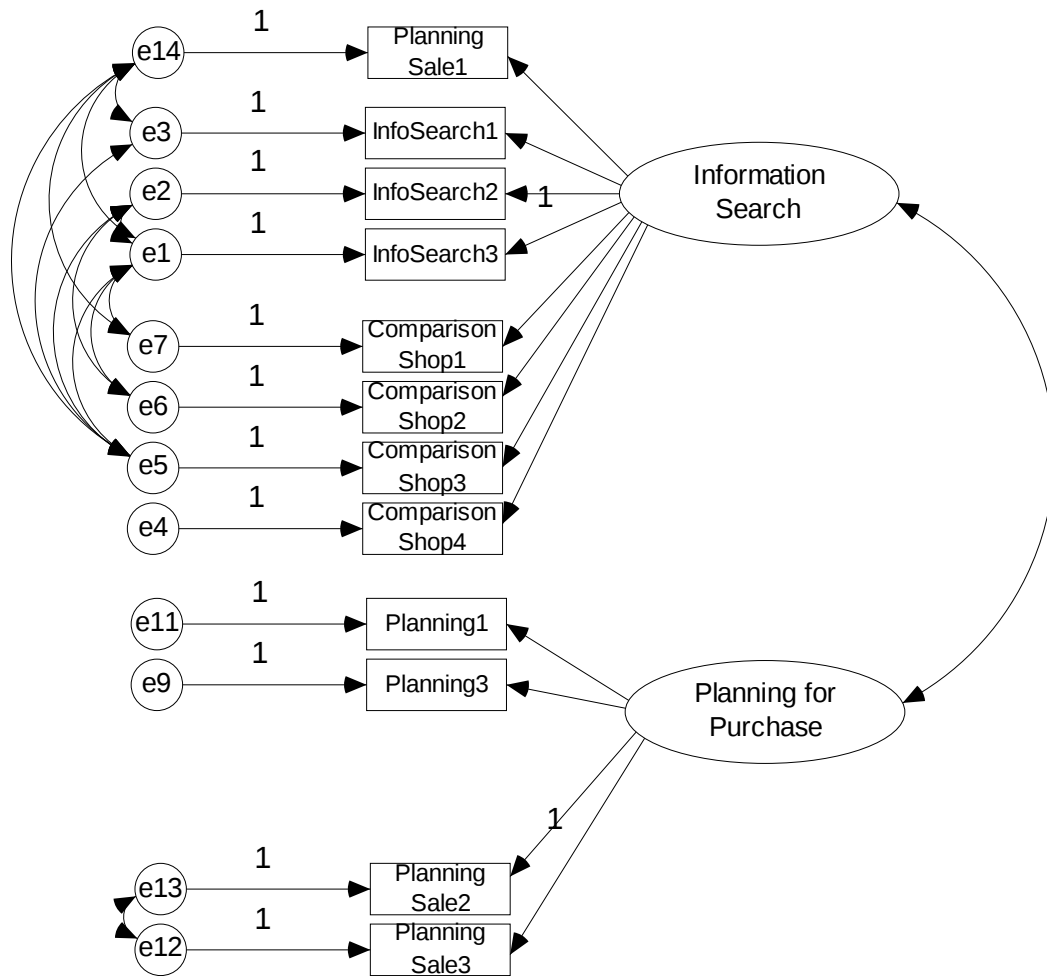


Figure 6 Final Pre-Purchase Model: Grocery

(see Table 26). The C.R. of both pre-purchase grocery constructs was greater than the minimum criteria of 0.70 indicating internal consistency of the construct indicators.

Electronics

First, path weights of the scale items were examined for significance. All items in the pre-purchase model for the electronics product category were found to be significant. In reviewing the parameters in the Covariance section, the parameters within the same construct representing covariance between the error terms e1 and e2, e5 and e7, e8 and e10, and e12 and e13 were higher than the M.I. cut off value. Each of these item pairs with high M.I. was modified with covariance arrows between the pairs. This reparameterization of the measurement model resulted in acceptable fit as can be seen in goodness-of-fit statistics for the original pre-purchase electronics model in Table 24. The covariance between e3 and e14 was higher than the M.I. cut off value of 10.0; therefore, PlanSale1 (I prepared for this purchase by looking through sale advertisements) was moved to the information search construct.

Next, the correlation between constructs was examined. The correlation between information search and comparison shopping was 0.880 and the correlation between planning purchases and planning sale purchases was 0.836; therefore, both pairs were combined to create a 2-factor model. Finally, the standardized loadings were examined (see Table 25) and the items InfoSearch 3 (I asked other people about their experience with this product prior to making this purchase) and Planning4 (I made a list of things I needed before making this shopping trip) were dropped from the pre-purchase electronics model because they loaded below the minimum factor loading. The 2-factor electronics

model consisted of information search (with 7 items) and planning (with 5 items). The final pre-purchase electronics model consisting of twelve observed variables represents good fit: CFI = 0.954; $\chi^2 = 93.4$; $df = 49$; χ^2 ratio = 1.905; RMSEA = 0.062 (see Table 23). The final pre-purchase electronics model is presented in Figure 7.

The C.R. of information search was 0.814 and the C.R. of planning was 0.704 (see Table 26). The C.R. of both pre-purchase electronics constructs was greater than the minimum criteria of 0.70 indicating internal consistency of the construct indicators.

Invariance Testing

Testing for invariance is used to understand whether components of the measurement model are invariant (i.e., equivalent) across groups (Byrne, 2001). In the present study, the invariance of the three product categories (i.e., clothing, grocery, electronics) for each stage (i.e., pre-purchase, purchase, post-purchase) was analyzed to identify the invariance of the model. To examine factor stability across the three different product categories, tests of invariance were conducted through a multi-group analysis procedure using AMOS. First, a baseline model for each stage was established. Next, two nested models were constructed for each stage: (a) the unconstrained model in which there are no cross-group constraints; and (b) the constrained model in which measurement weights (i.e., factor loadings) are held constant across groups. After estimates were calculated, the invariance was determined by the p -value < 0.05 (see Table 27). The p -values in the model fit output indicated that the data were significantly different for the models in the pre-purchase stage. The model comparison output showed that the chi-square difference was significant; suggesting the groups in the pre-purchase

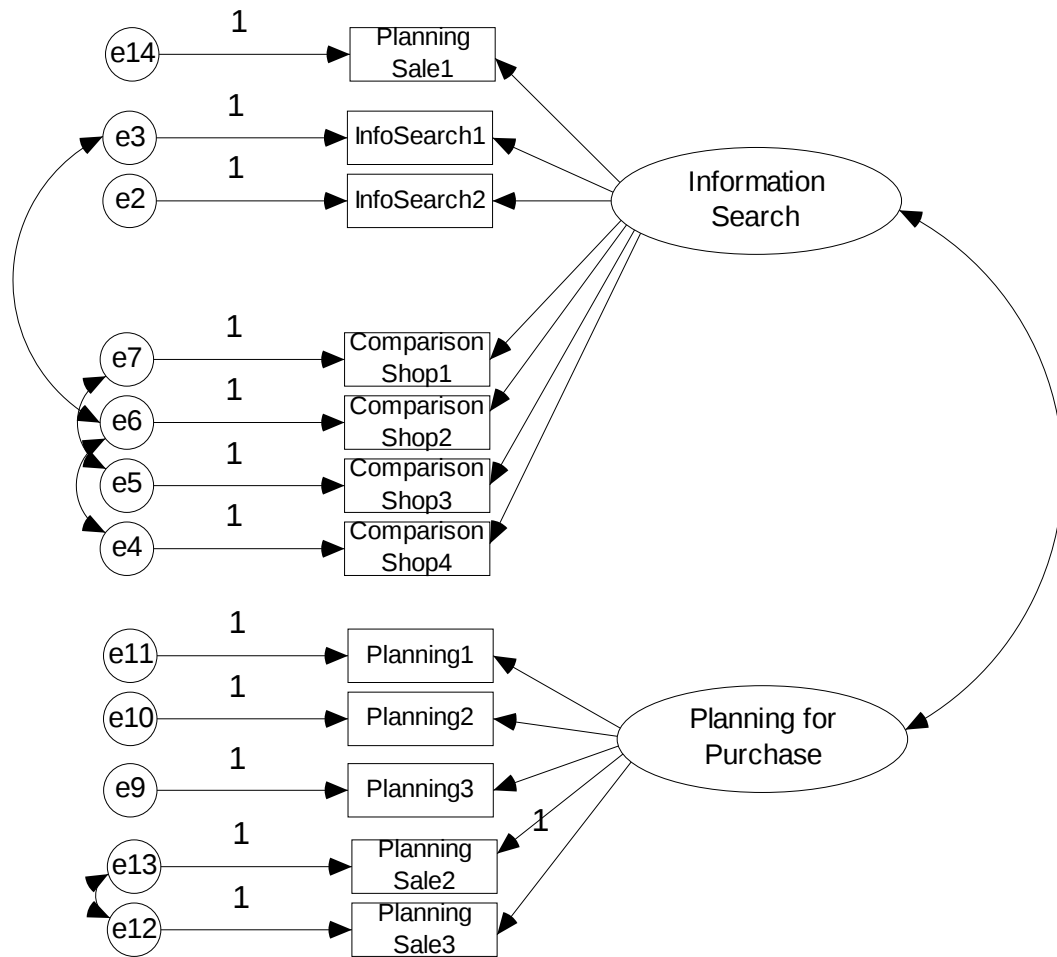


Figure 7 Final Pre-Purchase Model: Electronics

Table 27 Main Study Invariance Testing: Model Fit and Model Comparison

Stage	Model	NPAR	χ^2	<i>df</i>	<i>p</i> - value	χ^2 ratio	CFI	RMSEA
Pre-Purchase	Unconstrained	79	1372.04	168	0.000	8.17	0.814	0.070
	Constrained	60	1420.33	187	0.000	7.60	0.809	0.067
	Difference	19	48.29	19	0.000			
Purchase	Unconstrained	162	2482.35	597	0.000	4.16	0.888	0.046
	Constrained	118	2587.14	641	0.000	4.04	0.884	0.045
	Difference	44	104.79	44	0.000			
Post-Purchase	Unconstrained	153	2883.47	540	0.000	5.34	0.892	0.054
	Constrained	119	3172.03	574	0.000	5.53	0.880	0.055
	Difference	34	288.56		0.000			

stage differed.

Purchase Results

The original purchase model was a 5-factor structure composed of convenience, right product, saving money, saving time, and saving effort (see Figure 8). The results of the purchase stage were analyzed separately for the three product categories: clothing, grocery, and electronics.

Clothing

First, path weights of the scale items were examined for significance. All items in the purchase model for the clothing product category were found to be significant. In reviewing the parameters in the Covariance section, the parameters within the same construct representing covariance between the error terms e4 and e5, e8 and e11, e8 and e12, e11 and e12, e13 and e21, e18 and e20, e19 and e21, e22 and e23, e22 and e24, e22 and e25, and e25 and e26 were higher than the M.I. cut off value. Each of these item pairs with high M.I. was modified with covariance arrows between the pairs. This reparameterization of the measurement model resulted in acceptable fit as can be seen in goodness-of-fit statistics for the original purchase clothing model in Table 28.

Next, the correlation between constructs was examined. The correlation between convenience and effort was 0.899; therefore, these constructs were combined to create a 4-factor model. Finally, the standardized loadings were examined (see Table 29) and all items were above the minimum factor loading. The 4-factor clothing model consisted of saving effort (with 6 items), right product (with 6 items), saving money (with 5 items) and saving time (with 5 items). The final purchase clothing model consisting of 22

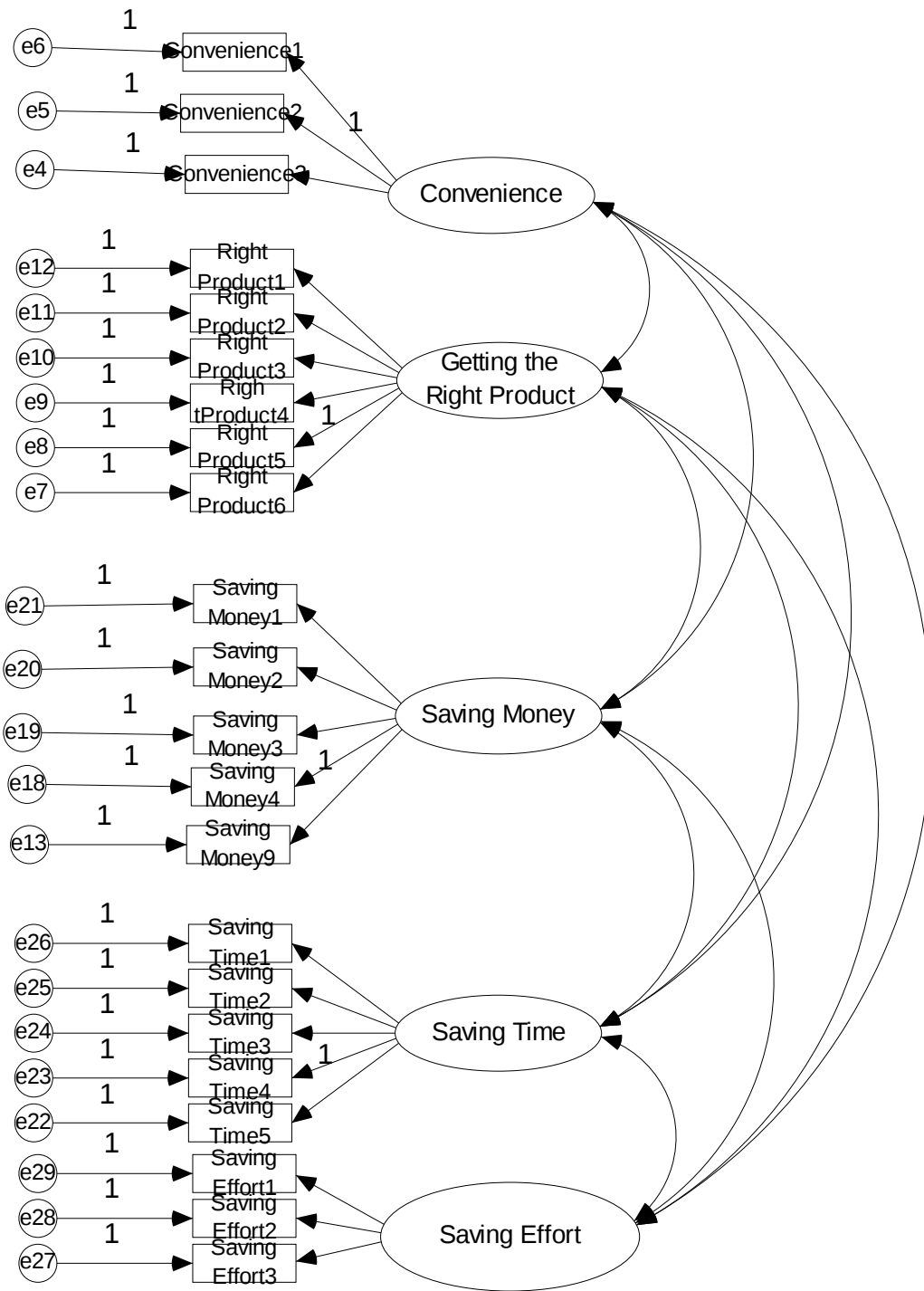


Figure 8 Original Measurement Model: Purchase

Table 28 Main Study Goodness-of-Fit Statistics: Purchase

Goodness-of-Fit Measures	Original Model Fit			Final Model Fit		
	Clothing	Grocery	Electronics	Clothing	Grocery	Electronics
CFI	0.919	0.915	0.902	0.923	0.912	0.902
Chi-Square	619.3	931.6	461.9	598.2	951.4	465.5
Degrees of Freedom	188	191	193	189	191	196
Chi-Square Ratio	3.294	4.878	2.393	3.165	4.981	2.375
RMSEA	0.069	0.072	0.077	0.067	0.073	0.077

Table 29 Purchase Standardized Loadings

Construct	Label	Scale Item	Standardized Loadings		
			Clothing	Grocery	Electronics
Saving Effort	Convenience1	Making this purchase was convenient for me.	0.78	0.79	0.785
	Convenience2	I made this purchase because it was convenient.	0.402	0.558	0.68
	Convenience3	Convenience was a benefit of making this purchase.	0.495	0.463	0.432
	SavingEffort1	Making this purchase was not a hassle.	0.715	0.774	0.675
	SavingEffort2	I did not spend extra effort on this purchase.	0.585	0.635	0.653
	SavingEffort3	I did not go out of my way to make this purchase.	0.587	0.505	0.648
Getting the Right Product	RightProduct1	This purchase was exactly what I was looking for.	0.583	0.636	0.688
	RightProduct2	This purchase perfectly fit my needs.	0.755	0.726	0.779
	RightProduct3	I have gotten everything I expected from this purchase.	0.784	0.746	0.811
	RightProduct4	I got a good quality product from this purchase.	0.716	0.769	0.797
	RightProduct5	This product was exactly the style I wanted.	0.701	0.67	0.744
	RightProduct6	This purchase was a very good fit for me.	0.712	0.814	0.701
Saving Money	SavingMoney1	In making this purchase, I got what I wanted at a price I was willing to pay.	0.789	0.649	0.642
	SavingMoney2	I got a lower price on this purchase than normal.	0.626	0.715	0.63
	SavingMoney3	I got a reasonable price on this purchase.	0.684	0.729	0.756
	SavingMoney4	I found this purchase on sale.	0.407	0.466	0.469
	SavingMoney9	I got a good deal on this purchase.	0.883	0.917	0.954
Saving Time	SavingTime1	In making this purchase, I used my time wisely.	0.776	0.737	0.574
	SavingTime2	It did not take much extra time to make this purchase.	0.627	0.623	0.563
	SavingTime3	I made this purchase as quickly as I could.	0.55	0.559	0.469
	SavingTime4	I didn't waste time making this purchase.	0.737	0.648	0.716
	SavingTime5	I was able to make this purchase quickly.	0.645	0.709	0.582

observed variables represents good fit: CFI = 0.923; $\chi^2 = 598.2$; $df = 189$; χ^2 ratio = 3.165; RMSEA = 0.067 (see Table 28). The final purchase clothing model is presented in Figure 9.

The C.R. values were 0.770 for saving effort, 0.859 for right product, 0.817 for saving money, and 0.802 for saving time (see Table 30). The C.R. of all purchase clothing constructs was greater than the minimum criteria of 0.70 indicating internal consistency of the construct indicators.

Grocery

First, path weights of the scale items were examined for significance. All items in the purchase model for the grocery product category were found to be significant. In reviewing the parameters in the Covariance section, the parameters within the same construct representing covariance between the error terms e4 and e5, e8 and e11, e8 and e12, e11 and e12, e18 and e20, e19 and e21, e22 and e24, e22 and e25, and e27 and e28 were higher than the M.I. cut off value. Each of these item pairs with high M.I. was modified with covariance arrows between the pairs. This reparameterization of the measurement model resulted in acceptable fit as can be seen in goodness-of-fit statistics for the original purchase grocery model in Table 28.

Next, the correlation between constructs was examined. The correlation between convenience and effort was 0.948; therefore, these constructs were combined to create a four factor model. Finally, the standardized loadings were examined (see Table 29) and all items were above the minimum factor loading of 0.40. The 4-factor grocery model consisted of saving effort (with 6 items), right product (with 6 items), saving money (with

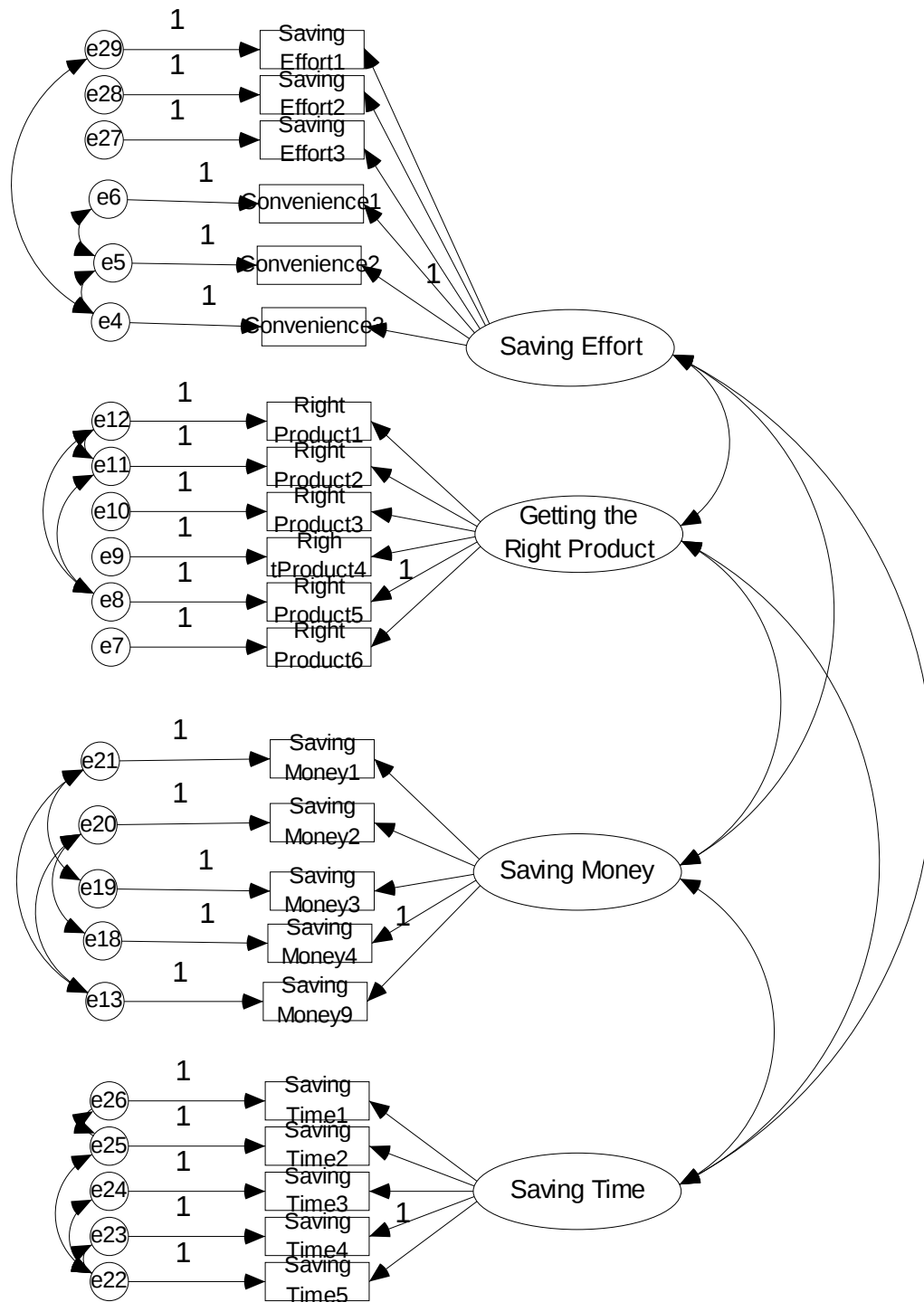


Figure 9 Final Purchase Model: Clothing

Table 30 Main Study Composite Reliability: Purchase

Construct	Product Category	Composite Reliability
Saving Effort	Clothing	0.77
	Groceries	0.794
	Electronics	0.814
Right Product	Clothing	0.859
	Groceries	0.871
	Electronics	0.888
Saving Money	Clothing	0.817
	Groceries	0.83
	Electronics	0.827
Saving Time	Clothing	0.802
	Groceries	0.791
	Electronics	0.72

5 items) and saving time (with 5 items). The final purchase grocery model consisting of 22 observed variables represents good fit: CFI = 0.912; $\chi^2 = 951.4$; $df = 191$; χ^2 ratio = 4.981; RMSEA = 0.073 (see Table 28). The final purchase grocery model is presented in Figure 10.

The C.R. of the constructs were: saving effort = 0.794; right product = 0.871; saving money = 0.830; and saving time = 0.791 (see Table 30). The C.R. of all purchase grocery constructs was greater than the minimum criteria of 0.70 indicating internal consistency of the construct indicators.

Electronics

First, path weights of the scale items were examined for significance. All items in the purchase model for the electronics product category were found to be significant. In reviewing the parameters in the Covariance section, the parameters within the same construct representing covariance between the error terms e8 and e11, e18 and e20, e19 and e20, e19 and e21, e22 and e24, e23 and e24 were higher than the M.I. cut off value. Each of these item pairs with high M.I. was modified with covariance arrows between the pairs. This reparameterization of the measurement model produced acceptable fit as observed in goodness-of-fit statistics for the original purchase electronics model in Table 28.

Next, the correlation between constructs was examined. The correlation between convenience and effort was 0.883; therefore, these constructs were combined to create a 4-factor model. Finally, the standardized loadings were examined (see Table 29) and all items were above the minimum factor loading of 0.40. The 4-factor grocery model

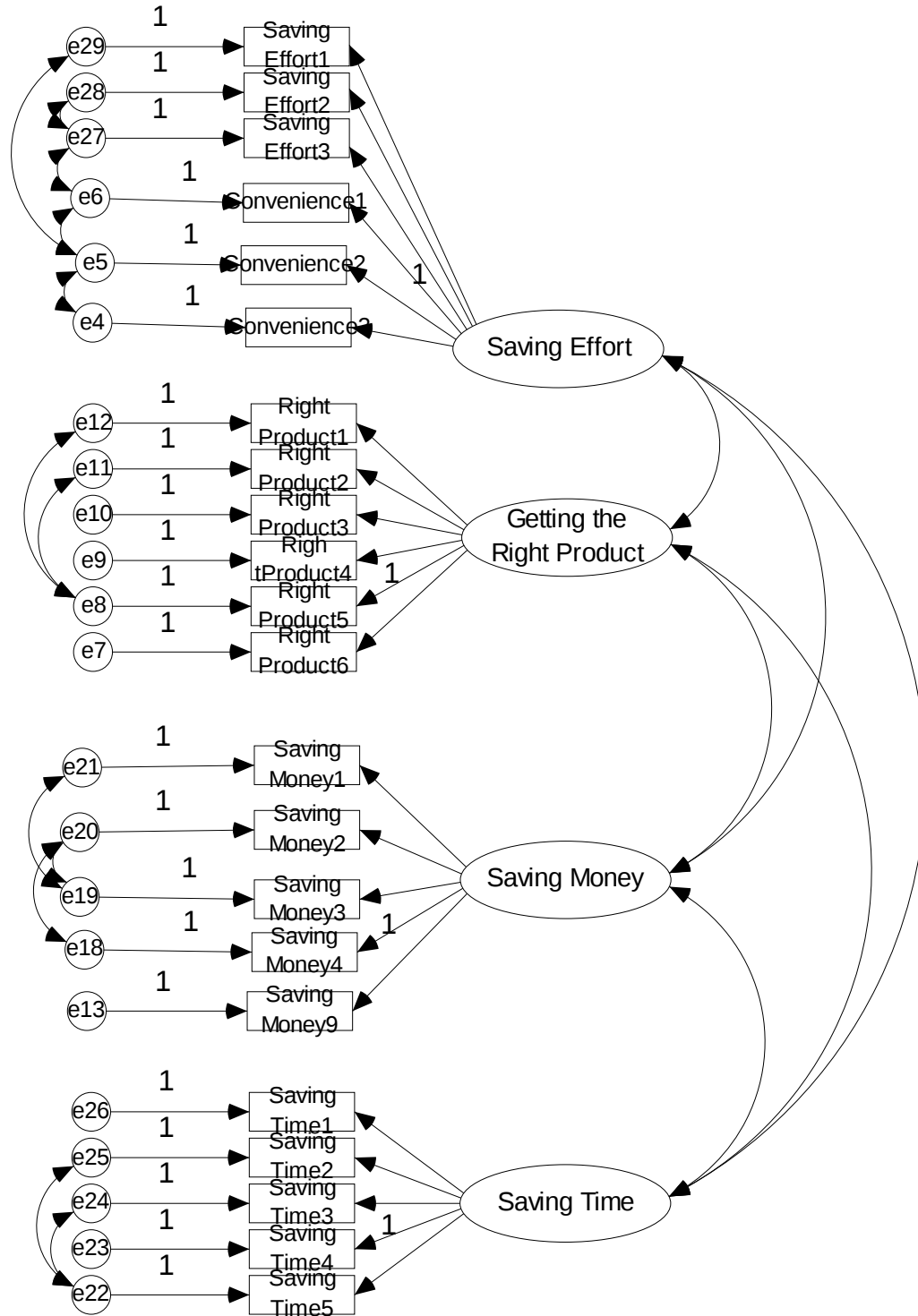


Figure 10 Final Purchase Model: Grocery

consisted of saving effort (with 6 items), right product (with 6 items), saving money (with 5 items) and saving time (with 5 items). The final purchase electronics model consisting of 22 observed variables represents good fit: CFI = 0.902; $\chi^2 = 465.5$; $df = 196$; χ^2 ratio = 2.375; RMSEA = 0.077 (see Table 28). The final purchase electronics model is presented in Figure 11.

The C.R. scores were 0.814 for saving effort, 0.888 for right product, 0.827 for saving money, and 0.720 for saving time (see Table 30). The C.R. of all purchase electronics constructs was greater than the minimum criteria of 0.70 indicating internal consistency of the construct indicators.

Invariance Testing

The p -values in the model fit output indicated that the data were significantly different for the models in the purchase stage (see Table 27). The model comparison output showed that the chi-square difference was significant (see Table 27), suggesting the groups in the purchase stage differed.

Post-purchase Results

The original post-purchase model was a 5-factor structure composed feelings, satisfaction, usefulness, rewards, and word of mouth (see Figure 12). The results of the post-purchase stage were analyzed separately for the three product categories: clothing, grocery, and electronics.

Clothing

First, path weights of the scale items were examined for significance. All items in the post-purchase model for the clothing product category were found to be significant. In

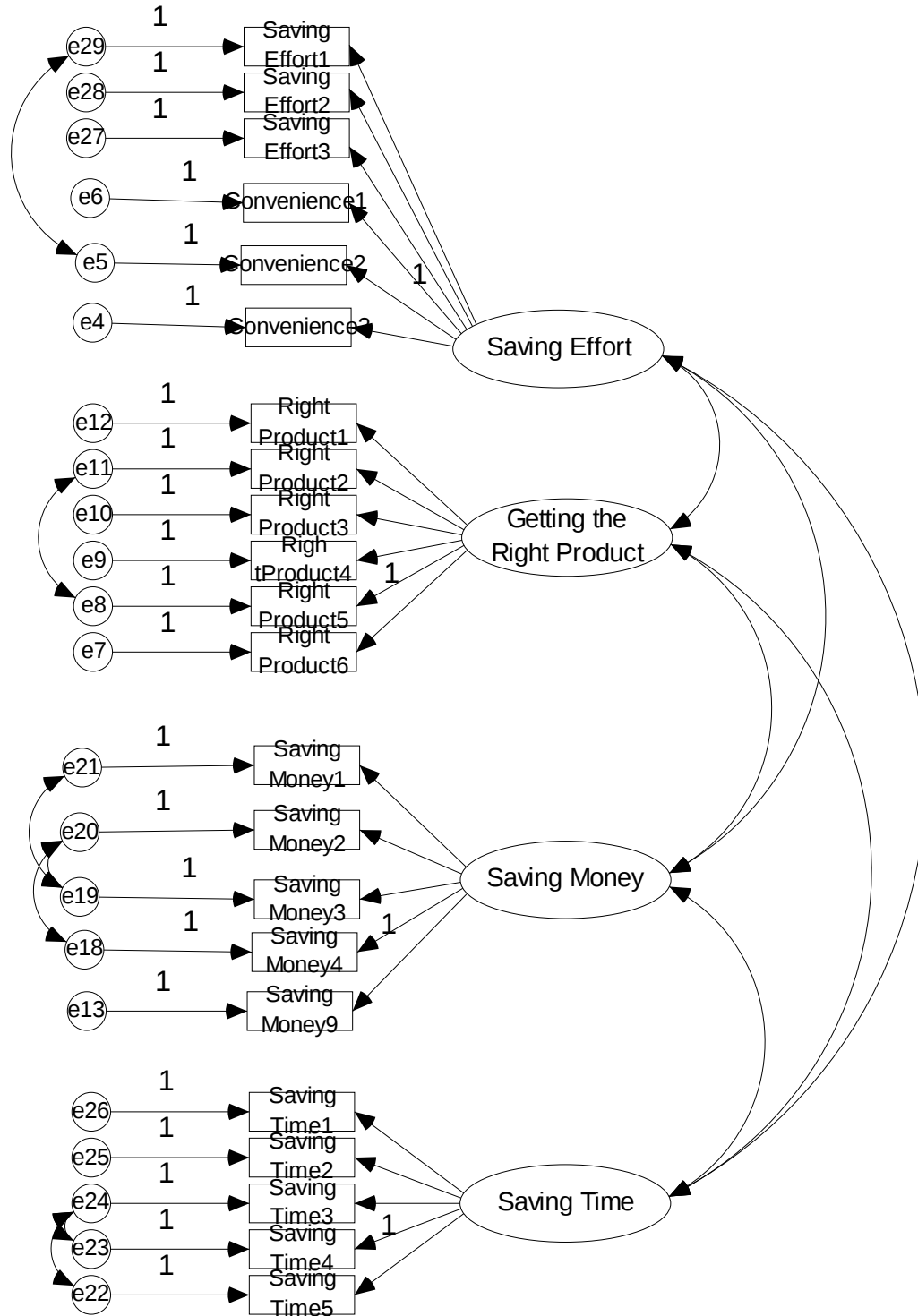


Figure 11 Final Purchase Model: Electronics

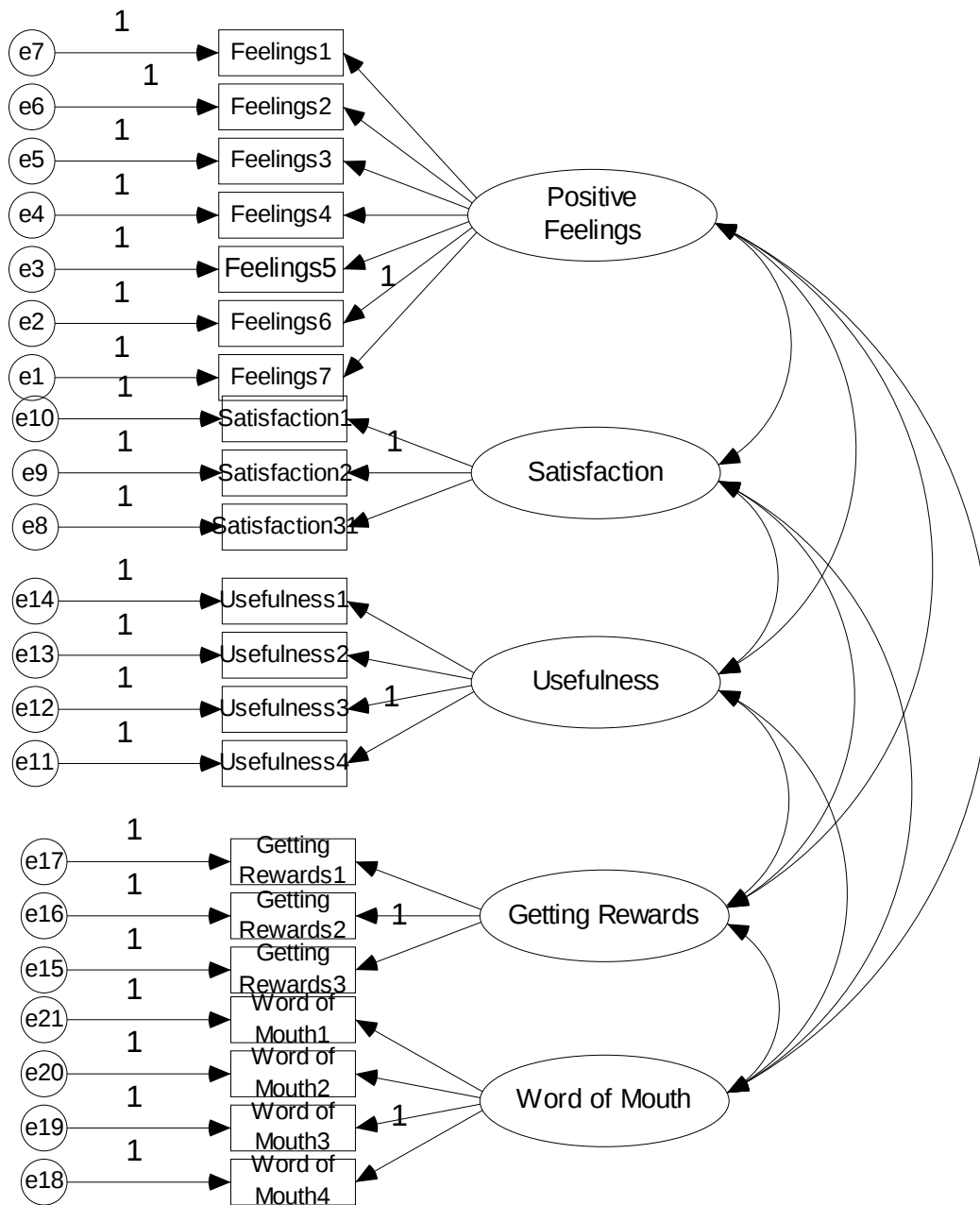


Figure 12 Original Measurement Model: Post-Purchase

reviewing the parameters in the Covariance section, the parameters within the same construct representing covariance between the error terms e1 and e2, e1 and e3, e1 and e4, e1 and e5, e4 and e7, e5 and e7, e8 and e10, e12 and e14, and e19 and e21 were higher than the M.I. cut off value of 10.0. Each of these item pairs with high M.I. was modified with covariance arrows between the pairs. This reparameterization of the measurement model resulted in acceptable fit as can be seen in goodness-of-fit statistics for the original post-purchase clothing model in Table 31.

Next, the correlation between constructs was examined. The correlation between positive feelings and satisfaction was 1.037; therefore, these constructs were combined to create a 4-factor model. Finally, the standardized loadings were examined (see Table 32) and all items were above the minimum factor loading. The 4-factor clothing model consisted of satisfaction (with 10 items), usefulness (with 4 items), getting rewards (with 3 items) and word of mouth (with 4 items). The final post-purchase clothing model consisting of 21 observed variables represents mediocre fit: CFI = 0.906; $\chi^2 = 862.6$; $df = 173$; χ^2 ratio = 4.986; RMSEA = 0.090 (see Table 31). The final post-purchase clothing model is presented in Figure 13.

The C.R. of satisfaction = 0.927; usefulness = 0.831; getting rewards = 0.656; and word of mouth = 0.937 (see Table 33). The C.R. of all post-purchase clothing constructs except getting rewards was greater than the minimum criteria of 0.70 indicating internal consistency of the construct indicators. The getting rewards value is acceptable because of the exploratory nature of the present study.

Table 31 Main Study Goodness-of-Fit Statistics: Post-Purchase

Goodness-of-Fit Measures	Original Model Fit			Final Model Fit		
	Clothing	Grocery	Electronics	Clothing	Grocery	Electronics
CFI	0.876	0.908	0.872	0.906	0.941	0.897
Chi-Square	1077.7	1158.1	622.6	862.6	796.1	535.6
Degrees of Freedom	169	165	173	173	165	173
Chi-Square Ratio	6.377	7.019	3.599	4.986	4.825	3.096
RMSEA	0.105	0.09	0.105	0.09	0.071	0.095

Table 32 Main Study Standardized Loadings: Post-Purchase

Construct	Label	Scale Item	Standardized Loadings		
			Clothing	Grocery	Electronics
Satisfaction	Feelings1	I feel good about this purchase.	0.723	0.702	0.748
	Feelings2	This purchase gave me a sense of pride.	0.714	0.739	0.725
	Feelings3	I am happy with this purchase.	0.6	0.504	0.624
	Feelings4	Making this purchase was exciting.	0.815	0.854	0.829
	Feelings5	The whole experience involved with this purchase was wonderful.	0.839	0.808	0.785
	Feelings6	This purchase was a really good experience.	0.783	0.823	0.784
	Feelings7	I had a fun experience making this purchase.	0.781	0.787	0.77
	Satisfaction1	I am satisfied with this purchase.	0.621	0.594	0.639
	Satisfaction2	This purchase gave me a feeling of satisfaction.	0.855	0.805	0.768
	Satisfaction3	This purchase has been satisfying.	0.73	0.737	0.695
Usefulness	Usefulness1	This product has been really useful.	0.844	0.804	0.769
	Usefulness2	I have gotten a lot of use out of this product.	0.84	0.858	0.846
	Usefulness3	I use this purchase all the time.	0.699	0.457	0.691
	Usefulness4	I will be able to use this product multiple times.	0.569	0.441	0.616
Getting Rewards	GettingRewards1	This purchase was better than expected.	0.691	0.712	0.785
	GettingRewards2	This purchase has been a pleasant surprise.	0.655	0.778	0.677
	GettingRewards3	I received some extra benefits along with this purchase.	0.519	0.604	0.575
Word of Mouth	Word of Mouth1	After making this purchase, I wanted to tell people about it.	0.861	0.884	0.868
	Word of Mouth2	I have shared this purchase story with other people.	0.903	0.905	0.85
	Word of Mouth3	I have bragged about this purchase.	0.908	0.905	0.854
	Word of Mouth4	I am still talking to others about this purchase.	0.88	0.847	0.882

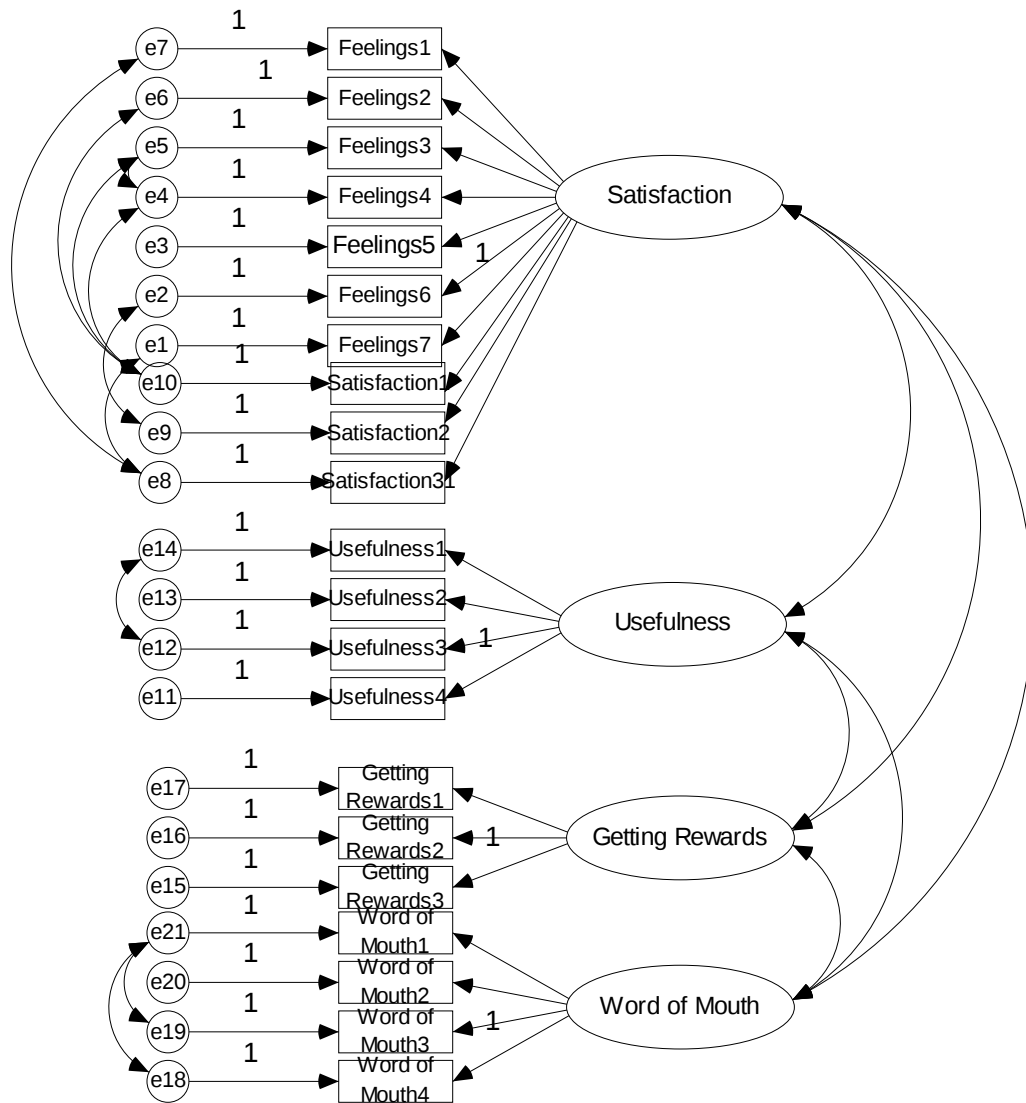


Figure 13 Final Post-Purchase Model: Clothing

Table 33 Main Study Composite Reliability: Post-Purchase

Construct	Product Category	Composite Reliability
Satisfaction	Clothing	0.927
	Groceries	0.923
	Electronics	0.923
Usefulness	Clothing	0.831
	Groceries	0.747
	Electronics	0.823
Getting Rewards	Clothing	0.656
	Groceries	0.742
	Electronics	0.722
Word of Mouth	Clothing	0.937
	Groceries	0.936
	Electronics	0.921

Grocery

First, path weights of the scale items were examined for significance. All items in the post-purchase model for the grocery product category were found to be significant. In reviewing the parameters in the Covariance section, the parameters within the same construct representing covariance between the error terms e1 and e5, e1 and e7, e2 and e4, e2 and e7, e3 and e5, e3 and e7, e4 and e7, e5 and e7, e6 and e7, e11 and e12, e15 and e16, e18 and e21, and e19 and e21 were higher than the M.I. cut off value. Each of these item pairs with high M.I. was modified with covariance arrows between the pairs. This reparameterization of the measurement model resulted in acceptable fit as can be seen in goodness-of-fit statistics for the original post-purchase grocery model in Table 31.

Next, the correlation between constructs was examined. The correlation between positive feelings and satisfaction was 0.931; therefore, these constructs were combined to create a 4-factor model. Finally, the standardized loadings were examined (see Table 32) and all items were above the minimum factor loading. The 4-factor grocery model consisted of satisfaction (with 10 items), usefulness (with 4 items), getting rewards (with 3 items) and word of mouth (with 4 items). The final post-purchase grocery model consisting of 21 observed variables represents good fit: CFI = 0.941; $\chi^2 = 796.1$; $df = 165$; χ^2 ratio = 4.825; RMSEA = 0.071 (Table 31). The final post-purchase grocery model is presented in Figure 14.

The C.R. was 0.923 for satisfaction, 0.747 for usefulness, 0.742 for getting rewards, and 0.936 for word of mouth (see Table 33). The C.R. of all post-purchase grocery constructs was greater than the minimum criteria of 0.70 indicating internal

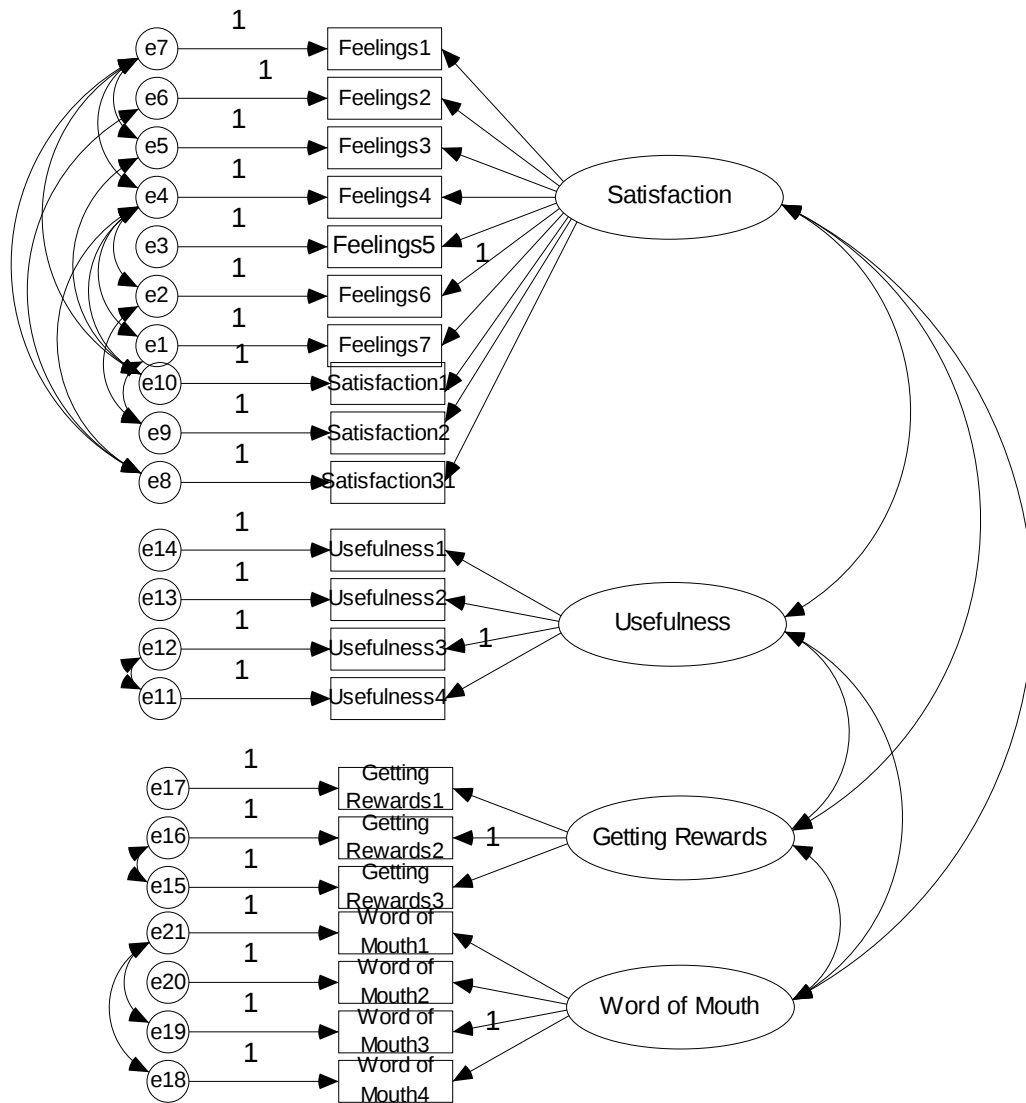


Figure 14 Final Post-Purchase Model: Grocery

consistency of the construct indicators.

Electronics

First, path weights of the scale items were examined for significance. All items in the post-purchase model for the electronics product category were found to be significant. In reviewing the parameters in the Covariance section, the parameters within the same construct representing covariance between the error terms e1 and e3, e2 and e4, e4 and e5, e4 and e7, e8 and e10, and e19 and e20 were higher than the M.I. cut off value. Each of these item pairs with high M.I. was modified with covariance arrows between the pairs. This reparameterization of the measurement model resulted in acceptable fit as can be seen in goodness-of-fit statistics for the original post-purchase electronics model in Table 31.

Next, the correlation between constructs was examined. The correlation between positive feelings and satisfaction was 1.008; therefore, these constructs were combined to create a 4-factor model. Finally, the standardized loadings were examined (see Table 32) and all items were above the minimum factor loading of 0.40. The 4-factor electronics model consisted of satisfaction (with 10 items), usefulness (with 4 items), getting rewards (with 3 items) and word of mouth (with 4 items). The final post-purchase electronics model consisting of 21 observed variables represents mediocre fit: CFI = 0.897; $\chi^2 = 535.6$; $df = 173$; χ^2 ratio = 3.096; RMSEA = 0.095 (see Table 31). The final post-purchase electronics model is presented in Figure 15.

The C.R. was 0.923 for satisfaction, 0.823 for usefulness, 0.722 for getting rewards, and 0.921 for word of mouth (see Table 33). The C.R. of all post-purchase

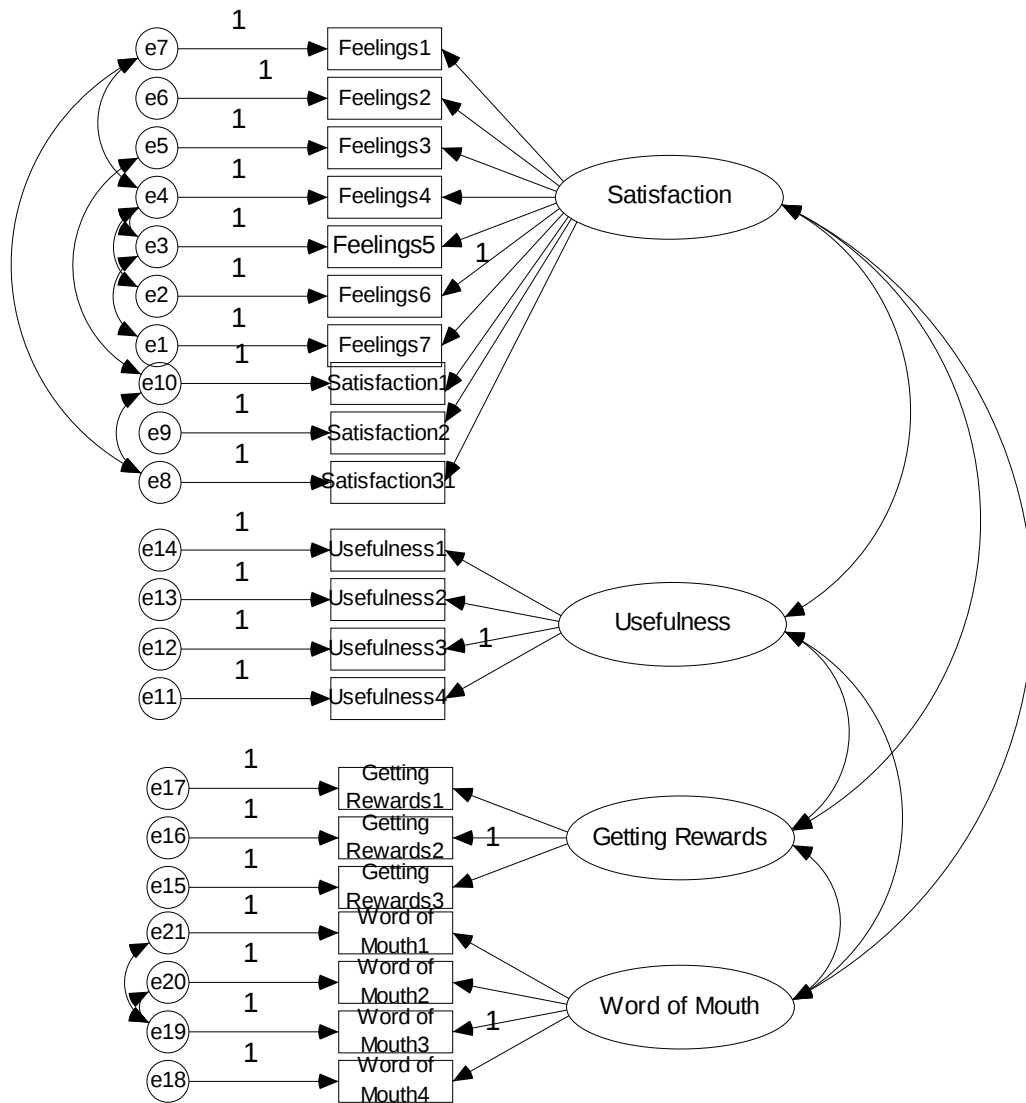


Figure 15 Final Post-Purchase Model: Electronics

electronics constructs was greater than the minimum criteria of 0.70 indicating internal consistency of the construct indicators.

Invariance Testing

The p -values in the model fit output indicated that the data were significantly different for the models in the post-purchase stage (see Table 27). The model comparison output showed that the chi-square difference was significant (see Table 27), suggesting the groups in the post-purchase stage differed.

Validity Testing

The scale validation was conducted for a 3-factor model (pre-purchase, purchase, and post-purchase); that is, the scale for each decision-making stage was tested. Validity was measured through tests for construct and nomological validity. Evidence of unidimensionality was measured through tests for convergent and discriminant validity. Convergent and discriminant validity were tested with average variance extracted (AVE). Nomological validity was tested by correlating smart shopping scale responses with existing scales of theoretically-related constructs.

Construct validity

Evidence of construct validity was provided by convergent and Discriminant validity. Convergent validity measures whether constructs that are theoretically related are actually related in the present study (Hair et al., 1995). Convergent validity can be evaluated through the AVE for the latent variables. To demonstrate convergence, the AVE scores should be greater than the threshold value of 0.50 (Hair et al., 1995). Higher

AVE values occur when the indicators (i.e., scale items) are truly representative of the construct (Hair et al., 1995).

Evidence of convergent validity using AVE for each of the constructs is provided in Table 34. AVE values ranged from 0.276 to 0.435 for the pre-purchase stage, from 0.344 to 0.570 for the purchase stage, and 0.392 to 0.789 for the post-purchase stage. Neither of the constructs in the pre-purchase stage demonstrated convergent validity for the clothing, grocery, or electronics product categories. Two constructs in the purchase stage (i.e., right product, saving money) demonstrated convergent validity for the grocery, and electronics product categories; only one construct (i.e., right product) demonstrated convergent validity for the clothing product category. Three constructs in the post-purchase stage (i.e., satisfaction, usefulness, word of mouth) demonstrated convergent validity for the clothing and electronics product categories. Two constructs in the post-purchase stage (i.e., satisfaction and word of mouth) demonstrated convergent validity for the grocery product category. The constructs that did not demonstrate convergent validity through AVE scores above 0.50 also demonstrated lower reliabilities (see Tables 26, 30 & 33 for comparison) because the AVE measure is a complementary measure to construct reliability (Hair et al., 1995).

Discriminant validity measures whether constructs that are not theoretically related are actually not related to each other in the present study (Hair et al., 1995). This can be assessed by examining the AVE for each construct and determining whether each is greater than the shared variance with any other construct under analysis (Fornell & Larcker, 1981; Hair et al., 1995).

Table 34 Main Study Average Variance Extracted (AVE)

Stage	Construct	Product Category	AVE
Pre-Purchase	Information Search	Clothing	0.37
		Groceries	0.355
		Electronics	0.393
	Planning	Clothing	0.276
		Groceries	0.435
		Electronics	0.329
Purchase	Saving Effort	Clothing	0.369
		Groceries	0.401
		Electronics	0.428
	Right Product	Clothing	0.506 *
		Groceries	0.532 *
		Electronics	0.570 *
	Saving Money	Clothing	0.486
		Groceries	0.504 *
		Electronics	0.502 *
	Saving Time	Clothing	0.451
		Groceries	0.433
		Electronics	0.344
Post-Purchase	Satisfaction	Clothing	0.539 *
		Groceries	0.552 *
		Electronics	0.547 *
	Usefulness	Clothing	0.558 *
		Groceries	0.446
		Electronics	0.541 *
	Getting Rewards	Clothing	0.392
		Groceries	0.492
		Electronics	0.468
	Word of Mouth	Clothing	0.789 *
		Groceries	0.784 *
		Electronics	0.746 *

* indicates AVE scores above the 0.5 threshold

Evidence of discriminant validity using AVE and shared variance is provided in Tables 35-43. In some cases, the squared correlations exceeded the AVE values of the other constructs demonstrating a lack of discriminant validity. Discriminant validity was not acceptable for the pair of pre-purchase constructs (i.e., information search and planning) for the clothing, grocery or electronics product categories (see Tables 35, 36 & 37). In the purchase stage, save effort, right product and save money were distinct constructs, but save effort and save time were not distinctly different in the clothing and electronics product categories (see Tables 38 and 40). In the purchase stage, save effort and save money were distinct constructs, but save effort, right product, and save time were not distinctly different in the grocery category (see Table 39). In the post-purchase stage, satisfaction, usefulness, and word of mouth were distinct constructs, but satisfaction and getting rewards were not distinctly different for the clothing, grocery or electronics product categories (see Tables 41, 42 & 43). These results indicate that all constructs are not different (discriminant) from other constructs in the measure of smart shopping.

Nomological validity

Nine constructs that were believed to be related to the smart shopping construct developed in this study were selected from the literature for validity testing. Nomological validity was tested by correlating pre-purchase and purchase scale responses with: price consciousness (Alford & Biswas, 2002), convenience seeking (Noble et al., 2006), marketplace knowledge (Clark et al., 2001), time consciousness (Kleijnen et al., 2007), and smart shopping (Mano & Elliott, 1997; Reynolds et al., 2002). Nomological validity

Table 35 Discriminant Validity: Pre-Purchase Clothing Model

	Information Search	Planning
Information Search	0.37	
Planning	0.84	0.28

Note: Bold items on the diagonal represent the AVE scores

Other items represent the squared correlation coefficients

The AVE should be larger than the squared correlation coefficients

Table 36 Discriminant Validity: Pre-Purchase Grocery Model

	Information Search	Planning
Information Search	0.36	
Planning	0.74	0.44

Note: Bold items on the diagonal represent the AVE scores

Other items represent the squared correlation coefficients

The AVE should be larger than the squared correlation coefficients

Table 37 Discriminant Validity: Pre-Purchase Electronics Model

	Information Search	Planning
Information Search	0.39	
Planning	0.90	0.33

Note: Bold items on the diagonal represent the AVE scores

Other items represent the squared correlation coefficients

The AVE should be larger than the squared correlation coefficients

Table 38 Discriminant Validity: Purchase Clothing Model

	Saving Effort	Getting the Right Product	Saving Money	Saving Time
Saving Effort	0.37			
Getting the Right Product	0.36	0.51		
Saving Money	0.20	0.68	0.49	
Saving Time	0.93	0.43	0.21	0.45

Note: Bold items on the diagonal represent the AVE scores

Other items represent the squared correlation coefficients

The AVE should be larger than the squared correlation coefficients

Table 39 Discriminant Validity: Purchase Grocery Model

	Saving Effort	Getting the Right Product	Saving Money	Saving Time
Saving Effort	0.40			
Getting the Right Product	0.57	0.53		
Saving Money	0.30	0.59	0.50	
Saving Time	1.02	0.67	0.42	0.43

Note: Bold items on the diagonal represent the AVE scores

Other items represent the squared correlation coefficients

The AVE should be larger than the squared correlation coefficients

Table 40 Discriminant Validity: Purchase Electronics Model

	Saving Effort	Getting the Right Product	Saving Money	Saving Time
Saving Effort	0.43			
Getting the Right Product	0.32	0.57		
Saving Money	0.21	0.69	0.50	
Saving Time	1.08	0.48	0.26	0.34

Note: Bold items on the diagonal represent the AVE scores

Other items represent the squared correlation coefficients

The AVE should be larger than the squared correlation coefficients

Table 41 Discriminant Validity: Post-Purchase Clothing Model

	Satisfaction	Usefulness	Getting Rewards	Word of Mouth
Satisfaction	0.54			
Usefulness	0.36	0.56		
Getting Rewards	0.77	0.37	0.39	
Word of Mouth	0.48	0.12	0.53	0.79

Note: Bold items on the diagonal represent the AVE scores

Other items represent the squared correlation coefficients

The AVE should be larger than the squared correlation coefficients

Table 42 Discriminant Validity: Post-Purchase Grocery Model

	Satisfaction	Usefulness	Getting Rewards	Word of Mouth
Satisfaction	0.55			
Usefulness	0.51	0.45		
Getting Rewards	0.68	0.36	0.49	
Word of Mouth	0.50	0.15	0.55	0.78

Note: Bold items on the diagonal represent the AVE scores

Other items represent the squared correlation coefficients

The AVE should be larger than the squared correlation coefficients

Table 43 Discriminant Validity: Post-Purchase Electronics Model

	Satisfaction	Usefulness	Getting Rewards	Word of Mouth
Satisfaction	0.55			
Usefulness	0.52	0.54		
Getting Rewards	0.76	0.51	0.47	
Word of Mouth	0.54	0.15	0.57	0.75

Note: Bold items on the diagonal represent the AVE scores

Other items represent the squared correlation coefficients

The AVE should be larger than the squared correlation coefficients

was also tested by correlating post-purchase scale responses with: hedonic shopping value (Babin et al., 1994), utilitarian shopping value (Babin et al., 1994), satisfaction (Arora, 1985), and smart shopper self-perception (Burton et al., 1998). Table 44 presents the results of the hypotheses testing.

Pre-Purchase and Purchase Stage

The first hypothesis was tested to examine the positive correlation between the constructs price-consciousness and saving money. Price-consciousness was tested using Alford and Biswas' (2002) 3-item price-consciousness scale. H_1 was supported with a Pearson correlation of 0.403 which was statistically significant at the 0.01 level.

Hypothesis H_{2a} was tested to examine the positive correlation between the constructs convenience-seeking and saving time. Hypothesis H_{2b} was tested to examine the positive correlation between the constructs convenience-seeking and saving effort. Convenience-seeking was tested using Noble et al.'s (2006) 3-item convenience-seeking scale. $H_{2a \& b}$ were supported with Pearson correlations of 0.295 and 0.234 respectively. These correlations were statistically significant at the 0.01 level. The third hypothesis was tested to examine the positive correlation between the constructs marketplace knowledge and information search. Marketplace knowledge was tested using Clark et al.'s (2001) 3-item marketplace knowledge scale. H_3 was supported with a Pearson correlation of 0.204 for clothing and grocery and 0.220 for electronics. Both were statistically significant at the 0.01 level. Hypothesis H_{4a} was tested to examine the positive correlation between the constructs time-consciousness and saving time. Hypothesis H_{4b} was tested to examine the positive correlation between time-consciousness and saving effort constructs. Time-

Table 44 Hypotheses Testing: Pearson Correlations

Hypothesis	Existing Construct		Smart Shopping Construct	Pearson Correlation	p-value
H ₁	price-consciousness (Alford & Biswas, 2002)	<-->	saving money	.403**	0.000
H _{2a}	convenience-seeking (Noble, et al., 2006)	<-->	saving time	.295**	0.000
H _{2b}	convenience-seeking	<-->	saving effort	.234**	0.000
H ₃	marketplace knowledge (Clark et al., 2001)	<-->	information search (clothing & grocery)	.204**	0.000
H ₃	marketplace knowledge	<-->	information search (electronics)	.220**	0.000
H _{4a}	time-consciousness (Kleijnen et al., 2007)	<-->	saving time	.058*	0.027
H _{4b}	time-consciousness	<-->	saving effort	.052*	0.044
H ₅	smart shopping (Mano & Elliot, 1997)	<-->	saving money	.278**	0.000
H _{6a}	hedonic shopping value (Babin et al., 1994)	<-->	satisfaction	.675**	0.000
H _{6b}	hedonic shopping value	<-->	getting rewards	.563**	0.000
H ₇	utilitarian shopping value (Babin et al., 1994)	<-->	usefulness	.335**	0.000
H _{8a}	satisfaction (Arora, 1985)	<-->	satisfaction	.671**	0.000
H _{8b}	satisfaction	<-->	getting rewards	.407**	0.000
H _{8c}	satisfaction	<-->	word of mouth	.334*	0.000
H ₉	smart shopper self-perception (Burton et al., 1998)	<-->	usefulness	.412**	0.000

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

consciousness was tested using Kleijnen et al.'s (2007) 9-item time-consciousness scale. H_{4a} was supported with a Pearson correlation of 0.058 which was statistically significant at the 0.05 level. H_{4b} was supported with a Pearson correlation of 0.052 which was statistically significant at the 0.05 level. Hypothesis H₅ was tested to examine the positive correlation between smart shopping (as defined by Mano & Elliott, 1997) and saving money constructs. Smart shopping was tested using Mano and Elliott's (1997) 7-item smart shopping scale. H₅ was supported with a Pearson correlation of 0.278 which was statistically significant at the 0.01 level.

Post-Purchase Stage

Hypothesis H_{6a} was tested to examine the positive correlation between hedonic shopping value and satisfaction constructs. Hypothesis H_{6b} was tested to examine the positive correlation between hedonic shopping value and getting rewards constructs. Hedonic shopping value was tested using Babin et al.'s (1994) 11-item hedonic shopping value scale. H_{6a} was supported with a Pearson correlation of 0.675 which was statistically significant at the 0.01 level. H_{6b} was supported with a Pearson correlation of 0.563 which was statistically significant at the 0.01 level. Hypothesis H₇ was tested to examine the positive correlation between utilitarian shopping value and usefulness constructs. Utilitarian shopping value was tested using Babin et al.'s (1994) 4-item utilitarian shopping value scale. H₇ was supported with a Pearson correlation of 0.335 which was statistically significant at the 0.01 level. Hypothesis H_{8a} was tested to examine the positive correlation between satisfaction (as defined by Arora, 1985) and satisfaction (as defined by the present study). Hypothesis H_{8b} was tested to examine the positive

correlation between satisfaction (as defined by Arora, 1985) and getting rewards constructs. H_{8c} was tested to examine the positive correlation between satisfaction (as defined by Arora, 1985) and word of mouth constructs. Satisfaction was tested using Arora's (1985) 3-item satisfaction scale. H_{8a} was supported with a Pearson correlation of 0.671 which was statistically significant at the 0.01 level. H_{8b} was supported with a Pearson correlation of 0.407 which was statistically significant at the 0.01 level. H_{8c} was supported with a with a Pearson correlation of 0.334 which was statistically significant at the 0.05 level. Hypothesis H_9 was tested to examine the positive correlation between smart shopper self-perception (as defined by Burton et al., 1998) and usefulness constructs. Smart shopping was tested using Burton et al.'s (Burton et al., 1998) 4-item smart shopper self-perception scale. H_9 was supported with a Pearson correlation of 0.412 which was statistically significant at the 0.01 level. Correlation estimates between the smart shopping constructs and the theoretically-related variables provided confirmation of nomological validity through statistically significant positive correlations with all nine of the theoretical constructs.

Discussion of Findings

With respect to gaining a better understanding and conceptualization of the term smart shopping, this study confirmed the presence of monetary savings and hedonic benefits (satisfaction) in smart shopping and added empirical support for the presence of additional constructs in smart shopping (i.e., information search, planning, saving effort, getting the right product, saving time, usefulness, getting rewards, and word of mouth).

This study confirmed the smart shopping literature related to monetary savings such as the study by Schindler (1998) that emphasized the utilitarian benefit of monetary savings in smart shopping. The present study provided empirical support for the saving money construct in the purchase stage and extends smart shopping activities to include purchase constructs labeled saving effort, getting the right product, and saving time.

This study also supported the cost and benefit components of consumer efficiency. For example, the pre-purchase and purchase stages represent the activities of smart shopping and are similar to the costs (i.e., price, time, energy) by Downs (1961) and the post-purchase stage represents the smart shopping behaviors and are similar to the benefits (i.e., goods, information, pleasure) by Downs (1961).

This study also confirmed the presence of hedonic responses in the smart shopping purchase experience. Previously, Schindler (1989) examined the smart shopper feelings associated with consumer emotions and excitement generated by price promotions. The present study extended Schindler's study by identifying other outcome constructs of smart shopping (i.e., usefulness, getting rewards, word of mouth) and by identifying other activities that generate emotions and excitement (i.e., saving effort, getting the right product, saving time). In addition, this study supported the study by Mano and Elliot (1997) that evaluated the hedonic value consumers received from smart purchases. Mano and Elliot (1997) only attributed the hedonic responses to price savings, whereas the present study attributed hedonic responses to other constructs such as saving effort or saving time.

Through the scale purification and validation, the present study provided empirical support for smart shopping topics previously found in the popular press: information gathering, planning, shopping enjoyment, saving time, saving money, and getting referrals from other shoppers. These findings confirmed the supposition that smart shopping activities included the expenditure of time, money, and effort, and often included emotional benefits from the shopping experience itself.

This study also supported economic theory that consumers desire utility from their consumption and that they cannot purchase all the desired goods and services; therefore, they must choose some combination of goods and services in exchange for their resources of time, money, and energy to obtain the desired utility.

Finally, this study supported the pre-purchase, purchase, and post-purchase consumer decision-making stages presented by Blackwell (2005). In these smart shopping stages, the consumer acquires information from outside, evaluates and narrows down the options, acquires the desired product (or an acceptable substitute), and evaluates the purchase based upon the consumption experience.

The final smart shopping scale items are presented in Appendix J. The pre-purchase stage includes eight items in the information search construct and six scale items for the planning construct. As indicated in Appendix J, one scale item (Planning3) should be excluded from studies in the clothing product category; two items (Planning2 and Planning4) should be excluded from studies in the grocery category; and one item (InfoSearch3) should be excluded from studies in the electronics category.

The purchase stage includes six items in the saving effort construct, six items in the getting the right product construct, five items in the saving money construct, and five items in the saving time construct. All scale items should be included in studies of clothing, grocery, and electronics product categories. The post-purchase stage includes 10 items in the satisfaction construct, four items in the usefulness construct, three items in the getting rewards construct, and four items in the word of mouth construct. All scale items should be included in studies of clothing, grocery, and electronics product categories.

Chapter Summary

In summary, the pilot test was conducted for initial scale refinement and resulted in modifications to the questionnaire wording and instructions in further studies. The pretest was conducted for scale purification and resulted in 57 smart shopping scale items for further studies.

In the main study, CFA was used to identify the overall factor structure of the smart shopping items. The magnitude of item error variances, the prevalence of large modification indices, and significance of residual covariation indicated potential items for deletion from the pool of smart shopping items. Results of the three item-analysis techniques along with goodness-of-fit indices (χ^2 test, df , χ^2 ratio test, CFI, and RMSEA) and standardized loadings were considered collectively in determining which scale items to retain in the 3-factor model. These techniques resulted in retention of 56 of 57 items in the clothing product category, 55 of 57 items in the grocery product category, and 55 of 57 items in the electronics product category. Composite reliability values ranged from

0.654 to 0.937. Tests of invariance found significant differences for the models between the three product categories for each of the three stages. Evidence of convergent and discriminant validity using AVE differed for the three stages and three product categories. Confirmation of nomological validity was identified through statistically significant correlations with all nine of the theoretical constructs.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

The purpose of this study is to gain a better understanding and conceptualization of the term smart shopping. In this chapter, the findings and implications of the smart shopping study are discussed, the limitations of the study are proposed, and suggestions for further research are provided.

Summary of Findings

The specific research objectives of this study are to: (a) investigate consumers' perceptions of the term smart shopping; (b) develop a measure of smart shopping; and (c) validate the measure of smart shopping. A comprehensive review of literature is used to identify existing smart shopping concepts and theories and to identify opportunities for expanding upon existing meanings of the term. Customers' perceptions of the term smart shopping are obtained through focus group interviews and face-to-face in-depth interviews. With this conceptual information, a measure of smart shopping is developed, purified, and validated through the use of a pilot test, pretest, and main study.

Preliminary statistical analyses reveal significant group differences in gender and age category variables across the three product categories. Assessments of normality reveal pronounced kurtosis values. Confirmatory factor analysis (CFA) is conducted for the three stages (i.e., pre-purchase, purchase, and post-purchase) and three product categories (i.e., clothing, grocery, and electronics). Results of the standardized loadings and goodness-of-fit indices are used to determine which scale items to retain in each model. In the clothing product category, 56 of 57 scale items are retained, in the grocery

product category, 55 of 57 items are retained, and in the electronics product category, 55 of 57 items are retained.

With respect to composite reliability, the values of the 10 constructs in the smart shopping model range from 0.654 to 0.937. The commonly used minimum reliability is 0.70; however values below this threshold are often accepted for exploratory research (Hair et al., 1995). The researcher conducts invariance testing on each stage for the three product categories and significant differences are found among the product categories in each stage.

Evidence of convergent and discriminant validity are evaluated through the AVE for the latent variables. Neither of the constructs in the pre-purchase stage demonstrates convergent validity. However, two constructs in the purchase stage (i.e., right product, saving money) demonstrate convergent validity; and three constructs in the post-purchase stage (i.e., satisfaction, usefulness, word of mouth) demonstrate convergent validity. Discriminant validity is not acceptable for the pair of pre-purchase constructs (i.e., information search and planning). In the purchase stage, save effort, right product and save money are distinct constructs, but save effort and save time are not distinctly different. In the post-purchase stage, satisfaction, usefulness, and word of mouth are distinct constructs, but satisfaction and getting rewards are not distinctly different.

Finally, correlation estimates between the smart shopping constructs and the theoretically-related variables provide confirmation of nomological validity through statistically significant correlations with all nine of the theoretical constructs.

With this study, the concept of “smart shopping” is conceptualized and tested from a broader perspective than previous studies. Previously, studies about smart shopping were primarily focused on saving money. This study has expanded the definition of the term by investigating cost and benefit components as well as utilitarian and hedonic aspects of smart shopping.

The constructs in the smart shopping stages include: (a) information search and planning in the pre-purchase stage; (b) saving effort, getting the right product, saving money, and saving time in the purchase stage; and (c) satisfaction, usefulness, getting rewards, and word of mouth in the post-purchase stage. These constructs are depicted in the revised smart shopping model (see Figure 16).

Pre-Purchase Stage

With respect to the pre-purchase stage, the smart shopping constructs differ for the three product categories. This suggests that the consumers’ information search and planning behaviors may differ dependent upon the product category (i.e., clothing, grocery, or electronics). While asking others about their purchase experiences (InfoSearch3) may be part of the information search for clothing and grocery purchases, it may not be a part of electronics purchases. Next, having an organized shopping plan (Planning2) may be a part of clothing and electronics purchases, but not a part of grocery purchases. In addition, while knowing how much money participants are willing to spend (Planning3) on their grocery and electronics purchases may be a part of smart shopping, it may not be an important part of clothing purchases. Finally, making a list before a shopping trip (Planning4) may be a part of grocery shopping, but may not be a part of

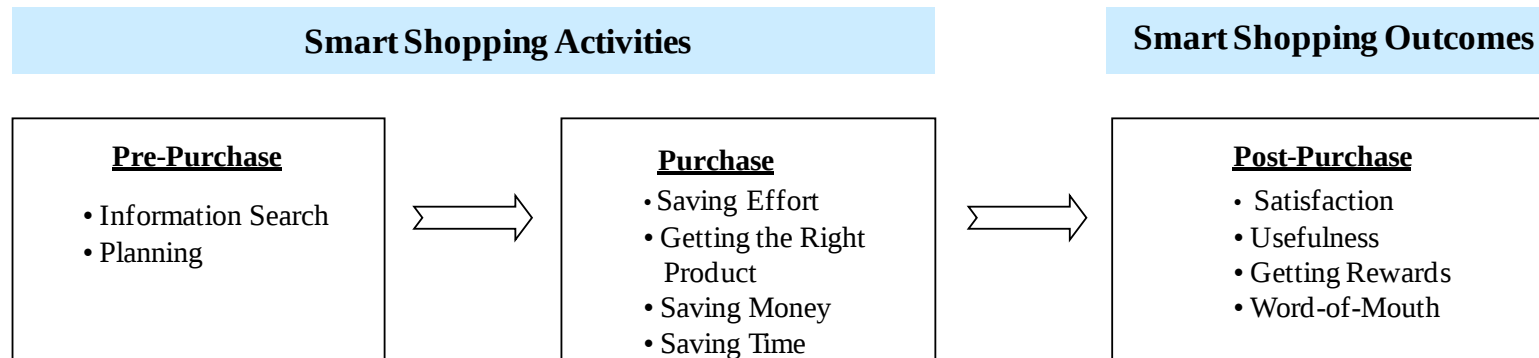


Figure 16 Final Model of Smart Shopping

clothing or electronics shopping. These results show that pre-purchase consumer shopping activities may not be consistent across product categories.

The original pre-purchase model includes four constructs (i.e., information search, comparison shopping, planning for purchases, and planning for sale purchases). However, the data show that the information search and comparison shopping constructs are highly correlated and exhibit theoretical similarity as are the planning for purchases and planning for sale purchases constructs. Therefore, these pairs of constructs were combined to provide two constructs (i.e., information search and planning). In a study of search behavior of grocery shoppers by Putrevu and Ratchford (1997), search was made up of 9 subscales: comparing unit prices, checking price tags, comparing brands on different ingredients/attributes, looking for in-store promotions, searching for coupons, looking for advertised specials in newspapers/flyers, shopping at multiple markets, discussing grocery shopping with friends, and looking for newspaper/magazine evaluations of grocery products. This method of using subscales indicates that the highly correlated constructs in the pre-purchase stage are theoretically similar; thus, two constructs remain (i.e., information search and planning).

Purchase Stage

The original purchase model is a 5-factor model composed of convenience, right product, saving money, saving time, and saving effort. Because of the high correlation and theoretical similarity between the saving time and getting convenience constructs, these two constructs are combined. In a study by Donthu and Garcia (1999) that compared Internet shoppers to Internet nonshoppers, the authors' convenience construct

consisted of three scale items: I hate to spend time gathering information on products, I do not like complicated things, and it is convenient to shop from home. In this study, the terms convenience and time are used in the same construct suggesting that the two are theoretically-related.

The correlation between the remaining saving time and saving effort constructs is high. However, based upon the information from the qualitative interviews, they are proposed to be two distinct constructs. For example, “I did not go out of my way” (saving effort) is similar to, but conceptually different from “I didn’t waste time making this purchase” (saving time). For this reason, the final purchase model is a 4-factor model consisting of saving effort, right product, saving money, and saving time.

Post-Purchase Stage

The original post-purchase model contains five constructs: positive feelings, satisfaction, usefulness, getting rewards, and word of mouth. Due to high correlation and theoretical similarity between satisfaction and positive feelings, these constructs are combined. Westbrook and Oliver (1991) examined feelings and attitudes toward purchases with 12 scale items that included both satisfaction statements (e.g., I am satisfied with my decision to buy this product) and positive feelings statements (e.g., I have truly enjoyed this purchase). Thus, the final post-purchase model contains four constructs: satisfaction, usefulness, getting rewards, and word of mouth.

The final smart shopping scale items are presented in Appendix J. The pre-purchase stage includes eight items in the information search construct and six scale items for the planning construct. As indicated in the Appendix, one item should be

excluded from studies in the clothing product category; two items should be excluded from studies in the grocery category; and one item should be excluded from studies in the electronics category.

The purchase stage includes six items in the saving effort construct, six items in the getting the right product construct, five items in the saving money construct, and five items in the saving time construct. All scale items should be included in studies of clothing, grocery, and electronics. The post-purchase stage includes 10 items in the satisfaction construct, four items in the usefulness construct, three items in the getting rewards construct, and four items in the word of mouth construct. All scale items should be included in studies of clothing, grocery, and electronics.

Implications

This study, which investigates the activities and outcomes of the smart shopping construct, illuminates the complexity of the term smart shopping. In order to compete for today's smart shopper who places importance on both price and non-price dimensions of shopping, retailers need to develop strategies for a specific smart shopping stage (i.e., pre-purchase, purchase, and post-purchase) and a specific product category (e.g., clothing, grocery, or electronics).

Specific pre-purchase strategies retailers could adopt to enhance smart shopping include: (a) online and in-store information kiosks for comparing product features and benefits; (b) subscriptions to retailer special events, price discounts, or new arrivals via email or postal service; (c) aisle-by-aisle grocery shopping lists that combine the stores' layout with the consumers' weekly shopping list. Such pre-purchase strategies could

provide shoppers with more information that would enable them to reduce the costs (e.g., money, time, effort) or increase the benefits (e.g., satisfaction, usefulness) of the shopping trip, thus making them feel like a smart shopper.

Purchase strategies could include: (a) online wish lists to save customers time when revisiting the website or visiting the store and to send to friends or family for gift-giving suggestions; (b) in-store pickup for online or telephone purchases to save shipping costs and to reduce shopping effort through reserved parking spaces and expedited check-out lanes; and (c) store maps on shopping carts or posted throughout the store to assist customers in navigating the store and in quickly finding the products for which they are shopping. These types of purchase strategies provide monetary and non-monetary savings for the smart shopper while also providing positive outcomes.

Post-purchase strategies could focus on the smart shoppers' desired outcomes and provide shopping experiences that increase satisfaction. Such strategies could include: (a) experiential shopping environments that provide entertainment as well as tangible products and services; (b) tell-a-friend services for customers to alert others about good products, services, or sales; and (c) rewards or rebates for purchases or periodic gifts-with-purchase. These post-purchase strategies provide utilitarian benefits such as saving money while also providing hedonic benefits such as getting rewards or word of mouth.

By choosing to meet the needs of the “smart” shopper, retailers can shift the focus from the “sale shopper” who makes shopping decisions purely based upon monetary costs, to the smart shopper who also wants to reduce the time and effort costs of his/her shopping trips while experiencing a pleasurable shopping trip.

Limitations and Directions for Future Research

This study has several limitations and opportunities for future research. First, as with all scale development research, one must use caution when applying the smart shopping scale to other shopping contexts (e.g., online and catalog) or product categories (e.g., furniture or jewelry). Further evidence is necessary to replicate and extend the proposed model before generalization beyond in-store clothing, grocery, or electronics purchases is recommended.

Second, it should be recognized that the participants for the pilot test, pretest, and main study are U.S. consumers; therefore, this study cannot be generalized to other cultural contexts. Though the term smart shopping is relatively widespread in American culture, it may not be applicable in other cultures. Further research could identify ways in which the proposed model is a reflection of Western cultures.

Third, there was a significant difference among the three product categories by some demographic characteristics (i.e., gender and age category); therefore, differences in product categories may be a reflection of differences in gender or age category. For example, 66.4% of the men in the sample chose the electronics product category; therefore, the results of the data may be a reflection of the difference between genders rather than the difference between product categories. This is both a limitation and direction for further research. Further testing of the demographic characteristics by product category is warranted.

Another fruitful research direction is to replicate the smart shopping study for online and catalog shopping. Such a replication would contribute to existing multi-

channel research projects and extend the smart shopping scales to multiple shopping channels.

Finally, more work is necessary to refine our knowledge of smart shopping activities and behaviors. The 57 smart shopping scale items surviving empirical verification in the pretest and main study are included in ten smart shopping constructs, but other potential constructs remain. For example, items specifying “coupon redemption” and “waiting” as a part of the purchase stage were not retained in the refined scale although they were voiced in the qualitative interviews. Thus, further attempts at measuring smart shopping might include items such as coupon redemption and waiting.

Recognizing that consumers desire better outcomes in exchange for their participation in shopping activities, this study assists in understanding the meaning of the term smart shopping, identifying ways of meeting the needs of the smart shopper, and suggesting marketing methods for targeting smart shoppers.

LIST OF REFERENCES

- Alford, B. L., & Biswas, A. (2002). The effects of discount level, price consciousness and sale proneness on consumers' price perception and behavioral intention. *Journal of Business Research*, 55(9), 775-783.
- Alreck, P. L., & Settle, R. B. (2002). The hurried consumer: Time-saving perceptions of Internet and catalogue shopping. *Journal of Database Marketing*, 10(1), 25.
- Andreoni, J. (1990). Impure altruism and donations to public goods: A theory of warm-glow giving. *Economic Journal*, 100(401), 464-477.
- Arora, R. (1985). Involvement: Its measurement for retail store research. *Journal of the Academy of Marketing Science*, 13(2), 229-241.
- Babin, B. J., & Darden, W. R. (1995). Consumer self-regulation in a retail environment. *Journal of Retailing*, 71(1), 47-70.
- Babin, B. J., Darden, W. R., & Griffin, M. (1994). Work and/or fun: Measuring hedonic and utilitarian shopping value. *Journal of Consumer Research*, 20(4), 644-656.
- Back, T., Haveron, K., Narasimhan, L., Rauch, S., & Sneader, K. (2005). Winning in a value-driven world. [Electronic Version]. Retrieved April 23, 2007 from <http://www.mckinsey.com/client/service/retail/pdf/Winninginavaluedrivenworld.pdf>
- Bade, R., & Parkin, M. (2007). *Foundations of economics*. New York: Pearson Education, Inc.
- Barta, S., Martin, J., Frye, J., & Woods, M. (1999). Trends in retail trade [Electronic Version]. *Oklahoma State University, Oklahoma Cooperative Extension Facts Sheets*. Retrieved September 28, 2006 from <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-2492/F-565web.pdf>
- Batra, R., & Ahtola, O. T. (1991). Measuring the hedonic and utilitarian sources of consumer attitudes. *Marketing Letters*, 2(2), 159-170.
- Bell, D. R., Ho, T.-H., & Tang, C. S. (1998). Determining where to shop: Fixed and variable costs of shopping. *Journal of Marketing Research (JMR)*, 35(3), 352-369.
- Bender, W. C. (1964). Consumer purchase-costs--do retailers recognize them? *Journal of Retailing*, 40(1), 1-8.
- Bettman, J. R., Luce, M. F., & Payne, J. W. (1998). Constructive consumer choice processes. *The Journal of Consumer Research*, 25(3), 187-217.
- Blackwell, R. D., Miniard, P. W., & Engel, J. F. (2005). *Consumer Behavior* (10th ed.). Mason, OH: South-Western College Publishers.
- Boyes, W., & Melvin, M. (2008). *Economics* (7th ed.). New York: Houghton Mifflin Company.
- Burton, S., Lichtenstein, D. R., Netemeyer, R. G., & Garretson, J. A. (1998). A scale for measuring attitude toward private label products and an examination of its psychological and behavioral correlates. *Journal of the Academy of Marketing Science*, 26(4), 293-306.
- Buy reliable, fix smart. (2002). *Consumer Reports Buying Guide*, 325.
- Byrne, B. M. (2001). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. London: Lawrence Erlbaum Associates.

- Carsky, M. L., & Dickinson, R. (1995). Toward consumer efficiency: A model for improved buymanship. *Journal of Consumer Affairs*, 29(2), 442-459.
- Churchill, G. A., Jr. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research* 16(1), 64-73.
- Clark, P. W., Martin, C. A., & Bush, A. J. (2001). The effect of role model influence on adolescents' materialism and marketplace knowledge. *Journal of Marketing Theory & Practice*, 9(4), 27-36.
- Cobanoglu, C., Warde, B., & Moreo, P. J. (2001). A comparison of mail, fax and web-based survey methods. *International Journal of Market Research*, 43(4), 441-452.
- Cochrane, W. W., & Bell, C. S. (1956). *The economics of consumption: economics of decision making in the household*. New York: McGraw-Hill
- Coupey, E. (1994). Restructuring: Constructive processing of information displays in consumer choice. *The Journal of Consumer Research*, 21(1), 83-99.
- Coupey, E., Bodur, O., & Brinberg, D. (1998). Predecision processes in consumer choice: Effects of prior knowledge on aspects of decision structuring. *Advances in Consumer Research*, 25(1), 226-232.
- Cox, E. P. (1980). The optimal number of response alternatives for a scale: A review. *Journal of Marketing Research (JMR)*, 17(4), 407-422.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (Second ed.). Thousand Oaks: Sage Publications.
- Crutsinger, M. (2006, October 13, 2007). Personal savings rate turns negative. *The San Diego Union-Tribune*.
- Darden, W. R., & Ashton, D. (1974). Psychographic profiles of patronage preference groups. *Journal of Retailing*, 50(4), 99.
- The delphi method. (n.d.). Retrieved May 30, 2008, from <http://www.iit.edu/~it/delphi.html>
- Denzin, N. K., & Lincoln, Y. S. (2005). The discipline and practice of qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research* (pp. 1-28). Thousand Oaks, CA: Sage Publications.
- Deutskens, E., Jong, A., Ruyter, K., & Wetzels, M. (2006). Comparing the generalizability of online and mail surveys in cross-national service quality research. *Marketing Letters*, 17(2), 119-136.
- Dillman, D. A. (2000). *Mail and internet surveys: The tailored design method* (2nd ed.). New York: John Wiley & Sons, Inc.
- Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of Marketing Research (JMR)*, 28(3), 307-319.
- Donthu, N., & Garcia, A. (1999). The internet shopper. *Journal of Advertising Research*, 39(3), 52-58.
- Downs, A. (1961). A theory of consumer efficiency. *Journal of Retailing*, 37, 6-12.
- Drive smart, save money. (2004). *Consumer Reports*, 69, 7.
- e-Rewards North American Consumer Panel [Electronic (2007). Version]. Retrieved August 13, 2008 from http://www.e-rewards.com/researchers/downloads/US_Consumer_Panels.pdf.

- Eastlick, M. A., & Feinberg, R. A. (1999). Shopping motives for mail catalog shopping. *Journal of Business Research*, 45(3), 281-290.
- Fern, E. F. (2001). *Advanced focus group research*. Thousand Oaks: Sage Publications.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Frank, R., Mihas, E., Narasimhan, L., & Rauch, S. (2003). Competing in a value-driven world [Electronic Version]. Retrieved March 30, 2006 from <http://www.mckinsey.com/practices/retail/knowledge/articles/competinginavaluedrivenworld.pdf>.
- Garland, R. (1991). The mid-point on a rating scale: Is it desirable? *Marketing Bulletin*, 2, 66-70.
- Garretson, J. A., & Burton, S. (2003). Highly coupon and sale prone consumers: Benefits beyond price savings. *Journal of Advertising Research*, 43(2), 162-172.
- Gibbs, A. (1997). Focus groups [Electronic Version]. *Social Research Update*, Winter from <http://sru.soc.surrey.ac.uk/SRU19.html>.
- Griffin, M., Babin, B. J., & Modianos, D. (2000). Shopping values of Russian consumers: The impact of habituation in a developing economy. *Journal of Retailing*, 76(1), 33-52.
- Gross, K., & Stone, J. (2002). *Dress smart men: Wardrobes that win in the new workplace (Chic Simple)*. New York: Warner Books.
- Hair, J. F., Jr., Anderson, R. E., Tatham, R. L., & William, C. B. (1995). *Multivariate data analysis with readings* (4th ed.). Englewood Cliffs: Prentice Hall.
- Hall, A. L., & Rist, R. C. (1999). Integrating multiple qualitative research methods (or avoiding the precariousness of a one-legged stool). *Psychology & Marketing*, 16(4), 291-304.
- Hamilton-Wright, K. J. (2007, May). Are you a smart and happy shopper? *Black Enterprise*, 37, 129.
- Hansen, F. (1972). *Consumer choice behavior*. New York: The Free Press.
- Hirschman, E. C., & Holbrook, M. B. (1982). Hedonic consumption: Emerging concepts, methods and propositions. *Journal of Marketing*, 46(3), 92-101.
- Holbrook, M. B., & Hirschman, E. C. (1982). The experiential aspects of consumption: Consumer fantasies, feelings, and fun. *Journal of Consumer Research*, 9(2), 132.
- Ingene, C. A. (1984). Productivity and functional shifting in spatial retailing: Private and social perspectives. *Journal of Retailing*, 60(3), 15-36.
- Jin, B., & Sternquist, B. (2004). Shopping is truly a joy. *Service Industries Journal*, 24(6), 1-18.
- Kahneman, D. (2000). New challenges to the rationality assumption. In D. Kahneman & A. Tversky (Eds.), *Choices, values, and frames* (pp. 758-774). New York: Russell Sage Foundation.
- Keeney, R. L. (1999). The value of internet commerce to the customer. *Management Science*, 45(4), 533-542.
- Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of behavioral research* (4th ed.). Fort Worth, TX: Harcourt College Publishers.

- Kim, Y.-K., & Kang, J. K. (1997). Consumer perception of shopping costs and its relationship with retail trends. *Journal of Shopping Center Research*, 4(2), 27-62.
- Kim, Y.-K., Sullivan, P., & Forney, J. C. (2007). *Experiential retailing: Concepts and strategies that sell*. New York: Fairchild Publications, Inc.
- Kleijnen, M., de Ruyter, K., & Wetzels, M. (2007). An assessment of value creation in mobile service delivery and the moderating role of time consciousness. *Journal of Retailing*, 83(1), 33-46.
- Koch, D. (2005). The rising dollar. *Retail Traffic*, 34(5), 72-78.
- Krueger, R. A. (1994). *Focus groups: A practical guide for applied research*. Thousand Oaks, CA: Sage Publications.
- Lichtenstein, D. R., Ridgway, N. M., & Netemeyer, R. G. (1993). Price perceptions and consumer shopping behavior: A field study. *Journal of Marketing Research (JMR)*, 30(2), 234-245.
- Low prices, treasure hunts build dollar empire. (2003). *DSN Retailing Today*, 42(22), 23-24.
- Mano, H., & Elliott, M. T. (1997). *Smart shopping: The origins and consequences of price savings*. Paper presented at the Advances in Consumer Research, Provo, UT.
- Mathwick, C., Malhotra, N., & Rigdon, E. (2001). Experiential value: conceptualization, measurement and application in the catalog and Internet shopping environment. *Journal of Retailing*, 77(1), 39-56.
- McCracken, G. (1988). *The long interview*. London: Sage Publications.
- Morgan, D. L. (1988). *Focus groups as qualitative research*. Newbury Park: Sage Publications.
- Morgan, D. L., & Spanish, M. T. (1984). Focus groups: A new tool for qualitative research. *Qualitative Sociology*, 7(3), 253-270.
- Morrison, M., Haley, E., Sheehan, K., & Taylor, R. (2002). *Using qualitative research in advertising*. Thousand Oaks, CA: Sage.
- Murphy, P. E., & Enis, B. M. (1986). Classifying products strategically. *Journal of Marketing*, 50(3), 24-42.
- Noble, S. M., Griffith, D. A., & Adjei, M. T. (2006). Drivers of local merchant loyalty: Understanding the influence of gender and shopping motives. *Journal of Retailing*, 82(3), 177-188.
- NOT your typical magazine. (2007). *Shop Smart*, August/September.
- Payne, A., & Holt, S. (2001). Diagnosing customer value: Integrating the value process and relationship marketing. *British Journal of Management*, 12(2), 159-182.
- Peter, J. P. (1979). Reliability: A review of psychometric basics and recent marketing practices. *Journal of Marketing Research*, 16(1), 6-17.
- Peter, J. P. (1981). Construct validity: A review of basic issues and marketing practices. *Journal of Marketing Research*, 18(2), 133-145.
- Pine, B. J., II, & Gilmore, J. H. (1999). *The experience economy*. Boston: Harvard Business School Press.
- Poloian, L. (2003). *Retailing principles*. New York: Fairchild Publications.

- Putrevu, S., & Ratchford, B. T. (1997). A model of search behavior with an application to grocery shopping. *Journal of Retailing*, 73(4), 463-486.
- Reynolds, K. E., Ganesh, J., & Luckett, M. (2002). Traditional malls vs. factory outlets: comparing shopper typologies and implications for retail strategy. *Journal of Business Research*, 55(9), 687-696.
- Schindler, R. M. (1989). *The excitement of getting a bargain: Some hypotheses concerning the origins and effects of smart-shopper feelings*. Paper presented at the Advances in Consumer Research, Provo, UT.
- Schindler, R. M. (1998). Consequences of perceiving oneself as responsible for obtaining a discount: Evidence for smart-shopper feelings. *Journal of Consumer Psychology*, 7(4), 371-392.
- Schmitt, B. (1999). Experiential marketing. *Journal of Marketing Management*, 15(1-3), 53-67.
- Sherry, J. F., McGrath, M. A., & Levy, S. J. (1993). The dark side of the gift. *Journal of Business Research*, 28(3), 225-244.
- Shimp, T. A., & Kavas, A. (1984). The theory of reasoned action applied to coupon usage. *Journal of Consumer Research*, 11(3), 795-809.
- Silverstein, M. J. (2006). *Treasure hunt: Inside the mind of the new consumer*. New York: The Penguin Group.
- Silverstein, M. J., & Roche, C. (2006). Cheap is good (*Geiz ist geil*) [Electronic Version] from http://www.bcg.com/publications/files/Cheap_Is_Good_May06.pdf.
- Solomon, M. R. (2002). *Consumer behavior: buying, having, and being* (5th ed.). Upper Saddle River: Prentice-Hall, Inc.
- Sproles, G. B., & Kendall, E. L. (1986). A methodology for profiling consumers' decision-making styles. *Journal of Consumer Affairs*, 20(2), 267.
- Stiglitz, J. E. (1997). *Principles of microeconomics* (2nd ed.). New York: W.W. Norton & Company, Inc.
- Stone, G. P. (1954). City shoppers and urban identification: observations on the social psychology of city life. *American Journal of Sociology*, 36-45.
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (Second ed.). Thousand Oaks: Sage Publications.
- Sweeney, J. C., & Soutar, G. N. (2001). Consumer perceived value: The development of a multiple item scale. *Journal of Retailing*, 77(2), 203-220.
- Swinyard, W. R. (1997). Retailing trends in the USA: Competition, consumers, technology and the economy. *International Journal of Retail & Distribution Management*, 25(8), 244-255.
- Tauber, E. M. (1972). Why do people shop? *Journal of Marketing*, 36(4), 46-49.
- Taylor, R. E. (1994). Qualitative Research. In M. W. Singletary (Ed.), *Mass communication research: Contemporary methods and applications* (pp. 265-279). New York: Longman.
- U.S. Census Bureau American Community Survey. (2006). Retrieved June 24, 2008, from

http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=ACS&_submenuId=&_lang=en&_ts=

- Viswanathan, M., Sudman, S., & Johnson, M. (2004). Maximum versus meaningful discrimination in scale response: Implications for validity of measurement of consumer perceptions about products. *Journal of Business Research*, 57(2), 108-124.
- Wallner, A., & Matisic, K. (2005). *The shopping bag: Tips, tricks and information to make you a savvy shopper*. New York: Dutton.
- Westbrook, R. A., & Black, W. C. (1985). A motivation-based shopper typology. *Journal of Retailing*, 61(1), 78.
- Westbrook, R. A., & Oliver, R. L. (1991). The dimensionality of consumption emotion patterns and consumer satisfaction. *Journal of Consumer Research*, 18(1), 84-91.
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *Journal of Marketing*, 52(3), 2-22.
- Zikmund, W. G. (2003). *Essentials of marketing research* (2nd ed.). Mason, OH: South-Western.

APPENDICES

APPENDIX A

Focus Group Interview Schedule

Opening question

- What does ‘smart shopper’ mean to you?

Additional Questions:

- What makes you feel like a smart shopper?
- When do you feel like a smart shopper?
- Have we missed anything?

Probing Questions:

- Would you explain further? Tell me more.
- Would you give an example?
- How did you feel about that?
- What did you think about that?
- I don’t understand.

APPENDIX B

Face-to-Face In-Depth Interview Schedule

Thank you very much for being a part of my study. If you feel uncomfortable for any reason, you don't have to answer the question. Also, please take your time thinking about the question before answering. Any questions before we begin?

When I say "smart shopping," I mean the context or ways you feel smart after you have made a purchase.

For this first set of questions, think about your personal shopping experiences, *in general*. Don't be limited to one product category or one shopping trip, but think about these questions, *in general*.

1. How would you describe the term "smart shopping?"
2. How does making a "smart" purchase make you feel?
3. What are some benefits of making a "smart" purchase?
4. Can you control whether or not you make a "smart" purchase? How? What do you do?
5. What happens after you make a "smart" purchase? (Results? Outcomes?)

Again, when I say "smart shopping," I mean the context or ways you feel smart after you have made a purchase.

For this second set of questions, think about a *specific* purchase that was "smart" and answer these questions about this *specific* shopping experience.

6. Tell me a little about something you have recently purchased that you felt was the result of "smart shopping."
7. Why did you consider it a "smart" purchase?
8. How did making this "smart" purchase make you feel?
9. What are some benefits of making this "smart" purchase?
10. How did you control this "smart" purchase?
11. What happened after you made this "smart" purchase? (Results? Outcomes?)

Additional probing questions such as: "Would you explain further?" "Would you give an example?" "How did you feel about that?" and "What did you think about that?" will be asked as necessary for clarification or explanation.

APPENDIX C

Initial Smart Shopping Survey Instrument

SECTION I. SMART SHOPPING ACTIVITIES

Recall your most **recent in-store shopping trip** for clothing, groceries or electronics when you made what you would consider a “smart purchase.”

Please indicate the type of purchase you are thinking of: clothing grocery electronics

Approximately how much money did you spend on this “**smart**” purchase? \$ _____

The following statements describe some **smart shopping activities**. Please circle the number that indicates your level of **agreement** or **disagreement** with each statement.

On this trip, I was a smart shopper because:	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I got the best price on this purchase for the least amount of effort.	1	2	3	4	5	6
It did not take much extra time to make this purchase.	1	2	3	4	5	6
I got a reasonable price on this purchase.	1	2	3	4	5	6
In making this purchase, I got what I wanted at a price I was willing to pay.	1	2	3	4	5	6
Prior to making this purchase, I shopped around to see what options were available.	1	2	3	4	5	6
I delayed my purchase until it was offered at a price I was willing to pay.	1	2	3	4	5	6
I was able to make this purchase quickly.	1	2	3	4	5	6
Prior to making this purchase, I tried out several products to see which one I liked best.	1	2	3	4	5	6
This purchase was exactly what I was looking for.	1	2	3	4	5	6
To save money, I bought a larger quantity of this product than normal.	1	2	3	4	5	6
I went to extra effort to save money on this purchase.	1	2	3	4	5	6
I read a magazine such as Consumer Reports to get information for this purchase.	1	2	3	4	5	6
I had an organized shopping plan before making this purchase.	1	2	3	4	5	6
I got a good quality product from this purchase.	1	2	3	4	5	6
This purchase was a very good fit for me.	1	2	3	4	5	6

On this trip, I was a smart shopper because:	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I bought extra of this product because it was a good price.	1	2	3	4	5	6
I used coupons to get a discount on this purchase.	1	2	3	4	5	6
In making this purchase, I saved time but spent extra money.	1	2	3	4	5	6
I got a lower price on this purchase than normal.	1	2	3	4	5	6
I didn't waste time making this purchase.	1	2	3	4	5	6
Prior to making this purchase, I compared products online.	1	2	3	4	5	6
I did not go out of my way to make this purchase.	1	2	3	4	5	6
I sacrificed my time to save money on this purchase.	1	2	3	4	5	6
I got a good deal on this purchase.	1	2	3	4	5	6
I went to a store where I could use coupons on this purchase.	1	2	3	4	5	6
I made this purchase as quickly as I could.	1	2	3	4	5	6
I asked other people about their experience with this product prior to making this purchase.	1	2	3	4	5	6
I made a list of things I needed before making this shopping trip.	1	2	3	4	5	6
Making this purchase was not a hassle.	1	2	3	4	5	6
I found this purchase on sale.	1	2	3	4	5	6
I have gotten everything I expected from this purchase.	1	2	3	4	5	6
I prepared for this purchase by looking through sale advertisements.	1	2	3	4	5	6
This purchase perfectly fit my needs.	1	2	3	4	5	6
I conducted research prior to making this purchase.	1	2	3	4	5	6
I did not spend extra effort on this purchase.	1	2	3	4	5	6
This product was exactly the style I wanted.	1	2	3	4	5	6
I waited until this product went on sale before making the purchase.	1	2	3	4	5	6
In making this purchase, I used my time wisely.	1	2	3	4	5	6
Making this purchase was convenient for me.	1	2	3	4	5	6
I knew how much I was willing to spend prior to making this purchase.	1	2	3	4	5	6
I made this purchase because it was convenient.	1	2	3	4	5	6

On this trip, I was a smart shopper because:	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
Prior to making this purchase, I went to several different stores to find the specific product I wanted.	1	2	3	4	5	6
Before making this purchase, I waited until I found the right product.	1	2	3	4	5	6

SECTION 2. SMART SHOPPING OUTCOMES

Recall the **recent in-store shopping trip** for clothing, groceries or electronics you selected in the previous section.

Please circle the number that indicates your level of **agreement** or **disagreement**.

Reflecting on this specific smart shopping trip:	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I am happy with this purchase.	1	2	3	4	5	6
This purchase gave me a sense of pride.	1	2	3	4	5	6
I am satisfied with this purchase.	1	2	3	4	5	6
After making this purchase, I wanted to tell people about it.	1	2	3	4	5	6
Making this purchase was exciting.	1	2	3	4	5	6
This purchase gave me a feeling of satisfaction.	1	2	3	4	5	6
The whole experience involved with this purchase was wonderful.	1	2	3	4	5	6
This purchase has been a pleasant surprise.	1	2	3	4	5	6
This product has been really useful.	1	2	3	4	5	6
This purchase was a really good experience.	1	2	3	4	5	6
I have gotten a lot of use out of this product.	1	2	3	4	5	6
I had a fun experience making this purchase.	1	2	3	4	5	6
I am still talking to others about this purchase.	1	2	3	4	5	6
I received some extra benefits along with this purchase.	1	2	3	4	5	6
I use this purchase all the time.	1	2	3	4	5	6
This purchase was better than expected.	1	2	3	4	5	6
I feel good about this purchase.	1	2	3	4	5	6
I have shared this purchase story with other people.	1	2	3	4	5	6
I have bragged about this purchase.	1	2	3	4	5	6

I will be able to use this product multiple times.	1	2	3	4	5	6
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SECTION 3. SHOPPING TRIP OUTCOMES

Recall the **recent in-store shopping trip** for clothing, groceries or electronics you selected in the previous section.

Please circle the number that indicates your level of **agreement** or **disagreement**.

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
While shopping, I was able to forget my problems.	1	2	3	4	5	6
I continued to shop, not because I had to, but because I wanted to.	1	2	3	4	5	6
This shopping trip was not a very nice time out.	1	2	3	4	5	6
During the trip, I felt the excitement of the hunt.	1	2	3	4	5	6
I took a lot of pride in making this smart purchase.	1	2	3	4	5	6
I am very satisfied with this purchase.	1	2	3	4	5	6
I got a real sense of joy when I made this wise purchase.	1	2	3	4	5	6
I had a good time because I was able to act on the “spur of the moment.”	1	2	3	4	5	6
I couldn’t buy what I really needed.	1	2	3	4	5	6
Making this smart purchase made me feel good about myself.	1	2	3	4	5	6
I accomplished just what I wanted to on this shopping trip.	1	2	3	4	5	6
On this smart shopping trip, I felt like a winner.	1	2	3	4	5	6
I enjoyed this shopping trip for its own sake, not just for the items I may have purchased.	1	2	3	4	5	6
I am confident that I made the right decision.	1	2	3	4	5	6
I enjoyed being immersed in exciting new products.	1	2	3	4	5	6
I feel very comfortable with this purchase decision.	1	2	3	4	5	6
Compared to other things I could have done, the time spent shopping was truly enjoyable.	1	2	3	4	5	6
While shopping, I found just the item(s) I was looking for.	1	2	3	4	5	6
While shopping, I felt a sense of adventure.	1	2	3	4	5	6
I was disappointed because I had to go to another store(s) to complete my shopping.	1	2	3	4	5	6
This shopping trip truly felt like an escape.	1	2	3	4	5	6
This shopping trip was truly a joy.	1	2	3	4	5	6

SECTION 4. CONSUMER CHARACTERISTICS

Think about your **in-store** shopping trips *in general*.

Please circle the number that indicates your level of **agreement** or **disagreement**.

In general,	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I am willing to go to extra effort to find lower prices.	1	2	3	4	5	6
I know a lot about different types of stores.	1	2	3	4	5	6
I prefer to do things when I'm ready, not at set deadlines.	1	2	3	4	5	6
The money saved by finding lower prices is usually worth the time and effort.	1	2	3	4	5	6
I spend a considerable amount of time and effort preparing for shopping trips.	1	2	3	4	5	6
I generally wait until an item is on sale before purchasing it.	1	2	3	4	5	6
I am usually well-informed about what is a reasonable price to pay for something.	1	2	3	4	5	6
I usually feel pressed for time.	1	2	3	4	5	6
I like to gather as much information as possible before I go on a shopping trip.	1	2	3	4	5	6
I keep abreast of when stores have sales.	1	2	3	4	5	6
I like to make to-do lists to help sequence my activities.	1	2	3	4	5	6
The time it takes to find lower prices is usually worth the effort.	1	2	3	4	5	6
At times I browse just to get information for future purchases.	1	2	3	4	5	6
I usually have a time schedule for everything.	1	2	3	4	5	6
When I shop, I want to find what I'm looking for in the least amount of time.	1	2	3	4	5	6
I prefer not to be late for appointments.	1	2	3	4	5	6
I shop a lot for specials.	1	2	3	4	5	6
I prefer to be able to plan in advance what tasks I need to do.	1	2	3	4	5	6
I want to spend little effort when I shop.	1	2	3	4	5	6
I prefer not thinking about how I use my time.	1	2	3	4	5	6
I am a knowledgeable consumer.	1	2	3	4	5	6
I want to shop in the least amount of time.	1	2	3	4	5	6

In general,	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I rarely think about how I'm using my time.	1	2	3	4	5	6
I often find top quality merchandise at reduced prices.	1	2	3	4	5	6
I often combine tasks to optimally use my time.	1	2	3	4	5	6

SECTION 5. GENERAL INFORMATION

The following questions will be used for description purposes only. Please select the answer that comes closest to your own.

What is your gender? ☐ Male ☐ Female

Which of the following best describes your racial or ethnic identification?

☐ African American/ Black ☐ Caucasian/ White
☐ Native American ☐ Asian or Pacific Islander
☐ Hispanic ☐ Other (please specify) _____

What is your marital status?

☐ Married
☐ Living in a marriage-like relationship
☐ Widowed
☐ Separated
☐ Divorced
☐ Single, never married

What is your age? _____

What is the highest level of education you have completed?

☐ High School graduate or less
☐ Some college
☐ Associate's Degree (community college, technical school, two-year college)
☐ Bachelor's Degree
☐ Graduate Degree (Master's, Doctoral)
☐ Other (please specify) _____

Do you work outside of the home?

☐ Yes- Full-time
☐ Yes- Part-time
☐ No
☐ Retired

What was your approximate total household income last year (before taxes)?

☐ Less than \$30,000 ☐ \$30,000-49,999 ☐ \$50,000-69,999
☐ \$70,000-89,999 ☐ \$90,000-109,999 ☐ \$110,000-129,999
☐ \$130,000-149,999 ☐ \$150,000+

How many children under 12 years of age do you have living in your home? _____

APPENDIX D

Smart Shopping Pilot Test Instrument

SECTION I. SMART SHOPPING ACTIVITIES

Recall your most **recent in-store shopping trip** for clothing, groceries or electronics when you made what you would consider a “smart purchase.”

Please **circle the type** of product you are thinking of: Clothing Groceries Electronics

Approximately how much money did you spend on this smart purchase? \$ _____

The following statements describe some **smart shopping activities**. Please circle the number that indicates your level of **agreement** or **disagreement** with each statement.

On this trip, I was a smart shopper because:	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I got the best price on this purchase for the least amount of effort.	1	2	3	4	5	6
It did not take much extra time to make this purchase.	1	2	3	4	5	6
I got a reasonable price on this purchase.	1	2	3	4	5	6
In making this purchase, I got what I wanted at a price I was willing to pay.	1	2	3	4	5	6
Prior to making this purchase, I shopped around to see what options were available.	1	2	3	4	5	6
I delayed my purchase until it was offered at a price I was willing to pay.	1	2	3	4	5	6
I was able to make this purchase quickly.	1	2	3	4	5	6
Prior to making this purchase, I tried out several products to see which one I liked best.	1	2	3	4	5	6
This purchase was exactly what I was looking for.	1	2	3	4	5	6
To save money, I bought a larger quantity of this product than normal.	1	2	3	4	5	6
I went to extra effort to save money on this purchase.	1	2	3	4	5	6
I read a magazine such as Consumer Reports to get information for this purchase.	1	2	3	4	5	6
I had an organized shopping plan before making this purchase.	1	2	3	4	5	6
I got a good quality product from this purchase.	1	2	3	4	5	6
This purchase was a very good fit for me.	1	2	3	4	5	6
I bought extra of this product because it was a good price.	1	2	3	4	5	6
I used coupons to get a discount on this purchase.	1	2	3	4	5	6

On this trip, I was a smart shopper because:	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
In making this purchase, I saved time but spent extra money.	1	2	3	4	5	6
I got a lower price on this purchase than normal.	1	2	3	4	5	6
I didn't waste time making this purchase.	1	2	3	4	5	6
Prior to making this purchase, I compared products online.	1	2	3	4	5	6
I did not go out of my way to make this purchase.	1	2	3	4	5	6
I sacrificed my time to save money on this purchase.	1	2	3	4	5	6
I got a good deal on this purchase.	1	2	3	4	5	6
I went to a store where I could use coupons on this purchase.	1	2	3	4	5	6
I made this purchase as quickly as I could.	1	2	3	4	5	6
I asked other people about their experience with this product prior to making this purchase.	1	2	3	4	5	6
I made a list of things I needed before making this shopping trip.	1	2	3	4	5	6
Making this purchase was not a hassle.	1	2	3	4	5	6
I found this purchase on sale.	1	2	3	4	5	6
I have gotten everything I expected from this purchase.	1	2	3	4	5	6
I prepared for this purchase by looking through sale advertisements.	1	2	3	4	5	6
This purchase perfectly fit my needs.	1	2	3	4	5	6
I conducted research prior to making this purchase.	1	2	3	4	5	6
I did not spend extra effort on this purchase.	1	2	3	4	5	6
This product was exactly the style I wanted.	1	2	3	4	5	6
I waited until this product went on sale before making the purchase.	1	2	3	4	5	6
In making this purchase, I used my time wisely.	1	2	3	4	5	6
Making this purchase was convenient for me.	1	2	3	4	5	6
I knew how much I was willing to spend prior to making this purchase.	1	2	3	4	5	6
I made this purchase because it was convenient.	1	2	3	4	5	6
Prior to making this purchase, I went to several different stores to find the specific product I wanted.	1	2	3	4	5	6
Before making this purchase, I waited until I found the right product.	1	2	3	4	5	6

SECTION 2. SMART SHOPPING OUTCOMES

Recall the **recent in-store shopping trip** for clothing, groceries or electronics you selected in the previous section.

Please circle the number that indicates your level of **agreement** or **disagreement** with each statement.

Reflecting on this specific smart shopping trip:	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I am happy with this purchase.	1	2	3	4	5	6
This purchase gave me a sense of pride.	1	2	3	4	5	6
I am satisfied with this purchase.	1	2	3	4	5	6
After making this purchase, I wanted to tell people about it.	1	2	3	4	5	6
Making this purchase was exciting.	1	2	3	4	5	6
This purchase gave me a feeling of satisfaction.	1	2	3	4	5	6
The whole experience involved with this purchase was wonderful.	1	2	3	4	5	6
This purchase has been a pleasant surprise.	1	2	3	4	5	6
This product has been really useful.	1	2	3	4	5	6
This purchase was a really good experience.	1	2	3	4	5	6
I have gotten a lot of use out of this product.	1	2	3	4	5	6
I had a fun experience making this purchase.	1	2	3	4	5	6
I am still talking to others about this purchase.	1	2	3	4	5	6
I received some extra benefits along with this purchase.	1	2	3	4	5	6
I use this purchase all the time.	1	2	3	4	5	6
This purchase was better than expected.	1	2	3	4	5	6
I feel good about this purchase.	1	2	3	4	5	6
I have shared this purchase story with other people.	1	2	3	4	5	6
I have bragged about this purchase.	1	2	3	4	5	6
I will be able to use this product multiple times.	1	2	3	4	5	6

SECTION 3. GENERAL INFORMATION

The following questions will be used for description purpose only. Please circle, check, or write in the answer that comes closest to your own.

What is your gender?

☐ Male

☐ Female

Which of the following best describes your racial or ethnic identification?

☐ African American/ Black

☐ Asian/ Pacific Islander

☐ Caucasian/ White

☐ Hispanic

☐ Native American

☐ Other (please specify) _____

What is your marital status?

☐ Single, never married

☐ Married

☐ Separated, Divorced or Widowed

What is your age? _____

What is the highest level of education you have completed?

☐ High School or less

☐ Some College

☐ Associate's Degree (community college, technical school, two-year college)

☐ Bachelor's Degree

☐ Graduate Degree (Master's, Doctoral)

☐ Other (please specify) _____

Do you work outside of the home? ☐ Yes- Full-time

☐ Yes- Part-time

☐ No

☐ Retired

What was your approximate total household income last year (before taxes)?

☐ Less than \$30,000

☐ \$30,000-49,999

☐ \$50,000-69,999

☐ \$70,000-89,999

☐ \$90,000-109,999

☐ \$110,000-129,999

☐ \$130,000-149,999

☐ \$150,000+

How many children under 12 years of age do you have living in your home? _____

APPENDIX E

Smart Shopping Pretest Instrument

SECTION I. SMART SHOPPING ACTIVITIES
Have you purchased clothing, groceries or electronics in-store in the last 3 months? Yes No
Recall your most recent in-store shopping trip for clothing, groceries or electronics when you made what you would consider a “ smart purchase .”
Please indicate the type of purchase you are thinking of: clothing grocery electronics
Please indicate the store name where you made this “ smart ” Prod_type purchase: _____
Please give a brief description of your purchase and why you consider this a “ smart ” Prod_type purchase: _____
Approximately how much money did you spend on this “ smart ” Prod_type purchase? \$ _____

I was a “smart” shopper because:	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I got the best price on this Prod_type purchase for the least amount of effort.	1	2	3	4	5	6
It did not take much extra time to make this Prod_type purchase.	1	2	3	4	5	6
I got a reasonable price on this Prod_type purchase.	1	2	3	4	5	6
In making this Prod_type purchase, I got what I wanted at a price I was willing to pay.	1	2	3	4	5	6
Prior to making this Prod_type purchase, I shopped around to see what options were available.	1	2	3	4	5	6
I delayed my Prod_type purchase until it was offered at a price I was willing to pay.	1	2	3	4	5	6
I was able to make this Prod_type purchase quickly.	1	2	3	4	5	6
Prior to making this Prod_type purchase, I tried out several products to see which one I liked best.	1	2	3	4	5	6
This Prod_type purchase was exactly what I was looking for.	1	2	3	4	5	6
To save money, I bought a larger quantity of this Prod_type product than normal.	1	2	3	4	5	6
I went to extra effort to save money on this Prod_type purchase.	1	2	3	4	5	6
I read a magazine such as Consumer Reports to get information for this Prod_type purchase.	1	2	3	4	5	6
I had an organized shopping plan before making this Prod_type purchase.	1	2	3	4	5	6
I got a good quality product from this Prod_type purchase.	1	2	3	4	5	6
This Prod_type purchase was a very good fit for me.	1	2	3	4	5	6

I was a “smart” shopper because:	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I bought extra of this Prod_type product because it was a good price.	1	2	3	4	5	6
I used coupons to get a discount on this Prod_type purchase.	1	2	3	4	5	6
In making this Prod_type purchase, I saved time but spent extra money.	1	2	3	4	5	6
I got a lower price on this Prod_type purchase than normal.	1	2	3	4	5	6
I didn’t waste time making this Prod_type purchase.	1	2	3	4	5	6
Prior to making this Prod_type purchase, I compared products online.	1	2	3	4	5	6
I did not go out of my way to make this Prod_type purchase.	1	2	3	4	5	6
I sacrificed my time to save money on this Prod_type purchase.	1	2	3	4	5	6
I got a good deal on this Prod_type purchase.	1	2	3	4	5	6
I went to a store where I could use coupons on this Prod_type purchase.	1	2	3	4	5	6
I made this Prod_type purchase as quickly as I could.	1	2	3	4	5	6
I asked other people about their experience with this product prior to making this Prod_type purchase.	1	2	3	4	5	6
I made a list of things I needed before making this Prod_type shopping trip.	1	2	3	4	5	6
Making this Prod_type purchase was not a hassle.	1	2	3	4	5	6
I found this Prod_type purchase on sale.	1	2	3	4	5	6
I have gotten everything I expected from this Prod_type purchase.	1	2	3	4	5	6
I prepared for this Prod_type purchase by looking through sale advertisements.	1	2	3	4	5	6
This Prod_type purchase perfectly fit my needs.	1	2	3	4	5	6
I conducted research prior to making this Prod_type purchase.	1	2	3	4	5	6
I did not spend extra effort on this Prod_type purchase.	1	2	3	4	5	6
This Prod_type product was exactly the style I wanted.	1	2	3	4	5	6
I waited until this Prod_type product went on sale before making the purchase.	1	2	3	4	5	6
In making this Prod_type purchase, I used my time wisely.	1	2	3	4	5	6
Making this Prod_type purchase was convenient for me.	1	2	3	4	5	6
I knew how much I was willing to spend prior to making this Prod_type purchase.	1	2	3	4	5	6
I made this Prod_type purchase because it was convenient.	1	2	3	4	5	6

I was a “smart” shopper because:	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
Prior to making this Prod_type purchase, I went to several different stores to find the specific product I wanted.	1	2	3	4	5	6
Before making this Prod_type purchase, I waited until I found the right product.	1	2	3	4	5	6

SECTION 2. SMART SHOPPING OUTCOMES

Recall the **in-store shopping trip for Prod_type** when you made what you would consider a “**smart purchase.**”

When I reflect on this specific “smart” shopping trip,	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I am happy with this Prod_type purchase.	1	2	3	4	5	6
This Prod_type purchase gave me a sense of pride.	1	2	3	4	5	6
I am satisfied with this Prod_type purchase.	1	2	3	4	5	6
After making Prod_type this purchase, I wanted to tell people about it.	1	2	3	4	5	6
Making this Prod_type purchase was exciting.	1	2	3	4	5	6
This Prod_type purchase gave me a feeling of satisfaction.	1	2	3	4	5	6
The whole experience involved with this Prod_type purchase was wonderful.	1	2	3	4	5	6
This Prod_type purchase has been a pleasant surprise.	1	2	3	4	5	6
This Prod_type product has been really useful.	1	2	3	4	5	6
This Prod_type purchase was a really good experience.	1	2	3	4	5	6
I have gotten a lot of use out of this Prod_type product.	1	2	3	4	5	6
I had a fun experience making this Prod_type purchase.	1	2	3	4	5	6
I am still talking to others about this Prod_type purchase.	1	2	3	4	5	6
I received some extra benefits along with this Prod_type purchase.	1	2	3	4	5	6
I use this Prod_type purchase all the time.	1	2	3	4	5	6
This Prod_type purchase was better than expected.	1	2	3	4	5	6
I feel good about this Prod_type purchase.	1	2	3	4	5	6
I have shared this Prod_type purchase story with other people.	1	2	3	4	5	6
I have bragged about this Prod_type purchase.	1	2	3	4	5	6
I will be able to use this Prod_type product multiple times.	1	2	3	4	5	6

SECTION 3. SHOPPING TRIP OUTCOMES

Recall the **in-store shopping trip for Prod_type** you selected in the previous sections.

Recall the in-store shopping trip for Prod_type.	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
While shopping, I was able to forget my problems.	1	2	3	4	5	6
I continued to shop, not because I had to, but because I wanted to.	1	2	3	4	5	6
This shopping trip was not a very nice time out.	1	2	3	4	5	6
During the trip, I felt the excitement of the hunt.	1	2	3	4	5	6
I took a lot of pride in making this smart purchase.	1	2	3	4	5	6
I am very satisfied with this purchase.	1	2	3	4	5	6
I got a real sense of joy when I made this wise purchase.	1	2	3	4	5	6
I had a good time because I was able to act on the “spur of the moment.”	1	2	3	4	5	6
I couldn’t buy what I really needed.	1	2	3	4	5	6
Making this smart purchase made me feel good about myself.	1	2	3	4	5	6
I accomplished just what I wanted to on this shopping trip.	1	2	3	4	5	6
On this smart shopping trip, I felt like a winner.	1	2	3	4	5	6
I enjoyed this shopping trip for its own sake, not just for the items I may have purchased.	1	2	3	4	5	6
I am confident that I made the right decision.	1	2	3	4	5	6
I enjoyed being immersed in exciting new products.	1	2	3	4	5	6
I feel very comfortable with this purchase decision.	1	2	3	4	5	6
Compared to other things I could have done, the time spent shopping was truly enjoyable.	1	2	3	4	5	6
While shopping, I found just the item(s) I was looking for.	1	2	3	4	5	6
While shopping, I felt a sense of adventure.	1	2	3	4	5	6
I was disappointed because I had to go to another store(s) to complete my shopping.	1	2	3	4	5	6
This shopping trip truly felt like an escape.	1	2	3	4	5	6
This shopping trip was truly a joy.	1	2	3	4	5	6

SECTION 4. CONSUMER CHARACTERISTICS

Think about your **in-store** shopping trips *in general*.

In general,	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I am willing to go to extra effort to find lower prices.	1	2	3	4	5	6
I know a lot about different types of stores.	1	2	3	4	5	6
I prefer to do things when I'm ready, not at set deadlines.	1	2	3	4	5	6
The money saved by finding lower prices is usually worth the time and effort.	1	2	3	4	5	6
I spend a considerable amount of time and effort preparing for shopping trips.	1	2	3	4	5	6
I generally wait until an item is on sale before purchasing it.	1	2	3	4	5	6
I am usually well-informed about what is a reasonable price to pay for something.	1	2	3	4	5	6
I usually feel pressed for time.	1	2	3	4	5	6
I like to gather as much information as possible before I go on a shopping trip.	1	2	3	4	5	6
I keep abreast of when stores have sales.	1	2	3	4	5	6
I like to make to-do lists to help sequence my activities.	1	2	3	4	5	6
The time it takes to find lower prices is usually worth the effort.	1	2	3	4	5	6
At times I browse just to get information for future purchases.	1	2	3	4	5	6
I usually have a time schedule for everything.	1	2	3	4	5	6
When I shop, I want to find what I'm looking for in the least amount of time.	1	2	3	4	5	6
I prefer not to be late for appointments.	1	2	3	4	5	6
I shop a lot for specials.	1	2	3	4	5	6
I prefer to be able to plan in advance what tasks I need to do.	1	2	3	4	5	6
I want to spend little effort when I shop.	1	2	3	4	5	6
I prefer not thinking about how I use my time.	1	2	3	4	5	6
I am a knowledgeable consumer.	1	2	3	4	5	6
I want to shop in the least amount of time.	1	2	3	4	5	6

In general,	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I rarely think about how I'm using my time.	1	2	3	4	5	6
I often find top quality merchandise at reduced prices.	1	2	3	4	5	6
I often combine tasks to optimally use my time.	1	2	3	4	5	6

SECTION 5. GENERAL INFORMATION

The following questions will be used for description purposes only. Please select the answer that comes closest to your own.

What is your gender? ☐ Male ☐ Female

Which of the following best describes your racial or ethnic identification?

☐ African American/ Black ☐ Caucasian/ White
☐ Native American ☐ Asian or Pacific Islander
☐ Hispanic ☐ Other (please specify) _____

What is your marital status?

☐ Married
☐ Living in a marriage-like relationship
☐ Widowed
☐ Separated
☐ Divorced
☐ Single, never married

What is your age? _____

What is the highest level of education you have completed?

☐ High School graduate or less
☐ Some college
☐ Associate's Degree (community college, technical school, two-year college)
☐ Bachelor's Degree
☐ Graduate Degree (Master's, Doctoral)
☐ Other (please specify) _____

Do you work outside of the home?

☐ Yes- Full-time
☐ Yes- Part-time
☐ No
☐ Retired

What was your approximate total household income last year (before taxes)?

☐ Less than \$30,000 ☐ \$30,000-49,999 ☐ \$50,000-69,999
☐ \$70,000-89,999 ☐ \$90,000-109,999 ☐ \$110,000-129,999
☐ \$130,000-149,999 ☐ \$150,000+

How many children under 12 years of age do you have living in your home? _____

APPENDIX F

Smart Shopping Main Study Instrument

SECTION I. SMART SHOPPING ACTIVITIES

Have you purchased clothing, groceries or electronics **in-store** in the last 3 months? Yes No

Recall your **most recent in-store shopping trip** for clothing, groceries or electronics when you made what you would consider a “**smart purchase**.”

Please indicate the type of purchase you are thinking of: clothing grocery electronics

Please indicate the store name where you made this “**smart**” Prod_type purchase: _____

Please give a brief description of your purchase and why you consider this a “**smart**” Prod_type purchase:

Approximately how much money did you spend on this “**smart**” Prod_type purchase? \$ _____

I was a “smart” shopper because:

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
Convenience was a benefit of making this Prod_type purchase.	1	2	3	4	5	6
It did not take much extra time to make this Prod_type purchase.	1	2	3	4	5	6
I got a reasonable price on this Prod_type purchase.	1	2	3	4	5	6
In making this Prod_type purchase, I got what I wanted at a price I was willing to pay.	1	2	3	4	5	6
Prior to making this Prod_type purchase, I shopped around to see what options were available.	1	2	3	4	5	6
I delayed my Prod_type purchase until it was offered at a price I was willing to pay.	1	2	3	4	5	6
I was able to make this Prod_type purchase quickly.	1	2	3	4	5	6
Prior to making this Prod_type purchase, I tried out several products to see which one I liked best.	1	2	3	4	5	6
This Prod_type purchase was exactly what I was looking for.	1	2	3	4	5	6
I read a magazine such as Consumer Reports to get information for this Prod_type purchase.	1	2	3	4	5	6
I had an organized shopping plan before making this Prod_type purchase.	1	2	3	4	5	6
I got a good quality product from this Prod_type purchase.	1	2	3	4	5	6
This Prod_type purchase was a very good fit for me.	1	2	3	4	5	6

I was a “smart” shopper because:	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I got a lower price on this Prod_type purchase than normal.	1	2	3	4	5	6
I didn’t waste time making this Prod_type purchase.	1	2	3	4	5	6
Prior to making this Prod_type purchase, I compared products online.	1	2	3	4	5	6
I did not go out of my way to make this Prod_type purchase.	1	2	3	4	5	6
I got a good deal on this Prod_type purchase.	1	2	3	4	5	6
I made this Prod_type purchase as quickly as I could.	1	2	3	4	5	6
I asked other people about their experience with this product prior to making this Prod_type purchase.	1	2	3	4	5	6
I made a list of things I needed before making this Prod_type shopping trip.	1	2	3	4	5	6
Making this Prod_type purchase was not a hassle.	1	2	3	4	5	6
I found this Prod_type purchase on sale.	1	2	3	4	5	6
I have gotten everything I expected from this Prod_type purchase.	1	2	3	4	5	6
I prepared for this Prod_type purchase by looking through sale advertisements.	1	2	3	4	5	6
This Prod_type purchase perfectly fit my needs.	1	2	3	4	5	6
I conducted research prior to making this Prod_type purchase.	1	2	3	4	5	6
I did not spend extra effort on this Prod_type purchase.	1	2	3	4	5	6
This Prod_type product was exactly the style I wanted.	1	2	3	4	5	6
I waited until this Prod_type product went on sale before making the purchase.	1	2	3	4	5	6
In making this Prod_type purchase, I used my time wisely.	1	2	3	4	5	6
Making this Prod_type purchase was convenient for me.	1	2	3	4	5	6
I knew how much I was willing to spend prior to making this Prod_type purchase.	1	2	3	4	5	6
I made this Prod_type purchase because it was convenient.	1	2	3	4	5	6
Prior to making this Prod_type purchase, I went to several different stores to find the specific product I wanted.	1	2	3	4	5	6
Before making this Prod_type purchase, I waited until I found the right product.	1	2	3	4	5	6

SECTION 2. SMART SHOPPING OUTCOMES

Recall the **in-store shopping trip for Prod_type** when you made what you would consider a “**smart purchase**.”

When I reflect on this specific “smart” shopping trip,	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I am happy with this Prod_type purchase.	1	2	3	4	5	6
This Prod_type purchase gave me a sense of pride.	1	2	3	4	5	6
I am satisfied with this Prod_type purchase.	1	2	3	4	5	6
After making Prod_type this purchase, I wanted to tell people about it.	1	2	3	4	5	6
Making this Prod_type purchase was exciting.	1	2	3	4	5	6
This Prod_type purchase gave me a feeling of satisfaction.	1	2	3	4	5	6
The whole experience involved with this Prod_type purchase was wonderful.	1	2	3	4	5	6
This Prod_type purchase has been a pleasant surprise.	1	2	3	4	5	6
This Prod_type product has been really useful.	1	2	3	4	5	6
This Prod_type purchase was a really good experience.	1	2	3	4	5	6
I have gotten a lot of use out of this Prod_type product.	1	2	3	4	5	6
I had a fun experience making this Prod_type purchase.	1	2	3	4	5	6
I am still talking to others about this Prod_type purchase.	1	2	3	4	5	6
I received some extra benefits along with this Prod_type purchase.	1	2	3	4	5	6
I use this Prod_type purchase all the time.	1	2	3	4	5	6
This Prod_type purchase was better than expected.	1	2	3	4	5	6
I feel good about this Prod_type purchase.	1	2	3	4	5	6
I have shared this Prod_type purchase story with other people.	1	2	3	4	5	6
I have bragged about this Prod_type purchase.	1	2	3	4	5	6
I will be able to use this Prod_type product multiple times.	1	2	3	4	5	6
This Prod_type purchase has been satisfying.	1	2	3	4	5	6

SECTION 3. SHOPPING TRIP OUTCOMES

Recall the **in-store shopping trip for Prod_type** you selected in the previous sections.

Recall the in-store shopping trip for Prod_type.	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
While shopping, I was able to forget my problems.	1	2	3	4	5	6
I continued to shop, not because I had to, but because I wanted to.	1	2	3	4	5	6
This shopping trip was not a very nice time out.	1	2	3	4	5	6
During the trip, I felt the excitement of the hunt.	1	2	3	4	5	6
I took a lot of pride in making this smart purchase.	1	2	3	4	5	6
I am very satisfied with this purchase.	1	2	3	4	5	6
I got a real sense of joy when I made this wise purchase.	1	2	3	4	5	6
I had a good time because I was able to act on the “spur of the moment.”	1	2	3	4	5	6
I couldn’t buy what I really needed.	1	2	3	4	5	6
Making this smart purchase made me feel good about myself.	1	2	3	4	5	6
I accomplished just what I wanted to on this shopping trip.	1	2	3	4	5	6
On this smart shopping trip, I felt like a winner.	1	2	3	4	5	6
I enjoyed this shopping trip for its own sake, not just for the items I may have purchased.	1	2	3	4	5	6
I am confident that I made the right decision.	1	2	3	4	5	6
I enjoyed being immersed in exciting new products.	1	2	3	4	5	6
I feel very comfortable with this purchase decision.	1	2	3	4	5	6
Compared to other things I could have done, the time spent shopping was truly enjoyable.	1	2	3	4	5	6
While shopping, I found just the item(s) I was looking for.	1	2	3	4	5	6
While shopping, I felt a sense of adventure.	1	2	3	4	5	6
I was disappointed because I had to go to another store(s) to complete my shopping.	1	2	3	4	5	6
This shopping trip truly felt like an escape.	1	2	3	4	5	6
This shopping trip was truly a joy.	1	2	3	4	5	6

SECTION 4. CONSUMER CHARACTERISTICS

Think about your **in-store** shopping trips *in general*.

In general,	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I am willing to go to extra effort to find lower prices.	1	2	3	4	5	6
I know a lot about different types of stores.	1	2	3	4	5	6
I prefer to do things when I'm ready, not at set deadlines.	1	2	3	4	5	6
The money saved by finding lower prices is usually worth the time and effort.	1	2	3	4	5	6
I spend a considerable amount of time and effort preparing for shopping trips.	1	2	3	4	5	6
I generally wait until an item is on sale before purchasing it.	1	2	3	4	5	6
I am usually well-informed about what is a reasonable price to pay for something.	1	2	3	4	5	6
I usually feel pressed for time.	1	2	3	4	5	6
I like to gather as much information as possible before I go on a shopping trip.	1	2	3	4	5	6
I keep abreast of when stores have sales.	1	2	3	4	5	6
I like to make to-do lists to help sequence my activities.	1	2	3	4	5	6
The time it takes to find lower prices is usually worth the effort.	1	2	3	4	5	6
At times I browse just to get information for future purchases.	1	2	3	4	5	6
I usually have a time schedule for everything.	1	2	3	4	5	6
When I shop, I want to find what I'm looking for in the least amount of time.	1	2	3	4	5	6
I prefer not to be late for appointments.	1	2	3	4	5	6
I shop a lot for specials.	1	2	3	4	5	6
I prefer to be able to plan in advance what tasks I need to do.	1	2	3	4	5	6
I want to spend little effort when I shop.	1	2	3	4	5	6
I prefer not thinking about how I use my time.	1	2	3	4	5	6
I am a knowledgeable consumer.	1	2	3	4	5	6
I want to shop in the least amount of time.	1	2	3	4	5	6

In general,	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I rarely think about how I'm using my time.	1	2	3	4	5	6
I often find top quality merchandise at reduced prices.	1	2	3	4	5	6
I often combine tasks to optimally use my time.	1	2	3	4	5	6

SECTION 5. GENERAL INFORMATION

The following questions will be used for description purposes only. Please select the answer that comes closest to your own.

What is your gender? ☐ Male ☐ Female

Which of the following best describes your racial or ethnic identification?

☐ African American/ Black ☐ Caucasian/ White
☐ Native American ☐ Asian or Pacific Islander
☐ Hispanic ☐ Other (please specify) _____

What is your marital status?

☐ Married ☐ Separated
☐ Living in a marriage-like relationship ☐ Divorced
☐ Widowed ☐ Single, never married

What is your age? _____

What is the highest level of education you have completed?

☐ High School graduate or less
☐ Some college
☐ Associate's Degree (community college, technical school, two-year college)
☐ Bachelor's Degree
☐ Graduate Degree (Master's, Doctoral)
☐ Other (please specify) _____

Do you work outside of the home? ☐ Yes- Full-time ☐ No
 ☐ Yes- Part-time ☐ Retired

What was your approximate total household income last year (before taxes)?

☐ Less than \$30,000 ☐ \$30,000-49,999 ☐ \$50,000-69,999
☐ \$70,000-89,999 ☐ \$90,000-109,999 ☐ \$110,000-129,999
☐ \$130,000-149,999 ☐ \$150,000+

How many children under 12 years of age do you have living in your home? _____

Additional comments (optional):

APPENDIX G **Main Study Group Comparison: Gender and Age within Product Category**

Product Category	Stage	Variable	Model	NPAR	χ^2	df	p-value	χ^2 ratio	CFI	RMSEA
Clothing	Pre-Purchase	Age	Unconstrained	210	570.464	336	0.000	1.70	0.900	0.038
			Constrained	145	644.289	401	0.000	1.61	0.896	0.035
			Difference	65	73.82	65	0.212*			
		Gender	Unconstrained	70	317.713	112	0.000	2.84	0.908	0.061
			Constrained	57	344.236	125	0.000	2.75	0.902	0.060
			Difference	13	26.52	13	0.014**			
	Purchase	Age	Unconstrained	324	2278.264	1194	0.000	1.91	0.820	0.041
			Constrained	214	2507.253	1304	0.000	1.92	0.801	0.044
			Difference	110	228.99	110	0.000			
		Gender	Unconstrained	108	1163.355	398	0.000	2.92	0.864	0.063
			Constrained	86	1252.682	420	0.000	2.98	0.852	0.064
			Difference	22	89.33	22	0.000			
	Post-Purchase	Age	Unconstrained	244	2168.135	1042	0.000	2.08	0.859	0.047
			Constrained	259	2354.372	1127	0.000	2.09	0.846	0.048
			Difference	85	186.24	85	0.000			
		Gender	Unconstrained	116	1210.904	346	0.000	3.50	0.882	0.072
			Constrained	95	1252.582	367	0.000	3.41	0.879	0.070
			Difference	21	41.68	21	0.005			

* p-value is significant at 0.05 level

** p-value is significant at 0.01 level

Product Category	Stage	Variable	Model	NPAR	χ^2	df	p-value	χ^2 ratio	CFI	RMSEA
Grocery	Pre-Purchase	Age	Unconstrained	222	585.769	246	0.000	2.38	0.900	0.043
			Constrained	162	686.166	306	0.000	2.24	0.888	0.041
			Difference	60	100.40	60	0.001			
		Gender	Unconstrained	74	384.985	82	0.000	4.70	0.910	0.070
			Constrained	62	389.198	84	0.000	4.14	0.912	0.065
			Difference	12	4.21	12	0.979*			
	Purchase	Age	Unconstrained	324	2848.958	1194	0.000	2.39	0.830	0.043
			Constrained	214	3047.794	1304	0.000	2.34	0.821	0.042
			Difference	110	198.84	110	0.000			
		Gender	Unconstrained	108	1430.065	398	0.000	3.59	0.884	0.059
			Constrained	86	1490.171	420	0.000	3.55	0.880	0.058
			Difference	22	60.11	22	0.000			
	Post-Purchase	Age	Unconstrained	348	2349.199	1038	0.000	2.26	0.884	0.041
			Constrained	243	2512.461	1143	0.000	2.20	0.879	0.040
			Difference	105	163.26	105	0.000			
		Gender	Unconstrained	116	1408.311	346	0.000	4.07	0.902	0.064
			Constrained	95	1428.96	367	0.000	3.89	0.902	0.062
			Difference	21	20.65	21	0.481*			

* p-value is significant at 0.05 level

** p-value is significant at 0.01 level

Product Category	Stage	Variable	Model	NPAR	χ^2	df	p-value	χ^2 ratio	CFI	RMSEA
Electronics	Pre-Purchase	Age	Unconstrained	174	466.634	294	0.000	1.59	0.841	0.051
			Constrained	114	542.732	354	0.000	1.53	0.827	0.048
			Difference	60	76.10	60	0.079*			
		Gender	Unconstrained	58	162.118	98	0.000	1.65	0.934	0.053
			Constrained	46	176.989	110	0.000	1.61	0.931	0.051
			Difference	12	14.87	12	0.249*			
	Purchase	Age	Unconstrained	324	2402.907	1194	0.000	2.01	0.695	0.066
			Constrained	214	2604.779	1304	0.000	2.00	0.672	0.066
			Difference	110	201.87	110	0.000			
		Gender	Unconstrained	108	866.94	398	0.000	2.18	0.840	0.071
			Constrained	86	904.197	420	0.000	2.15	0.835	0.070
			Difference	22	37.26	22	0.022**			
	Post-Purchase	Age	Unconstrained	348	2160.343	1038	0.000	2.08	0.752	0.069
			Constrained	243	2306.94	1143	0.000	2.08	0.743	0.067
			Difference	105	146.60	105	0.005			
		Gender	Unconstrained	116	888.427	346	0.000	2.57	0.885	0.082
			Constrained	95	923.065	367	0.000	2.52	0.851	0.081
			Difference	21	34.64	21	0.031**			

* p -value is significant at 0.05 level

** p -value is significant at 0.01 level

APPENDIX H
Main Study Assessment of Normality by Scale Item

Stage	Construct	Label	Mean	Std. Deviation	Skewness	Kurtosis
Pre-Purchase	Information Search	InfoSearch1	2.94	1.70	0.40	-1.20
		InfoSearch2	1.95	1.27	1.59	1.90
		InfoSearch3	2.15	1.38	1.26	0.59
		ComparisonShop	2.48	1.53	0.85	-0.47
		ComparisonShop	2.50	1.66	0.88	-0.60
		ComparisonShop	3.24	1.57	0.14	-1.21
		ComparisonShop	3.89	1.60	-0.36	-1.09
		PlanningSale1	3.45	1.81	0.00	-1.50
	Planning	Planning1	3.73	1.67	-0.29	-1.21
		Planning2	3.79	1.68	-0.32	-1.20
		Planning3	4.76	1.24	-1.20	1.03
		Planning4	3.56	1.84	-0.11	-1.51
		PlanningSale2	3.53	1.73	0.01	-1.38
		PlanningSale3	3.57	1.82	-0.02	-1.47
Purchase	Saving Effort	Convenience1*	5.10	0.85	-1.38	3.27
		Convenience2	4.53	1.24	-0.88	0.26
		Convenience3	4.45	1.25	-0.94	0.49
		SavingEffort1*	5.15	0.85	-1.43	3.54
		SavingEffort2	4.72	1.21	-1.14	0.95
		SavingEffort3	4.73	1.27	-1.19	0.83
	Right Product	RightProduct1*	5.13	0.88	-1.23	2.53
		RightProduct2*	5.25	0.77	-1.16	2.50
		RightProduct3*	5.32	0.81	-1.66	4.63
		RightProduct4*	5.34	0.75	-1.34	3.36
		RightProduct5*	5.11	0.88	-1.09	1.85
		RightProduct6*	5.31	0.76	-1.74	6.06
	Saving Money	SavingMoney1*	5.48	0.79	-2.24	7.48
		SavingMoney2*	5.19	1.06	-1.60	2.67
		SavingMoney3*	5.51	0.78	-2.32	8.04
		SavingMoney4	4.89	1.44	-1.37	0.84
		SavingMoney9*	5.41	0.80	-1.82	4.92
	Saving Time	SavingTime1*	5.05	0.83	-1.13	2.47
		SavingTime2	4.75	1.15	-1.19	1.19
		SavingTime3	4.65	1.18	-0.94	0.45
		SavingTime4*	5.09	0.96	-1.52	3.08
		SavingTime5*	5.01	1.01	-1.38	2.29

Note: Items marked with * had relatively high mean values, relatively low standard deviation values, and pronounced kurtosis.

Stage	Construct	Label	Mean	Std. Deviation	Skewness	Kurtosis
Post-Purchase	Satisfaction	Feelings1*	5.01	0.84	-0.98	2.12
		Feelings2	4.49	1.25	-0.72	0.01
		Feelings3*	5.43	0.68	-1.66	6.41
		Feelings4	3.91	1.49	-0.32	-0.79
		Feelings5	4.39	1.20	-0.59	0.09
		Feelings6	4.72	1.01	-0.90	1.49
		Feelings7	4.25	1.27	-0.52	-0.18
		Satisfaction1*	5.34	0.69	-1.17	3.33
		Satisfaction2	4.69	1.16	-1.02	1.02
		Satisfaction3*	4.99	0.91	-1.18	2.69
	Usefulness	Usefulness1*	5.08	0.85	-1.30	3.56
		Usefulness2*	4.98	0.99	-1.27	2.29
		Usefulness3	4.49	1.26	-0.80	0.12
		Usefulness4	4.70	1.44	-1.23	0.64
	Getting Rewards	GettingRewards1	4.49	1.10	-0.60	0.32
		GettingRewards2	4.29	1.25	-0.63	-0.08
		GettingRewards3	3.31	1.61	0.11	-1.15
	Word of Mouth	Word of Mouth1	3.97	1.57	-0.37	-1.00
		Word of Mouth2	3.61	1.70	-0.13	-1.30
		Word of Mouth3	3.21	1.72	0.20	-1.30
		Word of Mouth4	3.19	1.64	0.23	-1.16

Note: Items marked with * had relatively high mean values, relatively low standard deviation values, and pronounced kurtosis.

APPENDIX I **Main Study Assessment of Normality by Construct**

Stage	Product Category	Construct	Mean	Std. Deviation	Skewness	Kurtosis
Pre-Purchase	Clothing	Information Search	2.83	1.08	0.41	-0.45
		Planning	3.64	1.17	-0.10	-0.58
	Grocery	Information Search	2.83	1.08	0.41	-0.45
		Planning	3.90	1.22	-0.14	-0.77
	Electronics	Information Search	2.92	1.11	0.34	-0.53
		Planning	3.88	1.12	-0.13	-0.60
Purchase	all	Saving Effort	4.78	0.78	-0.69	0.79
		Right Product*	5.24	0.64	-1.04	2.77
		Saving Money*	5.29	0.76	-1.32	2.25
		Saving Time	4.91	0.77	-0.92	1.44
Post-Purchase	all	Satisfaction	4.72	0.82	-0.41	0.18
		Usefulness	4.81	0.87	-0.83	1.07
		Getting Rewards	4.03	1.03	-0.22	-0.10
		Word of Mouth	3.50	1.52	0.02	-1.14

Note: Constructs marked with * had relatively high mean values, relatively low standard deviation values, and pronounced kurtosis.

APPENDIX J
Final Smart Shopping Scale Items

Stage	Construct	Label	Scale Item
Pre-Purchase	Information Search	PlanningSale1	I prepared for this purchase by looking through sale advertisements.
		InfoSearch1	I conducted research prior to making this purchase.
		InfoSearch2	I read a magazine such as Consumer Reports to get information for this purchase.
		InfoSearch3	I asked other people about their experience with this product prior to making this purchase.
		ComparisonShop1	Prior to making this purchase, I went to several different stores to find the specific product I wanted.
		ComparisonShop2	Prior to making this purchase, I compared products online.
		ComparisonShop3	Prior to making this purchase, I tried out several products to see which one I liked best.
		ComparisonShop4	Prior to making this purchase, I shopped around to see what options were available.
	Planning	Planning1	Before making this purchase, I waited until I found the right product.
		Planning2	I had an organized shopping plan before making this purchase.
		Planning3	I knew how much I was willing to spend prior to making this purchase.
		Planning4	I made a list of things I needed before making this shopping trip.
		PlanningSale2	I delayed my purchase until it was offered at a price I was willing to pay.
		PlanningSale3	I waited until this product went on sale before making the purchase.

Note: Planing3 is not included in clothing pre-purchase model
Planing2 and Planing4 are not included in grocery pre-purchase model
InfoSearch3 is not included in the electronics pre-purchase model

Stage	Construct	Label	Scale Item
Purchase	Saving Effort	SavingEffort1	Making this purchase was not a hassle.
		SavingEffort2	I did not spend extra effort on this purchase.
		SavingEffort3	I did not go out of my way to make this purchase.
		Convenience1	Making this purchase was convenient for me.
		Convenience2	I made this purchase because it was convenient.
		Convenience3	Convenience was a benefit of making this purchase.
	Getting the Right Product	RightProduct1	This purchase was exactly what I was looking for.
		RightProduct2	This purchase perfectly fit my needs.
		RightProduct3	I have gotten everything I expected from this purchase.
		RightProduct4	I got a good quality product from this purchase.
		RightProduct5	This product was exactly the style I wanted.
		RightProduct6	This purchase was a very good fit for me.
	Saving Money	SavingMoney1	In making this purchase, I got what I wanted at a price I was willing to pay.
		SavingMoney2	I got a lower price on this purchase than normal.
		SavingMoney3	I got a reasonable price on this purchase.
		SavingMoney4	I found this purchase on sale.
		SavingMoney9	I got a good deal on this purchase.
	Saving Time	SavingTime1	In making this purchase, I used my time wisely.
		SavingTime2	It did not take much extra time to make this purchase.
		SavingTime3	I made this purchase as quickly as I could.
		SavingTime4	I didn't waste time making this purchase.
		SavingTime5	I was able to make this purchase quickly.

Stage	Construct	Label	Scale Item
Post-Purchase	Satisfaction	Feelings1	I feel good about this purchase.
		Feelings2	This purchase gave me a sense of pride.
		Feelings3	I am happy with this purchase.
		Feelings4	Making this purchase was exciting.
		Feelings5	The whole experience involved with this purchase was wonderful.
		Feelings6	This purchase was a really good experience.
		Feelings7	I had a fun experience making this purchase.
		Satisfaction1	I am satisfied with this purchase.
		Satisfaction2	This purchase gave me a feeling of satisfaction.
		Satisfaction3	This purchase has been satisfying.
	Usefulness	Usefulness1	This product has been really useful.
		Usefulness2	I have gotten a lot of use out of this product.
		Usefulness3	I use this purchase all the time.
		Usefulness4	I will be able to use this product multiple times.
	Getting Rewards	GettingRewards1	This purchase was better than expected.
		GettingRewards2	This purchase has been a pleasant surprise.
		GettingRewards3	I received some extra benefits along with this purchase.
	Word of Mouth	Word of Mouth1	After making this purchase, I wanted to tell people about it.
		Word of Mouth2	I have shared this purchase story with other people.
		Word of Mouth3	I have bragged about this purchase.
		Word of Mouth4	I am still talking to others about this purchase.

VITA

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- Lee, M-Y., Atkins, K., Kim, Y-K., & Park, S. (2006). Competitive Analyses Between Regional Malls and Big-box Retailers: A Correspondence

Analyses for Segmentation and Positioning. *Journal of Shopping Center Research*, 13(1), 81-98.

Kim, Y-K., Jolly, L., Fairhurst, A, & Atkins, K. (2005). Mixed-use Development: Creating a Model of Key Success Factors. *Journal of Shopping Center Research*, 12(1), 53-75.

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