

CONTRASTING MULTIPLE MODELS OF BRAND EQUITY'S ROLE IN CONSUMER  
DECISION MAKING

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AN ABSTRACT OF A DISSERTATION

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Manhattan, Kansas

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## **Abstract**

Brand Equity is a common phrase in consumer research, but there is still a lot of ambiguity surrounding the measurement of this concept (Keller, 2008). Several methods of measurement have been proposed over the years, but no one method has been adopted as the ideal way to predict purchase intent and measure brand equity. The current research tested three theories—Social Exchange Theory (SET), Theory of Planned Behavior (TPB), and the Yoo and Donthu model—to see which is the best predictor of purchase intent and brand equity. SET assumes consumers weigh the costs and rewards of purchasing the product. TPB uses consumers' attitudes over purchasing the product, subjective norms of what others would do, and the perceived behavioral control consumers have in actually purchasing the product. The Yoo and Donthu model has been used most often of the three theories in measuring brand equity and includes measures of brand loyalty, perceived quality, brand awareness/associations, and overall brand equity.

Study 1 assessed consumer durable products (TV and athletic shoes) and Study 2 assessed consumer non-durable products (soap and toothpaste). Consumers evaluated these products online based on a picture of the product, the brand name, price, customer reviews, quality ratings, and an advertisement and then indicated their likelihood to purchase the product. Theory of Planned Behavior was the best predictor of purchase intent across all four products assessed indicating that consumers look at external factors such as what others would do as well as how much control they have over purchasing the product as much as they consider their own attitudes.

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## **Chapter 1 - Introduction**

Brand equity is generally defined as “the marketing and financial value associated with a brand’s strength in the market, including actual proprietary brand assets, brand name awareness, brand loyalty, perceived brand quality, and brand associations” (Pride & Ferrell, 2003, p. 299). Although brand equity has been extensively discussed in the literature (Ailawadi, Lehmann, & Neslin, 2003), “no common viewpoint has emerged about how to conceptualize and measure brand equity” (Keller, 2008, p. 37). Punj and Hillyer (2004) believe the reason for this is due to the fact that “brand equity is regarded as being largely attitudinal in nature, composed of beliefs, affect, and other subjective experiences related to the brand” (p. 124).

Another set of researchers argue that the reason no common viewpoint has been found is because of the debate around whether brand equity should be measured from the perspective of customers or firms (Ailawadi et al., 2003). Customer-based brand equity is defined as “the differential effect of brand knowledge on consumer response to the marketing of the brand” (Keller, 1993, p. 2). The main factors for the customer-based measure are “attitudes, awareness, image, and knowledge” (Ailawadi et al., 2003, p. 1).

Keller (2008) asserts that “a brand has positive customer-based brand equity when consumers react more favorably to a product and the way it is marketed when the brand is identified than when it is not” (p. 48). In order to measure this type of brand equity, indirect and direct approaches are used. While both focus on brand awareness, the indirect approach identifies the specific parts that cause the differential response and the direct approach assesses the nature of that response (Keller, 1993).

On the flipside, brand equity focusing on the firm perspective is defined as “a set of assets and liabilities linked to a brand, its name and symbol, that adds to or subtracts from the value provided by a product or service to a firm and/or to that firm’s customers” (Aaker, 1991, p. 15). Price, market share, revenue, and cash flow are firm-level outcomes of brand equity (Ailawadi et al., 2003). Firm-based brand equity isn’t measured in terms of indirect vs. direct approaches like customer-based brand equity since its measurement is primarily monetarily based.

Aaker (1996) proposed a set of brand equity measures that combines both customer-based variables and the financial measures used in firm-based brand equity which can be used to

measure and track brand equity across products and markets. Aaker (1996) argues that a combination approach leads to a more valid instrument in the measurement of brand equity (p. 103). The Brand Equity Ten offers multiple ways to assess brand equity, in which there are five main categories: loyalty (price premium and satisfaction/loyalty), perceived quality/leadership (perceived quality and leadership), associations/differentiation (perceived value, brand personality, and organizational associations), awareness (brand awareness), and market behavior measures (market share and price and distribution indices). The right mix of these measures will depend on the firm's objectives, how many brands are being tracked, which constructs are most important for a firm and their consumers, etc.

The current research uses a similar combination of both customer-based and firm-based brand equity as Aaker (1996) proposed. The variables of brand name, price, perceived quality, advertisements, and word-of-mouth are used to find a strong predictor of brand equity and purchase intent. As Aaker (1996) alleged, the mix of Brand Equity Ten measures used depends on the purposes of each study. The current research covers all five of the Brand Equity Ten main categories, but only includes one measure per category to allow participants enough information to assess the products, but not be too overwhelming. The measures used for each of the main categories are as follows: 1) loyalty: satisfaction assessed through word-of-mouth since participants won't have actually purchased the products; 2) perceived quality/leadership: perceived quality from a reputable source (i.e., *Consumer Reports* magazine); 3) associations/differentiation: advertisements will show the brand's personality; 4) awareness: brand name; and 5) market behavior measures: price (Aaker (1996) asserted that price is a good indication of the behavior of the market).

The variables for the current studies are used as decision-making criteria for participants' purchase intent. Three models of brand equity are tested against one another to establish which is the best predictor of brand equity and purchase intent. Two theories that focus on how consumers interact with a brand are Social Exchange Theory (SET) and the Theory of Planned Behavior (TPB). Social Exchange Theory and the Theory of Planned Behavior have not been used much to explain consumer related phenomenon; however, the behaviors they have explained are not all that different from consumer related behaviors. Another model that has been shown to accurately predict brand equity is the Yoo and Donthu model. The three models will now be discussed, starting with Social Exchange Theory.



## **Social Exchange Theory Model of Brand Equity**

Social Exchange Theory explains how people interact with one another in terms of maximizing benefits/rewards and minimizing costs (see Equation 1.1). SET really came to prominence in the 1960s (Blau, 1964; Emerson, 1962; Homans, 1961) and is defined by Homans as “the exchange of activity, tangible or intangible, and more or less rewarding or costly, between at least two persons” (Cook & Rice, 2006, p. 54). The definition of cost in SET has two parts: “cost in the form of aversive stimuli encountered in a social transaction and ‘cost’ in the form of rewards foregone” (Emerson, 1976, p. 349); whereas benefits/rewards are “virtually synonymous with a positive reinforcement, but with the added connotation of being socially administered” (Emerson, 1976, p. 347).

### **Equation 1.1 Social Exchange Theory Formula**

$$\text{WORTH} = \text{REWARDS} - \text{COSTS}$$

The basic premise of SET comes from economics (Blau, 1964; Emerson, 1976), behavioral psychology (Homans, 1958; Emerson, 1976), and utilitarianism, which is the idea that “humans are motivated and act so as to maximize those outcomes they most value,” (White & Klein, 2008, p. 66). SET holds a set of assumptions about human nature: “humans seek rewards and avoid punishments, humans are rational beings, and the standards that humans use to evaluate costs and rewards vary over time and from person to person” (West & Turner, 2007, p. 188). The assumptions SET makes about the nature of relationships include: “relationships are interdependent and relational life is a process” (West & Turner, 2007, p. 188).

The current research focuses on how SET predicts consumers’ relationships with a brand, which will be discussed later in this paper. Over the years, SET has been used to explain relationship behaviors across multiple disciplines and fields of study. These will now be discussed to show the validity of SET in predicting behaviors.

### ***Validity of Social Exchange Theory (SET) in Research***

Social Exchange Theory has been used throughout the business field (Gould-Williams & Davies, 2005; Parzefall & Salin, 2010; Shore et al., 2009), but primarily to understand the

employee-organization relationship [EOR] which has been very important for explaining organizational exchange relationships (Shore, Coyle-Shapiro, Chen, & Tetrick, 2009). Gould-Williams and Davies (2005) studied the relationship between managers and employees specifically and found SET to be a valid framework. In addition, Parzefall and Salin (2010) argue that SET can be applied to workplace bullying by understanding how justice, contract breach, and perceived organizational support relate to the employee-employment relationship. SET can explain online relationship behavior as well. Hall, Widén, and Paterson (2010) and Faraj and Johnson (2011) evaluated the reasons why people are motivated to participate in an online environment, in which SET was a significant predictor.

Participation motivations have also been used in healthcare in terms of medication programs. Hamrin, McCarthy, and Tyson (2010) used SET to understand why families don't always adhere to children's psychotropic medication plans. They found that although there are rewards of psychotropic medication adherence, the costs outweigh these.

As it has been shown, Social Exchange Theory has been used successfully in several different fields outside of traditional Social Psychology. In the current research, SET is extrapolated to consumers' relationships with a brand. In other words, consumers use several factors to judge whether a brand stands up to their calculation of rewards and costs. If they feel they aren't getting enough rewards or benefits from the brand, they will terminate that relationship and therefore, purchase intent and brand equity decline for that consumer. However, if the consumer judges the brand to offer more rewards than costs based on this calculation, purchase intent and brand equity increase.

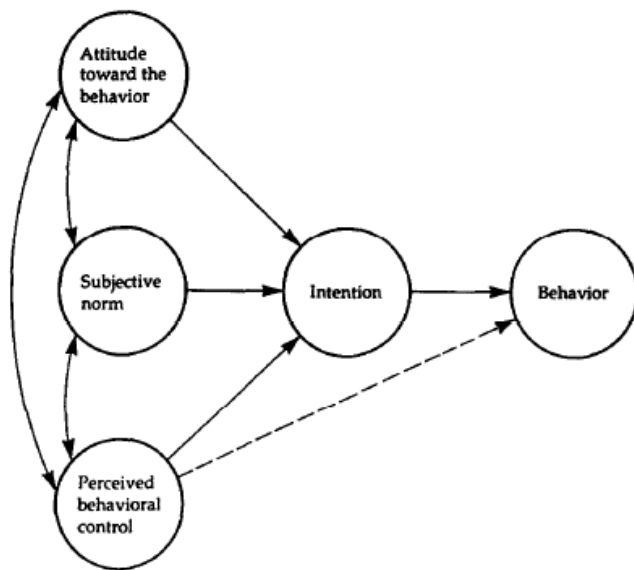
There are other models available (e.g., Theory of Planned Behavior) that could look at how consumers and brands interact with one another. Theory of Planned Behavior has a different take by focusing on consumers' attitudes, what they perceive to be subjective norms, as well as their perceived behavioral control. This theory will be discussed further now.

### **Theory of Planned Behavior Model of Brand Equity**

Theory of Planned Behavior by Ajzen (1985) is an extension of Fishbein and Ajzen's (1975) Theory of Reasoned Action. The Theory of Planned Behavior aims to measure behavioral intention by focusing on a person's attitude towards the behavior, subjective norms, and perceived behavioral control. The structural diagram of TPB is shown in Figure 1.1.

In TPB, attitude toward the behavior is seen as the “degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question” (Ajzen, 1991, p. 188). The second factor is subjective norms, which is defined as “the perceived social pressure to perform or not to perform the behavior” (Ajzen, 1991, p. 188). Perceived behavior control “refers to people’s perception of the ease or difficulty of performing the behavior of interest” and can depend on opportunities and resources (“e.g., time, money, skills, cooperation of others,” etc.) (Ajzen, 1991, p. 182). Perceived behavioral control is the main difference between the Theory of Planned Behavior and the Theory of Reasoned Action. It was added to the TPB model to account for limitations in the predictive power of the Theory of Reasoned Action when people have no control over their behaviors in a given situation.

**Figure 1.1 Theory of Planned Behavior Model**



Again, the current research uses this theory to better understand consumers’ purchase intent and perceived brand equity. Although Social Exchange Theory uses a consumer’s relationship with the brand in order to ascertain their purchase intent, Theory of Planned Behavior focuses on outside forces like the subjective norm. How the Theory of Planned Behavior is used in the current research will be discussed more in detail later, but first to show the validity of the Theory of Planned Behavior in real world situations, the next section will discuss some of the areas in which this theory has been utilized.

### ***Validity of Theory of Planned Behavior (TPB) in Research***

The Theory of Planned Behavior has fostered the validation and explanation of several behaviors across fields. TPB can be used to explain health-related issues such as quitting intentions of smokers when a smoking ban has been put in place (Macy, Middlestadt, Seo, Kolbe, & Jay, 2012) and adherence to fruit and vegetable consumption programs (Blanchard et al., 2009). In another area, Han, Hsu, and Sheu (2010) assessed green hotel stay intentions and found that the variables within TPB had a positive relationship with this behavior. Switching areas a bit, the addition of self-identity measures to the Theory of Planned Behavior has been shown to be significant in predicting intention (Rise, Sheeran, & Hukkelberg, 2010). A related field to self-identity is how others' behaviors affect your own—consumer susceptibility to interpersonal influence (CSII) (Bearden, Netemeyer, & Teel, 1989). As McGuire argues, “susceptibility to interpersonal influence is a general trait that varies across persons and that a person's relative influenceability in one situation tends to have a significant positive relationship to his or her influenceability in a range of other social situations” (as cited in Bearden et al., 1989, p. 473). For those that are higher in susceptibility to interpersonal influence, they will be more likely to care what others would do in a similar situation.

Another study that included self-identity in the assessment of the Theory of Planned Behavior is one by Pelling and White (2009) in order to understand behavioral intention to interact with social networking websites. While another consumer-specific study tying back to TPB is one about online purchasing (Pavlou & Fygenson, 2006). In most TPB applications, the variables of the theory come together to predict intentions, however in e-commerce, the intent to purchase a product comes before getting information and buying a product from a Web vendor (Pavlou & Fygenson, 2006). This happens because before a consumer will go to a website to seek information and possibly purchase, they first must realize they need that product. Since the current studies are completed online, the initial intent to purchase is provided to participants in the form of an instructional description before assessing the products. The exact wording of this instructional description will be presented in the Method section of this paper.

So often, TPB is used to predict behavioral intention, but that doesn't necessarily lead to actual behavior. De Cannière, De Pelsmacker, and Geuens (2009) assessed the effectiveness of the Relationship Quality Model (RQ) versus the TPB model and found that TPB was better than the RQ model at predicting intentions as well as actual behaviors.

Theory of Planned Behavior is valid in predicting behavioral intentions across several topic areas, including purchase intent (De Cannière et al., 2009). The current studies further the TPB research on purchase intent by assessing attitude, subjective norm, and perceived behavioral control in the following way. Consumers' attitudes about buying a product/brand are dependent on several factors, including advertisements and word-of-mouth, for example. The subjective norm is based on consumers' perceptions of how others would behave (or what products others would buy). If this is a popular product, then the subjective norm has a higher value. The perceived behavioral control can be affected by factors outside of consumers' control. For example, during the holiday season, the "hot" toy will be very difficult to purchase, which consequently leads to a lower perceived behavioral control. Depending on the calculation of their behavioral intention/purchase intent, this leads to a higher or lower perceived brand equity.

The current studies extrapolate Social Exchange Theory and the Theory of Planned Behavior to brand equity. Since there is little previous research that ties these theories to consumer research, a validated measure of brand equity will be tested against SET and TPB. The other model that will be used is one created by Yoo and Donthu (2001).

### **Yoo & Donthu Model of Brand Equity**

Yoo and Donthu (2001) created a consumer-based measure that could be used cross-culturally as well as across several product categories. Their scale was the first to be developed based on Aaker's (1991) theory of brand equity (Londono, 2012). Yoo and Donthu (2001) tested their measure, which focused on brand loyalty (3 scale items), brand awareness (3 items), perceived quality of the brand (2 items), brand associations (3 items), and overall brand equity (4 items) (see Appendix A), on Americans, Korean Americans, and Koreans.

In the context of this model, brand loyalty "refers to the tendency to be loyal to a focal brand, which is demonstrated by the intention to buy the brand as a primary choice" (Oliver, 1997, as cited in Yoo & Donthu, 2001, p. 3). Brand awareness is "the ability for a buyer to recognize or recall that a brand is a member of a certain product category" (Aaker, 1991, p. 61). Perceived quality is "the consumer's judgment about a product's overall excellence or superiority" (Zeithaml, 1988, p. 3). Brand associations are defined as "anything linked in memory to a brand" (Aaker, 1991, p. 109).

The products chosen for the testing of the Yoo and Donthu model were film for cameras (“a low-cost, fast-replacement cycle, short-term experience good”), athletic shoes (“a medium-cost, medium-replacement cycle, medium-term experience good”), and color TVs (“high-cost, slow-replacement cycle, longer-term experience good”) (Yoo & Donthu, 2001, p. 3) because they “were different in price range, frequency of purchase, consumers’ product involvement, and consumption situation” (Yoo & Donthu, 2001, p. 3). The authors found their measure to be both valid and reliable in assessing brand equity.

### ***Validity of Yoo & Donthu in Research***

Yoo and Donthu’s model of brand equity has been used widely in measuring brand equity across multiple domains (Londono, 2012). As Christodoulides and De Chernatony (2010) assert, “amongst the indirect approaches to consumer-based brand equity measurement, the Yoo and Donthu (2001) study arguably has the most strengths and fewest weaknesses (p. 56). The authors argue this because Yoo and Donthu (2001) tested their model across multiple cultures and different product categories, it is easy to administer, gathers data at the individual consumer level, and a stringent validation process was completed.

Yoo and Donthu’s (2001) model has been used often in the retailer domain (Pappu & Quester, 2006; Li & Ellis, 2014; Kim, Jin-Sun & Kim, 2008). Pappu and Quester (2006) used a modified version of the Yoo and Donthu (2001) model to measure retailer brand equity, namely with department stores and specialty stores. Li and Ellis (2014) utilized Yoo and Donthu’s brand equity scale items in order to test consumers’ willingness to pay a price premium for branded apparel vs. non-branded apparel. Consumers were willing to pay around \$2.50 more for apparel whose brand has higher brand equity. A study on hotel brand equity by Kim, Jin-Sun, and Kim (2008) found that when brand loyalty and brand awareness/association were higher, so was guests’ revisit intent. Yoo and Donthu’s perceived quality variables were not found to be a direct predictor of hotel revisit intent in this study.

The three models/theories will be tested by assessing specific elements of products that will be discussed further now.

## **Chapter 2 - Brand Equity Variables**

Many different variables have been used to assess brand equity (Ailawadi, Lehmann, & Neslin, 2003; Punj & Hillyer, 2004; Keller, 2008); however, using a combination of both

customer-and firm-based brand equity measures is argued to be the most valid (Aaker, 1996). Five variables, which are utilized in the current research, that combine both forms of brand equity and have been found to be valid many times previously are brand name (Breneiser & Allen, 2001; Alamgir et al., 2010; Bojei & Hoo, 2011; Erdem, Swait, & Valenzuela, 2006; Kim & Drolet, 2009), product quality (Dougherty & Shanteau, 1999; Hilgenkamp & Shanteau, 2010), price (Erdem, Keane, & Sun, 2008; Rao, 2005; Shiv, Carmon, & Ariely, 2005), word-of-mouth (East, Hammond, & Lomax, 2008; Guo, 2011; Park & Kim, 2008), and advertisements (Erdem et al., 2008; Smith, Gradojevic, & Irwin, 2007).

## **Brand Name**

One of the biggest determinants of brand equity is brand name. One way to show this is to look at generics versus name brands. Soda has been a popular product in which to test whether lower-cost generic brands can compare to higher-cost name brands. Breneiser and Allen (2011) tested this with Coca-Cola brand soda, Sam's Choice store brand soda, and Publix store brand soda in a study with blind and non-blind conditions. Participants were asked to rank the three sodas in order of preference, in which the sodas were labeled as Cola 1, 2, and 3 in the blind condition and were told exactly which brand was which in the non-blind. Breneiser and Allen (2011) found that Coca-Cola was overwhelmingly preferred (50%) in the non-blind condition, however significantly less so in the blind condition (only 31%). Preference for the Publix brand doubled from the non-blind condition (15%) to the blind condition (33%); however there was no difference in preference between the non-blind and blind conditions for Sam's Choice (35%). By preferring the brand name soda only when it is known, this shows that the three drinks are similar in quality, taste, etc. The main difference is the brand name, which shows that Coca-Cola has stronger brand equity than its generic counterparts.

Although Breneiser and Allen (2011) were testing consumer non-durable goods (i.e., products that are fairly inexpensive, are used relatively quickly, and don't require lots of research before purchase), another study shows a similar effect with consumer durable goods (i.e., products that are bought infrequently, typically are purchased at a higher price, and are "items for which buyers are willing to expend considerable effort in planning making purchases" (Pride & Ferrell, 2003, p. 252)). As Alamgir, Nasir, Shamsuddoha, and Nedelea (2010) found, brand names matter a great deal in terms of the importance placed by consumers. When assessing

purchase intent of cars, consumers were reluctant to try car brands they were unfamiliar with. This finding is similar to many other product categories, however, this is especially the case for consumer durable goods, when more of an investment is needed and the product is expected to last a longer period of time.

Consumers' preference for brand-name products is a marketing universal that has been shown several times throughout the years (Bojei & Hoo, 2011; Erdem, Swait, & Valenzuela, 2006). Kim and Drolet (2009) found Asian Americans are more likely to prefer brand-name products than European Americans which can be attributed to Asian Americans' stronger sense of self-consciousness. Another study by Bojei and Hoo (2011) found that the higher the brand awareness, the more likely Malaysian consumers were to repurchase that brand of smartphone. Like the rest of the brand name examples, brand equity has been proven to be a cross-cultural occurrence.

### **Product Quality**

Product quality is key in understanding brand equity because often, other variables (like brand name and price) lead consumers to infer good or bad product quality. In this case, when consumers perceive the product quality to be good, purchase intent (and as a result brand equity) increases.

It is difficult to determine product quality without signals for previously untried products. One signal is expert ratings such as *Consumer Reports* magazine for example. Dougherty and Shanteau (1999) showed how expert ratings can affect quality perceptions when participants test consumer products and rate them on overall quality. There were no product names given; only labels stating whether *Consumer Reports* magazine rated the product as high, medium, or low quality. The point of this experiment was to see whether people's perceptions of quality were affected by the quality ratings of a credible source. They found that subjects were influenced by quality ratings and their "evaluations of consumer products are modified by their expectations" (Dougherty & Shanteau, 1999, p. 58). Following a similar method but using brand names instead of quality ratings, Hilgenkamp and Shanteau (2010) found that the brand name with the highest brand value was most likely to be purchased independent of product quality.



## **Price**

Consumers often use price as an indicator of product quality. For products that have a higher perceived product quality due to price, they also are more likely to be purchased which leads to stronger brand equity. According to Erdem, Keane, and Sun (2008), higher prices are associated with the perception of higher quality products while frequent price cuts can imply lower product quality.

The phenomenon of price implying product quality has been around since 1949 when “Knauth documented a hosiery retailer’s ‘enormous’ positive sales response following a price increase from \$1.00 to \$1.14, apparently because the high price ‘suggested higher value’” (Rao, 2005, p. 401). However, there’s a major difference between this perceived vs. actual product quality as the correlation between price and actual product quality is typically low (Rao, 2005). Shiv, Carmon, and Ariely (2005) showed that when consumers expect a product to perform well due to its price, a placebo effect occurs; consumers perceive the actual efficacy of the product to be higher.

## **Word-of-Mouth**

Word-of-mouth (WOM) is “informal advice passed between consumers. It is usually interactive, swift, and lacking in commercial bias. WOM is a powerful influence on consumer behavior” (East, Hammond, & Lomax, 2008, p. 215). If a consumer hears negative word-of-mouth reviews, they are less likely to buy that product, which in turn, decreases brand equity. However, the opposite is true, that positive WOM positively affects brand equity. Guo (2011) looked at Chinese consumers and how their collectivist culture affects their brand switching behavior. It was found that negative word-of-mouth information coming from an expert made Chinese consumers more likely to switch brands. The author attributes this to the collectivist culture which makes outside feedback more important to consumers than in individualistic cultures. As we saw with brand name, word-of-mouth seems to be a cross-cultural occurrence as well.

Word-of-mouth has been a key contributor to consumers’ perceptions of brands for years. However, the use of online consumer reviews is a newer concept. Park and Kim (2008) studied how online consumer reviews’ level of expertise, types of reviews, and numbers of reviews to determine how influential they are on readers’ purchase intent of that product. Experts look more

to the type of reviews when deciding whether to purchase a product, while novices focus more on the number of reviews.

East et al. (2008) found that when consumers are familiar with a brand, they consider positive recommendations for their purchase decision more than negative recommendations. However, when consumers feel very likely to choose a brand initially, it is harder to sway that opinion with contrary word-of-mouth information.

## **Advertising**

“An important goal of advertising is designing effective campaigns that foster favorable attitudes toward a product” (Pyun & James, 2011, p. 33). These favorable attitudes then lead to stronger brand equity; hence the importance of an effective campaign as well as a getting several noticeable ads out into the marketplace. Advertising is also a way to showcase a brand’s personality to consumers (Aaker & Biel, 1993).

Erdem et al. (2008) found that when it comes to advertising, the more ads presented, the higher the perceived product quality. Consumers infer that if a company has the resources to produce multiple ads, the product must be performing well.

More than just the pure number of advertisements, the amount of money a brand spends on ads also positively impacts brand equity (Smith, Gradojevic, & Irwin, 2007). All else equal, the more money the brand spends on ads, the more gross profit they make and the stronger the brand equity. However, this is truer for the long-term rather than the short-term.

## **Chapter 3 - Introduction/Purpose of Current Research**

The current research includes two studies (one with consumer durable goods and the other with consumer non-durable goods) that measure brand equity and test which model/theory, Social Exchange Theory, Theory of Planned Behavior, or the Yoo and Donthu model of brand equity, best predicts purchase intent for consumers. This research uses purchase intent as the dependent variable because we cannot measure whether they’ll actually buy the product, but intentions “are assumed to capture the motivational factors that influence a behavior” (Ajzen, 1991, p. 181). The reason for using both consumer durable and non-durable goods in the current research is to assess if the findings generalize across a multitude of products. The main method for both studies is an online questionnaire with scale items for each of the three models (which

will be discussed in more detail later). Items included for Social Exchange Theory include assessments of perceived rewards and costs. For the Theory of Planned Behavior items in the questionnaire, the instructions from Ajzen (2012) were used for item creation. The items from the Yoo and Donthu model were used in their entirety for the current research since they were found to be both valid and reliable scale items across multiple products and cultures (Yoo & Donthu, 2001). The Consumer Susceptibility to Interpersonal Influence Scale (Bearden et al., 1989) is also included to assess how much of an impact others' opinions of a product or brand have on a consumers' purchase intent. The products are assessed virtually on brand name, perceived product quality, price, word of mouth, and advertisements; these variables were chosen based on the previous research mentioned above. How these variables are assessed will be further explained in the procedure section for each study.

## **Purpose and Hypotheses**

The purpose of this study is to determine which of the three models/theories (Social Exchange Theory, Theory of Planned Behavior, or the Yoo & Donthu model) is the best predictor of purchase intent for several consumer products. Since each of the three theories has an equal chance of best predicting purchase intent, one theory will not be hypothesized to outperform the others. Instead, the logic behind how each theory could best predict purchase intent will be presented. The implications of how Consumer Susceptibility to Interpersonal Influence (CSII) could impact purchase intent will also be discussed.

### ***Social Exchange Theory***

Social Exchange Theory could be the best predictive model if consumers weigh the rewards and costs of a product before they make a purchase. The behavior of intending to buy the product would need to be seen as “worth it” by the consumer after weighing the rewards and costs (i.e., rewards – costs = a positive assessment). SET most pertains to the field of Social Psychology in assessing social relationships. If SET were the best predictor of purchase intent, it could be argued that consumers see their relationship with a product as similar to that of a friendship. This is feasible given the strength of brand loyalty in the market. Brand loyalty is defined by Aaker (1991) as “the attachment that a customer has to a brand” (p. 39). It's entirely possible that the “attachment” Aaker refers to could be similar to a social relationship

attachment. Therefore, if consumers feel their attachment to the brand offers more rewards or benefits than costs, SET will be the best predictor of purchase intent.

### ***Theory of Planned Behavior***

Theory of Planned Behavior could be the best predictive model, especially if consumers care a great deal about what others think or would do in the same situation. This is the only brand equity model being tested that takes others' actions/opinions into account directly (subjective norm) as well as factors outside consumers' control (perceived behavioral control). It's not enough for a consumer to have a positive attitude or assessment toward a product in order to buy it, they have to have some sort of likelihood that they could actually do so, be that financial means, time, skills, cooperation of others, supply and demand, etc. Although attitudes, subjective norms, and perceived behavioral control are all assessed by the individual consumer, two-thirds of TPB is based on semi-external factors to the consumer. Subjective norm is "the perceived social pressure to perform or not perform the behavior" (Ajzen, 1991, p. 188) which is felt by the consumer, but what others' would do, think, judge on others all play a role which is more external. The same can be said about perceived behavioral control; again, it's a perception the consumer has, but is based on external factors like availability of a product, for example. The other two theories being tested lack this external account in the purchase decision. Perceived behavioral control was added to the TPB model from the Theory of Reasoned Action because the original theory had limitations in the predictive power. Therefore, external factors could make more of a difference in purchase intent that SET and the Yoo and Donthu model do not account for, giving TPB more predictive strength.

### ***Yoo and Donthu Model***

Unlike the other two theories, the Yoo and Donthu Model has already been proven to accurately predict purchase intent for both consumer durable and non-durable goods with consumers (Yoo & Donthu, 2001). SET and TPB have rarely been used in the context of purchase intent and brand equity before, so it's possible that a tried and true model will win out. Like mentioned earlier, Yoo and Donthu's scale was the first to be developed based on Aaker's (1991) theory of brand equity, which conceptualized brand equity, but hadn't been operationalized for measurement before Yoo and Donthu (Christodoulides & De Chernatony,

2010). Their measure focuses mainly on the product itself and consumers' awareness and perceptions of it (indirect approaches) rather than on consumers' preferences (direct approach). Because the indirect approach "measures brand equity through its demonstrable manifestations" (Christodoulides & De Chernatony, 2010, p. 49) and direct approaches try to separate the value of the product from the value of the brand, indirect approaches have been used more often in measuring brand equity due to the complications related to separating a product from its brand. Given the strong history of indirect approaches (and this model in particular) in measuring brand equity, the Yoo and Donthu model could best predict purchase intent for both consumer durable and non-durable goods in the current research.

### ***Consumer Susceptibility to Interpersonal Influence***

Consumer Susceptibility to Interpersonal Influence varies by person but is a general trait. Stafford and Cohanough (1977) argue that it's important to consider "the effects of interpersonal influence on development of attitudes, norms, values, aspirations, and purchase behavior" (as cited in Bearden et al., 1989, p. 473). Therefore, CSII should be a significant predictor of purchase intent or explain a significant amount of additional variance in the models. However, because Theory of Planned Behavior already includes subjective norms, which is the perceived social pressure to perform a behavior, it is expected that CSII will not add a significant amount of predictive power to the TPB model. Because no such social influence aspect is part of Social Exchange Theory or the Yoo and Donthu model, the expectation is that CSII will make these models stronger in their predictive power of purchase intent.

## **Chapter 4 - Pilot Study**

A small pilot study was conducted prior to Studies 1 and 2 to test the effectiveness of the product materials. Eighteen participants completed the TV and athletic shoes pilot test and thirteen assessed the toothpaste and soap. Participants were General Psychology students at a large, Mid-Western university. Several aspects were tested including: brand name values, athletic shoes' gender neutrality, and whether the product quality ratings, word-of-mouth customer reviews, and advertisements gave consumers enough information in order to make a purchase decision. Participants completed an online questionnaire which included both quantitative and qualitative measures. The quantitative portion of the questionnaire included the full measures

being used for Studies 1 and 2 along with questions pertaining to which brands have the highest and lowest brand value. Qualitative feedback was requested during pilot testing to understand how well the product quality ratings, word-of-mouth customer reviews, and the advertisements worked at providing enough information for participants to make their purchase decision. Qualitative feedback was solicited through survey open ends by asking why they would or wouldn't buy the product and which factors played into that decision. Several changes were made from pilot testing to Studies 1 and 2; the exact changes made will be discussed during the Materials section of each respective study.

## **TV and Athletic Shoes Pilot Testing**

### *Brand Names*

Participants were asked to rank three brands for each product (TV: Samsung, Sharp, Viore; Shoes: Nike, Asics, Hi Tec) from best to worst. Samsung and Nike were ranked almost unanimously as the best, while Viore and Hi Tec were significantly chosen as the worst brand, therefore placing Sharp and Asics in the middle in terms of brand value (TV:  $\chi^2(2, N=18)=30.33$ ,  $p=.000$ ; Shoes:  $\chi^2(2, N=18)=24.11$ ,  $p=.000$ ) (see Tables 4.1 and 4.2).

**Table 4.1 Comparison of Differences Between Brand Value Rankings of TV Brands**

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Frequency percentages for each brand at each of the three values

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<u>Brands</u>	<u>Top Ranking (1)</u>	<u>Middle Ranking (2)</u>	<u>Bottom Ranking (3)</u>
Samsung	88.9%	11.1%	0%
Sharp	11.1%	83.3%	5.6%
Viore	0%	5.6%	94.4%

**Table 4.2 Comparison of Differences Between Brand Value Rankings of Shoe Brands**

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Frequency percentages for each brand at each of the three values

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<u>Brands</u>	<u>Top Ranking (1)</u>	<u>Middle Ranking (2)</u>	<u>Bottom Ranking (3)</u>
Nike	88.9%	11.1%	0%
Asics	11.1%	61.1%	27.8%
Hi Tec	0%	27.8%	72.2%

### ***Gender Neutrality of Athletic Shoes***

Since shoes are typically gender specific which would cause a bias if both males and females rated their purchase intent for the same shoe, a gender neutral athletic shoes was chosen. Pilot testing was completed to confirm the gender neutrality of the specific shoe being used for this study and showed there was not a significant difference in purchase intent of the shoe for men ( $M=1.67$ ,  $SD=1.21$ ) and women ( $M=2.08$ ,  $SD=1.51$ );  $t(16)=-.587$ ,  $p = .565$ .

### ***Product Quality Ratings***

During the qualitative open ends in the pilot study, it was brought up several times that a “medium” rating of 60 and 58 for the TV and shoes, respectively, was too low to ever consider purchasing these products. Therefore, slightly higher ratings were used in Study 1.

### ***Word-of-Mouth Reviews***

For the pilot study, one customer review was tested per product (TV and athletic shoes) and was found to be unrealistic. Many online sites include numerous customer reviews, so more were added for Study 1. Qualitative feedback from pilot testing also showed that the reviews were seen by many as too negative to even consider purchasing. More positive reviews were included for Study 1.

### ***Advertisements***

One ad per product was created and tested during pilot testing. During the same qualitative open ends as described above, several participants mentioned that they viewed the ads positively (“The ad made it seem good for running.”), however a couple of suggestions were made to improve the athletic shoes ad, which were made for Study 1.

## Soap and Toothpaste Pilot Testing

### *Brand Names*

In pilot testing, participants were asked to rank three brands (Soap: Dove, Dial, Coast; Toothpaste: Colgate, Arm & Hammer, Ultrabrite) from best to worst. Dove and Colgate were ranked almost unanimously as the best, Coast and Ultrabrite were significantly chosen as the worst brand, and Dial and Arm & Hammer ratings were chosen most often as the middle brand (Soap:  $\chi^2(2, N=15)=22.93, p=.000$ ; Toothpaste:  $\chi^2(2, N=15)=24.40, p=.000$ ) (see Tables 4.3 and 4.4).

**Table 4.3 Comparison of Differences Between Brand Value Rankings of Soap Brands**

Frequency percentages for each brand at each of the three values			
<u>Brands</u>	<u>Top Ranking (1)</u>	<u>Middle Ranking (2)</u>	<u>Bottom Ranking (3)</u>
Dove	93.3%	6.7%	0%
Dial	6.7%	73.3%	20.0%
Coast	0%	20.0%	80.0%

**Table 4.4 Comparison of Differences Between Brand Value Rankings of Toothpaste Brands**

Frequency percentages for each brand at each of the three values			
<u>Brands</u>	<u>Top Ranking (1)</u>	<u>Middle Ranking (2)</u>	<u>Bottom Ranking (3)</u>
Colgate	86.7%	13.3%	0%
Arm & Hammer	13.3%	80.0%	6.7%
Ultrabrite	0%	6.7%	93.3%

### *Product Quality Ratings*

Just like for the TV and athletic shoes, “medium” ratings of 58 and 60 for the soap and toothpaste, respectively, were mentioned by several participants as being too low to ever consider purchasing these products. The numeric ratings were raised for Study 2.



### ***Word-of-Mouth Reviews***

One customer review was tested per product (soap and toothpaste) and the same results as the pilot testing for the TV and athletic shoes were found. More customer reviews and more positive ones were added for Study 2.

### ***Advertisements***

An ad for each product was created and tested during the pilot study. From qualitative feedback, participants said that although the advertising wasn't the most important factor in their purchase intent ("I made my decision based on the brand name before I even read the ad."), they viewed the ads positively. Participants gave suggestions for improvement for each of the ads which were incorporated into Study 2.

## **Chapter 5 - Study 1**

### **Participants**

The participants for this study were 150 consumers that belong to a sample company's panel (Innovate MR, LLC). The number of participants was based on a power analysis that assumes an effect size of 0.15 (which is a medium effect size from Cohen, 1988) and a power level of 0.95. After the survey was programmed and tested, the sample company sent emails to their panel members inviting them to participate in the research. The following quotas (maximums) were put in place so as to get an even mix of demographics of participants: gender (50% female, 50% male); age (50% 18-45, 50% 46 and older); region (quota based on census distribution: 23% West, 22% Midwest, 18% Northeast, 37% South); ethnicity (30% non-Caucasian); education (15% High school graduates or less—as online sample panelists skew more educated); and socioeconomic status (no more than 35 survey completes per household income bracket). Participants received the equivalent of \$5 (in Innovate MR points) from the sample company for their involvement in this study.

### **Materials**

Two different consumer durable goods (one television—Figure 5.1 and one pair of athletic shoes—Figure 5.2) were assessed in this study. These products were chosen based on

Yoo and Donthu's (2001) explanation that these products differ in "price range, frequency of purchase, consumers' product involvement, and consumption situation" (p. 3). These products were assessed through an online questionnaire (which is explained in the Measures and Procedures section). The specific pair of athletic shoes was chosen because they are gender neutral which was confirmed during the pilot study.

**Figure 5.1 Picture of TV**



**Figure 5.2 Picture of Athletic Shoes**



### ***Brand Names***

The brand names used in this study are Sharp for the TV and Asics for the athletic shoes as they were the brands with medium brand value during pilot testing. The brand with medium brand value was preferred for this study because the brand with the highest brand value may create a positive purchase bias; whereas the lowest brand value brand may create the opposite bias in that consumers may not be willing to buy it because the brand is more of a "generic" and doesn't even enter their consideration set.

### ***Prices***

The prices associated with the two products are as follows: TV = \$289.99; Athletic Shoes = \$150. The price for the TV was chosen because it is the listed price on Sharp's website

(<http://www.sharppusa.com>) for a 32” Sharp LED flatscreen TV. The price of the athletic shoes was selected based on what is listed on Asics’ website (<http://www.asicsamerica.com>) for the same model of shoe shown during the pilot testing.

### ***Product Quality Ratings***

Product quality was given in terms of a reputable source’s ratings (i.e., *Consumer Reports Magazine*). The use of *Consumer Reports Magazine* as the rating source was shown to be valid in the study by Dougherty and Shanteau (1999). The rating shown was one of medium product quality as to mimic an average product. The ratings used during pilot testing were seen as too low to consider purchasing the TV and athletic shoes. Therefore, the ratings for the proposed study were increased to 70 and 75 for the TV and shoes, respectively (see Table 5.1).

**Table 5.1 Product Quality Wording for TV and Athletic Shoes**

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#### TV

***Consumer Reports Score:*** 70 out of 100 (Based on HD picture quality, sound quality, viewing angle, motion blur performance, ease of use, versatility, and power consumption)

#### Athletic Shoes

***Consumer Reports Score:*** 75 out of 100 (Based on fit, arch support, stability, cushioning, and motion control)

### ***Word-of-Mouth Reviews***

Word-of-mouth was shown as customer reviews, which look like typical reviews one would see from other consumers on amazon.com, for example (see Table 5.2). The reviews include an overall star rating and both positive and negative remarks about the product. Since the reviews were seen as too negative during the pilot study and not being realistic having only one review, a slightly more positive tone was employed as well as more reviews were added for the purposes of Study 1.

**Table 5.2 Word-of-Mouth/Reviews for TV and Athletic Shoes**

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TV

**Average:** 4 stars out of 5

“Good TV for the money. The picture is good, but I have to turn the volume up a bit sometimes in order to hear it. But that could be my hearing for all I know.”

“Overall, I am very happy with this TV and would definitely recommend it, with the only reservation being the sound if you plan to use the built-in speakers.”

“Picture quality is very good.”

“Works great, great picture and sound isn’t too bad. Was easy to set up and we’ve had no problems out of it so far.”

Athletic Shoes

**Average:** 4 stars out of 5

“The shoe fits amazingly and don’t give me blisters when running! The only minor issue I have is that they aren’t the best looking shoes I’ve ever seen.”

“They are supportive, provide the needed stability, and are super cushioned.”

“It seems to run a bit smaller than normal, but overall a great pair of running shoes.”

“So comfy. Perfect width. Price is a bit high but worth it for a solid pair of running shoes.”

***Advertisements***

Print advertisements were created that included a picture of the product, the brand logo, an additional picture of nature, and a slogan previously used by each respective brand (see Figures 5.3 and 5.4). The reason a real ad was not used for each product is that there are too many variables to control for. Based on results from the pilot study, the outline around the shoe and the font used in the athletic shoes ad were changed for the current study. No changes were suggested for the TV advertisement.

**Figure 5.3 Print Advertisement for TV**



**Figure 5.4 Print Advertisement for Athletic Shoes**



## **Measures and Procedure**

In the current study, participants completed an online survey. The first screen of the survey explained to participants that they were voluntarily participating in this study (informed consent) and were informed of their incentive (see Appendix A). Demographics were asked next in order to maintain the quotas set up to get an even mix of participants. These demographics

included gender, age, state of residence, marital status, employment status, education, annual household income, and ethnicity (see Appendix A).

The next section of the survey was the Consumer Susceptibility to Interpersonal Influence Scale items (see Table 5.3 for an example and Appendix A for the full scale), which was at the beginning of the survey so the product descriptions didn't bias consumers' responses to this section.

**Table 5.3 Consumer Susceptibility to Interpersonal Influence Example Items**

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To make sure I buy the right product or brand, I often observe what others are buying and using. Strongly disagree :\_\_1\_\_:\_\_2\_\_:\_\_3\_\_:\_\_4\_\_:\_\_5\_\_:\_\_6\_\_:\_\_7\_\_: Strongly agree

I rarely purchase the latest fashion styles until I am sure my friends approve of them.

Strongly disagree :\_\_1\_\_:\_\_2\_\_:\_\_3\_\_:\_\_4\_\_:\_\_5\_\_:\_\_6\_\_:\_\_7\_\_: Strongly agree

After completing the CSII scale items, participants were shown the product description of one of the two products (order was randomized). As mentioned earlier, in online purchases, the intent to purchase a product comes before obtaining information and buying a product from a Web vendor. The initial intent for this study was given in the form of instructions, which were the following: "Imagine you are considering buying a new <TV OR pair of athletic shoes> because your current <one OR pair> broke. You are doing research online to determine which one to buy. You come across the following <TV OR pair of athletic shoes>." The product description page then included a picture of the product (see Figures 5.1 and 5.2 above), followed by a randomized order of the brand name, price, *Consumer Reports* score, customer reviews, and print advertisement.

After consumers saw the description for their first randomly chosen product, they were asked their purchase intent for the product as well as additional intention questions regarding how each variable (brand name, product quality, price, word-of-mouth, and advertisements) individually affected participants' purchase decision (see Table 5.4 for an example and Appendix

A for the full scale). The intention items were presented before the rest of the scale items so as to get participants' initial, gut intentions for the product and to make sure the rest of the scale items didn't bias their true purchase intent.

**Table 5.4 Intention Example Items**

---

I intend to purchase this <PRODUCT>.

Strongly disagree :\_\_1\_\_:\_\_2\_\_:\_\_3\_\_:\_\_4\_\_:\_\_5\_\_:\_\_6\_\_:\_\_7\_\_: Strongly agree

I am likely to purchase this <PRODUCT> based on the BRAND NAME alone.

Strongly disagree :\_\_1\_\_:\_\_2\_\_:\_\_3\_\_:\_\_4\_\_:\_\_5\_\_:\_\_6\_\_:\_\_7\_\_: Strongly agree

Following this, the remaining scale items (SET: costs, rewards; TPB: attitude, perceived norm, perceived behavioral control; Yoo & Donthu scale items) were randomly presented for each participant. The Social Exchange Theory items assessed were perceived costs and rewards for each product. These were in two different forms; 1) 7-point agreement scales, and 2) qualitative open end items (see Table 5.5 for an example and Appendix A for the full scale).

**Table 5.5 Social Exchange Theory Example Items**

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Cost Item Example

This <PRODUCT> is too expensive.

Strongly disagree :\_\_1\_\_:\_\_2\_\_:\_\_3\_\_:\_\_4\_\_:\_\_5\_\_:\_\_6\_\_:\_\_7\_\_: Strongly agree

Cost Qualitative Open End Example

What are the negatives of this <PRODUCT>?

Reward Item Example

I feel like this <PRODUCT> is “worth it” in terms of overall value.

Strongly disagree :\_\_1\_\_:\_\_2\_\_:\_\_3\_\_:\_\_4\_\_:\_\_5\_\_:\_\_6\_\_:\_\_7\_\_: Strongly agree

#### Reward Qualitative Open End Example

What positives do you see this <PRODUCT> having?

The Theory of Planned Behavior items included were attitude, perceived norm, and perceived behavioral control (see Table 5.6 for an example and Appendix A for the full scale). All of these items were on a 7-point scale: semantic differential scale for attitude, Likert scale for perceived norm and perceived behavioral control.

**Table 5.6 Theory of Planned Behavior Example Items**

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#### Attitude Item Example

The <PRODUCT> I just saw is

a bad value :\_\_1\_\_:\_\_2\_\_:\_\_3\_\_:\_\_4\_\_:\_\_5\_\_:\_\_6\_\_:\_\_7\_\_: a good value

#### Perceived Norm Item Example

Most people who are important to me would probably purchase this <PRODUCT>.

Strongly disagree :\_\_1\_\_:\_\_2\_\_:\_\_3\_\_:\_\_4\_\_:\_\_5\_\_:\_\_6\_\_:\_\_7\_\_: Strongly agree

#### Perceived Behavioral Control Item Example

My buying this <PRODUCT> is up to me.

true :\_\_1\_\_:\_\_2\_\_:\_\_3\_\_:\_\_4\_\_:\_\_5\_\_:\_\_6\_\_:\_\_7\_\_: false



The Yoo and Donthu items were tested exactly as was laid out in the authors' original paper (Yoo & Donthu, 2001) utilizing a 7-point Likert scale of strongly disagree to strongly agree (see Table 5.7 for an example and Appendix A for the full scale).

**Table 5.7 Yoo and Donthu Example Scale Items**

---

I consider myself to be loyal to <BRAND>.
Strongly disagree :__1__:__2__:__3__:__4__:__5__:__6__:__7__: Strongly agree
I am aware of <BRAND>.
Strongly disagree :__1__:__2__:__3__:__4__:__5__:__6__:__7__: Strongly agree

Once all of these items were completed for the first product, consumers were shown the description of the second product and repeated the intention and the rest of the scale items (SET, TPB, Yoo & Donthu) like they did for the first product.

The end of the survey included participants being thanked for their feedback and debriefed before being paid for their involvement in the study (see Appendix A).

## Statistical Analyses

Hierarchical multiple regressions were performed to assess which theory is the best predictor of overall purchase intent. For each product (TV and athletic shoes), three hierarchical multiple regression analyses were performed (one each for SET, TPB, and Yoo & Donthu model). The dependent variable for each was the overall purchase intent for the product. The following table (Table 5.8) shows the steps used for each regression on each of the theories.

**Table 5.8 Steps Used by Theory in Hierarchical Multiple Regressions**

---

Steps Used in Analysis of Each Theory for TV and Athletic Shoes			
<u>Theories</u>	<u>Step 1</u>	<u>Step 2</u>	<u>Step 3</u>

---

SET	Demographics (gender, age, HHI, ethnicity)	Cost and Rewards scale items were averaged for each participant.	CSII scale items were averaged for each participant.
TPB	Demographics (gender, age, HHI, ethnicity)	Attitude, Subjective Norms, and Perceived Behavioral Control scale items were averaged for each participant.	CSII scale items were averaged for each participant.
Yoo & Donthu	Demographics (gender, age, HHI, ethnicity)	Yoo & Donthu Brand Equity scale items were averaged for each participant.	CSII scale items were averaged for each participant.

The demographics of gender, age, household income, and ethnicity were chosen instead of using all demographic variables because they were hypothesized to most affect purchase intent. Gender, age and ethnicity are the most standard demographics and also could impact intent. Household income is an important demographic in that how much money someone makes will impact their likelihood to buy consumer durable goods which are more expensive. The scale items for each theory were averaged together to create one theory metric to standardize the theories since each had a different number of scale items and Yoo and Donthu (2001) suggest this is a valid way to analyze the data.

Analyses for each product were conducted to ensure no violations of normality, linearity, and homoscedasticity. Correlations between the predictor variables (gender, age, HHI, ethnicity, SET/TPB/Yoo & Donthu, and CSII) were examined to test for multicollinearity. For both the TV (see Tables 5.9, 5.13, and 5.17) and athletic shoes (see Tables 5.21, 5.25, and 5.29), all correlations were weak to moderate indicating no issue with multicollinearity. The highest

correlations of the predictor variables were related to CSII (highest correlation:  $r = .46$ ). See Appendix B for a breakdown of all of the demographics collected in Study 1.

For each product, the three hierarchical multiple regressions are assessed side by side and the model which explains the most variance ( $R^2$ )/has the largest change in explained variance from Step 1 ( $R^2$  change) and is the best predictor ( $\beta$ ) is the best predictor of purchase intent. The predictive power of the theories will be assessed by looking at both Step 2 (when the theory is initially introduced) and Step 3 (when the last variable CSII is introduced).

## **Results**

### ***TV***

In testing the prediction power of the three theories for purchase intent of the TV after controlling for demographics, all were significant, but the Theory of Planned Behavior ( $\beta = .59$ ) performed the best over Social Exchange Theory ( $\beta = .53$ ) and the Yoo and Donthu model ( $\beta = .54$ ). The results from each theory will be discussed in more depth now.

#### ***Social Exchange Theory***

Social Exchange Theory was a significant predictor of purchase intent for the TV ( $F(6, 143) = 21.78$ ;  $p < .001$ ) and fell in the middle of the three theories in terms of explained variance (48%), however SET had the lowest  $\beta$  compared to the other two theories (see Table 5.10). The first step of the hierarchical multiple regression had four demographic variables entered (gender, age, HHI, and ethnicity) which was statistically significant  $F(4, 145) = 3.08$ ;  $p < .05$ , however only 8% of the variance was explained. Within the variables entered, age was the only significant predictor ( $\beta = -.19$ ,  $p < .05$ ). In Step 2, SET was entered and the model now explained 39% of the total variance ( $F(5, 144) = 18.69$ ;  $p < .001$ ) and an additional 32% from Step 1 ( $R^2$  Change = .32;  $F(1, 144) = 74.86$ ;  $p < .001$ ). In Step 2, age ( $\beta = -.18$ ,  $p < .01$ ) and SET ( $\beta = .57$ ,  $p < .001$ ) were the only significant predictors. In Step 3, CSII was entered and again, the model was significant  $F(6, 143) = 21.78$ ;  $p < .001$  and explained 48% of the total variance and an additional 8% from Step 2 ( $R^2$  Change = .08;  $F(1, 143) = 22.96$ ;  $p < .01$ ). None of the demographic variables were significant in Step 3, but SET ( $\beta = .53$ ,  $p < .001$ ) and CSII ( $\beta = .32$ ,  $p < .001$ ) were found to be significant predictors of purchase intent for the TV.

**Table 5.9 SET Averaged Descriptive Statistics and Correlations for TV**

Variables	PI	Gender	Age	HHI	Ethnicity	SET	CSII
Purchase Intent	1						
Gender	-.09	1					
Age	-.19**	-.16*	1				
HHI	.18*	.11	-.19*	1			
Ethnicity	.05	-.06	.05	-.02	1		
SET	.58***	-.11	-.01	.05	-.01	1	
CSII	.43***	.07	-.36***	.23**	.11	.13	1
<i>Means</i>	3.83	1.50	44.15	3.77	1.86	4.42	3.41
<i>Std Deviations</i>	1.82	.50	15.11	2.09	1.60	.96	1.55

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 5.10 SET Averaged Hierarchical Multiple Regression Table for TV**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	β	t
<b>Step 1</b>	.28	.08*					
Gender				-.49	.29	-.14	-1.67
Age				-.02	.01	-.19*	-2.28
HHI				.14	.07	.16	1.92
Ethnicity				.06	.09	.05	.63
<b>Step 2</b>	.63	.39***	.32***				
Gender				-.25	.24	-.07	-1.05
Age				-.02	.01	-.18**	-2.68
HHI				.11	.06	.13	1.89
Ethnicity				.07	.07	.06	.93
SET				1.07	.12	.57***	8.65
<b>Step 3</b>	.69	.48***	.08***				
Gender				-.27	.22	-.08	-1.21
Age				-.01	.01	-.07	-1.07
HHI				.06	.05	.07	1.14

Ethnicity	.02	.07	.02	.30
SET	.99	.12	.53***	8.53
CSII	.38	.08	.32***	4.79

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

To assess the individual contributors of SET (i.e., costs and rewards), another hierarchical multiple regression was completed to see which variables within SET are significant in predicting purchase intent (see Tables 5.11 and 5.12). Both the reward items ( $\beta = .47$ ,  $p < .001$ ) and cost items ( $\beta = .17$ ,  $p < .05$ ) were found to be significant, but the reward items were better predictors of purchase intent within SET than the cost items.

**Table 5.11 SET Costs and Rewards Descriptive Statistics and Correlations for TV**

Variables	PI	Gender	Age	HHI	Ethnicity	Rewards	Costs	CSII
Purchase Intent	1							
Gender	-.09	1						
Age	-.19**	-.16*	1					
HHI	.18*	.11	-.19*	1				
Ethnicity	.05	-.06	.05	-.02	1			
Rewards	.62***	-.06	-.14*	.06	.06	1		
Costs	.21**	-.12	.22**	.00	-.12	.24**	1	
CSII	.43***	.07	-.36***	.23**	.11	.34***	-.26***	1
<i>Means</i>	3.83	1.50	44.15	3.77	1.86	4.48	4.32	3.41
<i>Std Deviations</i>	1.82	.50	15.11	2.09	1.60	1.21	1.19	1.55

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 5.12 SET Costs and Rewards Hierarchical Multiple Regression Table for TV**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	$\beta$	t
<b>Step 1</b>	.28	.08*					
Gender				-.49	.29	-.14	-1.67

Age				-.02	.01	-.19*	-2.28
HHI				.14	.07	.16	1.92
Ethnicity				.06	.09	.05	.63
<b>Step 2</b>	.65	.43***	.35***				
Gender				-.28	.24	-.08	-1.18
Age				-.01	.01	-.12	-1.75
HHI				.11	.06	.13*	2.01
Ethnicity				.03	.07	.03	.44
Rewards				.86	.10	.57***	8.52
Costs				.13	.11	.09	1.23
<b>Step 3</b>	.70	.48***	.06***				
Gender				-.28	.22	-.08	-1.25
Age				-.01	.01	-.06	-.85
HHI				.07	.06	.08	1.27
Ethnicity				.01	.07	.01	.15
Rewards				.70	.10	.47***	6.75
Costs				.26	.11	.17*	2.49
CSII				.33	.09	.29***	3.88

Note: Statistical Significance: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

### *Theory of Planned Behavior*

Theory of Planned Behavior was the best predictor of purchase intent for the TV and was a significant model overall ( $F(6, 143) = 25.56, p < .001$ ) (see Table 5.14). Step 1 again had the same four demographic variables entered and was significant ( $F(4, 145) = 3.08; p < .05$ ). Step 2 added TPB and explained 49% of the total variance ( $F(5, 144) = 27.78; p < .001$ ) and an additional 41% from Step 1 ( $R^2$  Change = .41;  $F(1, 144) = 116.77; p < .001$ ). Age ( $\beta = -.14, p < .05$ ) continued to be significant in Step 2, as was household income ( $\beta = .15, p < .05$ ) and TPB ( $\beta = .65, p < .001$ ). CSII was entered in Step 3 and explained a total of 52% of the variance ( $F(6,$

143) = 25.56,  $p < .001$ ); an additional 3% from Step 2 ( $R^2$  Change = .03;  $F(1, 143) = 7.82$ ;  $p < .01$ ). In Step 3, only TPB ( $\beta = .59$ ,  $p < .001$ ) and CSII ( $\beta = .19$ ,  $p < .01$ ) were significant.

**Table 5.13 TPB Averaged Descriptive Statistics and Correlations for TV**

Variables	PI	Gender	Age	HHI	Ethnicity	TPB	CSII
Purchase Intent	1						
Gender	-.09	1					
Age	-.19**	-.16*	1				
HHI	.18*	.11	-.19*	1			
Ethnicity	.05	-.06	.05	-.02	1		
TPB	.67***	-.08	-.06	.02	.06	1	
CSII	.43***	.07	-.36***	.23**	.11	.33***	1
<i>Means</i>	3.83	1.5	44.15	3.77	1.86	4.63	3.41
<i>Std Deviations</i>	1.82	.50	15.11	2.09	1.60	1.18	1.55

Note: Statistical Significance: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**Table 5.14 TPB Averaged Hierarchical Multiple Regression Table for TV**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	$\beta$	t
<b>Step 1</b>	.28	.08*					
Gender				-.49	.29	-.14	-1.67
Age				-.02	.01	-.19*	-2.28
HHI				.14	.07	.16	1.92
Ethnicity				.06	.09	.05	.63
<b>Step 2</b>	.70	.49***	.41***				
Gender				-.28	.22	-.08	-1.27
Age				-.02	.01	-.14*	-2.22
HHI				.13	.05	.15*	2.43
Ethnicity				.01	.07	.01	.16
TPB				1.00	.09	.65***	10.81
<b>Step 3</b>	.72	.52***	.03**				

Gender	-.30	.22	-.08	-1.39
Age	-.01	.01	-.08	-1.21
HHI	.10	.05	.12	1.91
Ethnicity	-.01	.07	-.01	-.19
TPB	.91	.10	.59***	9.52
CSII	.22	.08	.19**	2.78

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

Another hierarchical multiple regression was completed to see which items within TPB (i.e., attitudes, subjective norms, perceived behavioral control) are significant in predicting purchase intent (see Tables 5.15 and 5.16). The subjective norm items are the only ones within TPB that are significant ( $\beta = .74$ ,  $p < .001$ ).

**Table 5.15 TPB Attitudes, Subjective Norms (SN), and Perceived Behavioral Control (PBC) Descriptive Statistics and Correlations for TV**

Variables	PI	Gender	Age	HHI	Ethnicity	Attitude	SN	PBC	CSII
Purchase Intent	1								
Gender	-.09	1							
Age	-.19**	-.16*	1						
HHI	.18*	.11	-.19*	1					
Ethnicity	.05	-.06	.05	-.02	1				
Attitudes	.45***	-.06	.05	.00	.09	1			
SN	.78***	-.15*	-.21**	.05	.04	.60***	1		
PBC	.41***	.08	-.02	-.02	-.01	.37***	.49***	1	
CSII	.43***	.07	-.36***	.23**	.11	.20**	.39***	.26***	1
<i>Means</i>	3.83	1.50	44.15	3.77	1.86	4.77	4.11	5.05	3.41
<i>Std Deviations</i>	1.82	.50	15.11	2.09	1.60	1.47	1.55	1.10	1.55

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001



**Table 5.16 TPB Attitudes, Subjective Norms (SN), and Perceived Behavioral Control (PBC) Hierarchical Multiple Regression Table for TV**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	$\beta$	t
<b>Step 1</b>	.28	.08*					
Gender				-.49	.29	-.14	-1.67
Age				-.02	.01	-.19*	-2.28
HHI				.14	.07	.16	1.92
Ethnicity				.06	.09	.05	.63
<b>Step 2</b>	.80	.64***	.56***				
Gender				.03	.20	.01	.16
Age				.00	.01	.00	.02
HHI				.12	.05	.14**	2.60
Ethnicity				.03	.06	.02	.47
Attitudes				-.04	.08	-.03	-.52
SN				.91	.09	.77***	10.47
PBC				.09	.10	.05	.85
<b>Step 3</b>	.80	.65***	.01*				
Gender				.01	.19	.00	.06
Age				.00	.01	.03	.60
HHI				.10	.05	.11*	2.18
Ethnicity				.01	.06	.01	.18
Attitudes				-.04	.08	-.03	-.51
SN				.87	.09	.74***	9.89
PBC				.06	.10	.04	.60
CSII				.14	.07	.12*	2.07

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

### ***Yoo and Donthu Model***

The Yoo and Donthu model was also found to be a significant predictor of purchase intent for the TV ( $F(6, 143) = 18.31, p < .001$ ) and came in second to TPB in terms of  $\beta$ , but

explained the least amount of variance overall (see Table 5.18). Just like the other two theories, Step 1 had four demographic variables entered and was significant ( $F(4, 145) = 3.08$ ;  $p < .05$ ). Yoo and Donthu was added in Step 2 which was significant overall ( $F(5, 144) = 20.70$ ;  $p < .001$ ) and explained 42% of the variance (an additional 34% from Step 1;  $R^2$  Change = .34;  $F(1, 144) = 84.12$ ;  $p < .001$ ). Yoo and Donthu was the only significant predictor in Step 2 ( $\beta = .60$ ,  $p < .001$ ). Step 3 again added CSII which was significant overall ( $F(6, 143) = 18.31$ ,  $p < .001$ ) and explained an additional 2% of the variance ( $R^2$  Change = .02;  $F(1, 143) = 4.20$ ;  $p < .05$ ). Both Yoo and Donthu ( $\beta = .54$ ,  $p < .001$ ) and CSII ( $\beta = .16$ ,  $p < .05$ ) were significant in Step 3.

**Table 5.17 Yoo & Donthu Averaged Descriptive Statistics and Correlations for TV**

Variables	PI	Gender	Age	HHI	Ethnicity	Y&D	CSII
Purchase Intent	1						
Gender	-.09	1					
Age	-.19**	-.16*	1				
HHI	.18*	.11	-.19*	1			
Ethnicity	.05	-.06	.05	-.02	1		
Y&D	.63***	-.14*	-.10	.12	.14*	1	
CSII	.43***	.07	-.36***	.23**	.11	.45***	1
<i>Means</i>	3.83	1.5	44.15	3.77	1.86	4.17	3.41
<i>Std Deviations</i>	1.82	.50	15.11	2.09	1.60	1.25	1.55

Note: Statistical Significance: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**Table 5.18 Yoo & Donthu Averaged Hierarchical Multiple Regression Table for TV**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	$\beta$	t
<b>Step 1</b>	.28	.08*					
Gender				-.49	.29	-.14	-1.67
Age				-.02	.01	-.19*	-2.28
HHI				.14	.07	.16	1.92
Ethnicity				.06	.09	.05	.63

<b>Step 2</b>	.65	.42***	.34***							
Gender				-.14	.24	-.04	-.58			
Age				-.01	.01	-.12	-1.80			
HHI				.08	.06	.09	1.33			
Ethnicity				-.04	.07	-.03	-.51			
Yoo & Donthu				.88	.10	.60***	9.17			
<b>Step 3</b>	.66	.43***	.02*							
Gender				-.18	.24	-.05	-.74			
Age				-.01	.01	-.07	-1.06			
HHI				.06	.06	.07	1.02			
Ethnicity				-.05	.07	-.04	-.69			
Yoo & Donthu				.79	.11	.54***	7.51			
CSII				.18	.09	.16*	2.03			

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

The additional hierarchical multiple regression for the Yoo and Donthu model assessed the significance of the brand loyalty, perceived quality, brand awareness/associations, and overall brand equity items in predicting purchase intent (see Tables 5.19 and 5.20). None of the variables were individually significant in Step 3, however the overall brand equity items were significant in Step 2 ( $\beta = .32$ ,  $p < .05$ ).

**Table 5.19 Yoo and Donthu Brand Loyalty, Perceived Quality, Brand Awareness/Associations (AA), and Overall Brand Equity (OBE) Descriptive Statistics and Correlations for TV**

Variables	PI	Gend.	Age	HHI	Ethn.	Loyalty	Quality	AA	OBE	CSII
Purchase Intent	1									

Gender	-.09	1								
Age	-.19**	-.16*	1							
HHI	.18*	.11	-.19*	1						
Ethnicity	.05	-.06	.05	-.02	1					
Loyalty	.63***	-.10	-.14*	.13	.10	1				
Quality	.48***	-.11	.04	.05	.09	.65***	1			
AA	.40***	-.16	-.10	.11	.17*	.53***	.62***	1		
OBE	.64***	-.12	-.10	.09	.11	.89***	.71***	.55***	1	
CSII	.43***	.07	-.36***	.23**	.11	.51***	.29***	.21**	.50***	1
<i>Means</i>	3.83	1.50	44.15	3.77	1.86	3.42	4.61	4.72	3.82	3.41
<i>Std</i>	1.82	.50	15.11	2.09	1.60	1.63	1.52	1.15	1.64	1.55
<i>Deviations</i>										

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 5.20 Yoo and Donthu Brand Loyalty, Perceived Quality, Brand Awareness/Associations (AA), and Overall Brand Equity (OBE) Hierarchical Multiple Regression Table for TV**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	β	t
<b>Step 1</b>	.28	.08*					
Gender				-.49	.29	-.14	-1.67
Age				-.02	.01	-.19*	-2.28
HHI				.14	.07	.16	1.92
Ethnicity				.06	.09	.05	.63
<b>Step 2</b>	.67	.45***	.37***				
Gender				-.18	.23	-.05	-.77
Age				-.01	.01	-.12	-1.74
HHI				.08	.06	.09	1.40
Ethnicity				-.02	.07	-.02	-.27
Loyalty				.29	.16	.26	1.89
Quality				.09	.12	.07	.75

AA				.01	.13	.01	.08
OBE				.36	.17	.32*	2.16
<b>Step 3</b>	.67	.46***	.01				
Gender				-.20	.23	-.06	-.84
Age				-.01	.01	-.09	-1.25
HHI				.07	.06	.08	1.18
Ethnicity				-.03	.07	-.03	-.41
Loyalty				.27	.16	.24	1.71
Quality				.09	.12	.07	.75
AA				.03	.13	.02	.24
OBE				.32	.17	.29	1.93
CSII				.11	.09	.10	1.19

Note: Statistical Significance: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

### ***Athletic Shoes***

Just like with the TV, all three theories were significant, however, TPB ( $\beta = .70$ ) was the best predictor of the athletic shoes over SET ( $\beta = .58$ ) and the Yoo and Donthu model ( $\beta = .62$ ). The results for each of the three theories will be discussed now in the order of SET, TPB, and Yoo and Donthu.

### ***Social Exchange Theory***

Like the TV, SET was a significant predictor of purchase intent ( $F(6, 143) = 21.49$ ;  $p < .001$ ), but tied the Yoo and Donthu model in explaining the least amount of the variance (47%) for the athletic shoes (see Table 5.22), however SET had the lowest predictive power ( $\beta = .58$ ) of the three theories. The first step of the hierarchical multiple regression had four demographic variables entered (gender, age, HHI, and ethnicity) which was statistically significant  $F(4, 145) = 3.97$ ;  $p < .01$ , with 10% of the variance being explained. Within the demographics in Step 1, household income ( $\beta = .21$ ,  $p < .01$ ) and ethnicity ( $\beta = .17$ ,  $p < .05$ ) were significant predictors. In Step 2, SET was entered and the model now explained 46% of the total variance ( $F(5, 144) = 24.64$ ;  $p < .001$ ) and an additional 36% from Step 1 ( $R^2 \text{ Change} = .36$ ;  $F(1, 144) = 96.84$ ;  $p < .001$ ).

.001). In Step 2, household income ( $\beta = .17, p < .01$ ) and SET ( $\beta = .62, p < .001$ ) were significant predictors. CSII was entered in Step 3 and again, the model was significant ( $F(6, 143) = 21.49; p < .001$ ) and explained 47% of the total variance and an additional 1% from Step 2, which was not a significant change ( $R^2 \text{ Change} = .01; F(1, 143) = 3.55; p > .05$ ). Like Step 2, household income ( $\beta = .15, p < .05$ ) and SET ( $\beta = .58, p < .001$ ) were found to be significant predictors of purchase intent for the athletic shoes in Step 3.

**Table 5.21 SET Averaged Descriptive Statistics and Correlations for Athletic Shoes**

Variables	PI	Gender	Age	HHI	Ethnicity	SET	CSII
Purchase Intent	1						
Gender	.07	1					
Age	-.15*	-.16*	1				
HHI	.24**	.11	-.19*	1			
Ethnicity	.16*	-.06	.05	-.02	1		
SET	.65***	.11	-.08	.10	.13	1	
CSII	.38***	.07	-.36***	.23**	.11	.33***	1
<i>Means</i>	3.43	1.50	44.15	3.77	1.86	3.97	3.41
<i>Std Deviations</i>	1.99	.50	15.11	2.09	1.60	1.04	1.55

Note: Statistical Significance: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**Table 5.22 SET Averaged Hierarchical Multiple Regression Table for Athletic Shoes**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	$\beta$	t
<b>Step 1</b>	.31	.10**					
Gender				.17	.32	.04	.54
Age				-.02	.01	-.11	-1.41
HHI				.20	.08	.21**	2.65
Ethnicity				.21	.10	.17*	2.18
<b>Step 2</b>	.68	.46***	.36***				
Gender				-.06	.25	-.02	-.2.5
Age				-.01	.01	-.08	-1.21

HHI				.16	.06	.17**	2.66
Ethnicity				.11	.08	.09	1.40
SET				1.17	.12	.62***	9.84
<b>Step 3</b>	.69	.47***	.01				
Gender				-.05	.25	-.01	-.20
Age				.00	.01	-.03	-.51
HHI				.14	.06	.15*	2.33
Ethnicity				.09	.08	.08	1.21
SET				1.10	.12	.58***	8.89
CSII				.17	.09	.13	1.88

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

Just like the TV, a secondary hierarchical multiple regression was completed to see which items within SET (i.e., rewards and costs) are significant in predicting purchase intent (see Tables 5.23 and 5.24). The reward items ( $\beta = .67$ ,  $p < .001$ ) were found to be significant, but the cost items were not.

**Table 5.23 SET Costs and Rewards Descriptive Statistics and Correlations for Athletic Shoes**

Variables	PI	Gender	Age	HHI	Ethnicity	Rewards	Costs	CSII
Purchase Intent	1							
Gender	.07	1						
Age	-.15*	-.16*	1					
HHI	.24**	.11	-.19*	1				
Ethnicity	.16*	-.06	.05	-.02	1			
Rewards	.73***	.13	-.15*	.19**	.12	1		
Costs	.05	-.01	.08	-.15*	.05	.04	1	
CSII	.43***	.07	-.36***	.23**	.11	.39***	-.01	1
<i>Means</i>	3.43	1.50	44.15	3.77	1.86	3.99	3.95	3.41

*Std Deviations*    1.99       .50       15.11       2.09       1.60       1.45       1.32       1.55

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 5.24 SET Costs and Rewards Hierarchical Multiple Regression Table for Athletic Shoes**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	β	t
<b>Step 1</b>	.31	.10**					
Gender				.17	.32	.04	.54
Age				-.02	.01	-.11	-1.41
HHI				.20	.08	.21**	2.65
Ethnicity				.21	.10	.17*	2.18
<b>Step 2</b>	.74	.55***	.45***				
Gender				-.11	.23	-.03	-.49
Age				-.01	.01	-.04	-.76
HHI				.10	.06	.10	1.76
Ethnicity				.10	.07	.08	1.33
Rewards				.95	.08	.69***	11.76
Costs				.06	.09	.04	.72
<b>Step 3</b>	.74	.55***	.01				
Gender				-.10	.23	-.03	-.44
Age				.00	.01	-.02	-.31
HHI				.09	.06	.09	1.58
Ethnicity				.09	.07	.07	1.21
Rewards				.91	.09	.67***	10.69
Costs				.06	.09	.04	.69
CSII				.11	.08	.08	1.25

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

### *Theory of Planned Behavior*



As was already mentioned, TPB is the best predictor of purchase intent for the athletic shoes ( $\beta = .70$ ) and was significant overall ( $F(6, 143) = 34.82, p < .001$ ) (see Table 5.26). Just like the athletic shoes SET analysis, demographics (gender, age, household income, and ethnicity) were entered into Step 1, which was found to be significant ( $F(4, 145) = 3.97; p < .01$ ). In step 2, TPB was added and explained 59% of the total variance ( $F(5, 144) = 40.71; p < .001$ ) and an additional 49% from Step 1 ( $R^2$  Change = .49;  $F(1, 144) = 169.24; p < .001$ ). TPB ( $\beta = .73, p < .001$ ) was the only significant predictor in Step 2. CSII was entered in Step 3 and explained a total of 59% of the variance ( $F(6, 143) = 34.82, p < .001$ ) with no increase from Step 2. In Step 3, only TPB ( $\beta = .70, p < .001$ ) was significant.

**Table 5.25 TPB Averaged Descriptive Statistics and Correlations for Athletic Shoes**

Variables	PI	Gender	Age	HHI	Ethnicity	TPB	CSII
Purchase Intent	1						
Gender	.07	1					
Age	-.15*	-.16*	1				
HHI	.24**	.11	-.19*	1			
Ethnicity	.16*	-.06	.05	-.02	1		
TPB	.75***	.15*	-.18*	.20**	.08	1	
CSII	.38***	.07	-.36***	.23**	.11	.36***	1
<i>Means</i>	3.43	1.50	44.15	3.77	1.86	4.21	3.41
<i>Std Deviations</i>	1.99	.50	15.11	2.09	1.60	1.26	1.55

Note: Statistical Significance: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**Table 5.26 TPB Averaged Hierarchical Multiple Regression Table for Athletic Shoes**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	$\beta$	t
<b>Step 1</b>	.31	.10**					
Gender				.17	.32	.04	.54
Age				-.02	.01	-.11	-1.41
HHI				.20	.08	.21**	2.65
Ethnicity				.21	.10	.17*	2.18

<b>Step 2</b>	.77	.59***	.49***				
Gender				-.17	.22	-.04	-.79
Age				.00	.01	-.01	-.25
HHI				.09	.05	.09	1.66
Ethnicity				.13	.07	.10	1.89
TPB				1.15	.09	.73***	13.01
<b>Step 3</b>	.77	.59***	.01				
Gender				-.16	.22	-.04	-.73
Age				.00	.01	.02	.29
HHI				.08	.05	.08	1.42
Ethnicity				.11	.07	.09	1.70
TPB				1.11	.09	.70***	12.02
CSII				.13	.08	.10	1.68

Note: Statistical Significance: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Another hierarchical multiple regression was completed to see which items within TPB (i.e., attitudes, subjective norms, perceived behavioral control) are significant in predicting purchase intent (see Tables 5.27 and 5.28). The attitude ( $\beta = .21$ ,  $p < .01$ ) and subjective norm items ( $\beta = .59$ ,  $p < .001$ ) are the only ones within TPB that are significant.

**Table 5.27 TPB Attitudes, Subjective Norms (SN), and Perceived Behavioral Control (PBC) Descriptive Statistics and Correlations for Athletic Shoes**

Variables	PI	Gender	Age	HHI	Ethnicity	Attitude	SN	PBC	CSII
Purchase Intent	1								
Gender	.07	1							
Age	-.15*	-.16*	1						
HHI	.24**	.11	-.19*	1					
Ethnicity	.16*	-.06	.05	-.02	1				
Attitudes	.65***	.16*	-.16*	.19*	.11	1			

SN	.77***	.10	-.23**	.22**	.07	.69***	1		
PBC	.45***	.12	-.01	.05	-.05	.47***	.58***	1	
CSII	.38***	.07	-.36***	.23**	.11	.25***	.43***	.25***	1
<i>Means</i>	3.43	1.50	44.15	3.77	1.86	4.30	3.69	4.73	3.41
<i>Std Deviations</i>	1.99	.50	15.11	2.09	1.60	1.47	1.67	1.10	1.55

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 5.28 TPB Attitudes, Subjective Norms (SN), and Perceived Behavioral Control (PBC) Hierarchical Multiple Regression Table for Athletic Shoes**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	β	t
<b>Step 1</b>	.31	.10**					
Gender				.17	.32	.04	.54
Age				-.02	.01	-.11	-1.41
HHI				.20	.08	.21**	2.65
Ethnicity				.21	.10	.17*	2.18
<b>Step 2</b>	.79	.63***	.53***				
Gender				-.08	.21	-.02	-.36
Age				.00	.01	.03	.49
HHI				.07	.05	.07	1.32
Ethnicity				.12	.07	.10	1.83
Attitudes				.28	.10	.20**	2.83
SN				.73	.10	.61***	7.67
PBC				.01	.12	.00	.04
<b>Step 3</b>	.80	.63***	.00				
Gender				-.07	.21	-.02	-.35
Age				.01	.01	.04	.78
HHI				.06	.05	.06	1.17
Ethnicity				.11	.07	.09	1.67
Attitudes				.29	.10	.21**	2.92
SN				.70	.10	.59***	7.12

PBC	-.01	.12	.00	-.06
CSII	.08	.08	.06	1.03

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

### *Yoo and Donthu Model*

The Yoo and Donthu model, like with the TV, fell in the middle in terms of its predictive power for the athletic shoes ( $\beta = .62$ ) (see Table 5.30). The model was found to be a significant predictor overall ( $F(6, 143) = 21.19, p < .001$ ). Just like the other two theories, Step 1 had four demographic variables entered and was significant ( $F(4, 145) = 3.97; p < .01$ ). Step 2 included the Yoo and Donthu model was significant ( $F(5, 144) = 25.33; p < .001$ ) and explained 47% of the variance (an additional 37% from Step 1;  $R^2$  Change = .37;  $F(1, 144) = 99.92; p < .001$ ). The Yoo and Donthu model was the only significant predictor in Step 2 ( $\beta = .64, p < .001$ ). Again CSII was added in Step 3, which was significant overall ( $F(6, 143) = 21.19, p < .001$ ), but didn't explain any additional variance. Like Step 2, only Yoo and Donthu was significant in Step 3 ( $\beta = .62, p < .001$ ).

**Table 5.29 Yoo & Donthu Averaged Descriptive Statistics and Correlations for Athletic Shoes**

Variables	PI	Gender	Age	HHI	Ethnicity	Y&D	CSII
Purchase Intent	1						
Gender	.07	1					
Age	-.15*	-.16*	1				
HHI	.24**	.11	-.19*	1			
Ethnicity	.16*	-.06	.05	-.02	1		
Y&D	.67***	.10	-.16*	.26***	.10	1	
CSII	.38***	.07	-.36***	.23**	.11	.46***	1
<i>Means</i>	3.43	1.50	44.15	3.77	1.86	3.69	3.41
<i>Std Deviations</i>	1.99	.50	15.11	2.09	1.60	1.48	1.55

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 5.30 Yoo & Donthu Averaged Hierarchical Multiple Regression Table for Athletic Shoes**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	$\beta$	t
<b>Step 1</b>	.31	.10**					
Gender				.17	.32	.04	.54
Age				-.02	.01	-.11	-1.41
HHI				.20	.08	.21**	2.65
Ethnicity				.21	.10	.17*	2.18
<b>Step 2</b>	.68	.47***	.37***				
Gender				.00	.25	.00	.00
Age				-.01	.01	-.04	-.68
HHI				.06	.06	.07	1.02
Ethnicity				.13	.08	.10	1.64
Yoo & Donthu				.86	.09	.64***	10.00
<b>Step 3</b>	.69	.47***	.00				
Gender				.01	.25	.00	.02
Age				.00	.01	-.02	-.36
HHI				.06	.06	.06	.93
Ethnicity				.12	.08	.10	.13
Yoo & Donthu				.82	.09	.62***	8.81
CSII				.08	.09	.06	.87

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

The additional hierarchical multiple regression for the Yoo and Donthu model assessed the significance of the brand loyalty, perceived quality, brand awareness/associations, and overall brand equity items in predicting purchase intent (see Tables 5.31 and 5.32). None of the

variables were individually significant in Step 3, however the brand loyalty items were significant in Step 2 ( $\beta = .29$ ,  $p < .05$ ).

**Table 5.31 Yoo and Donthu Brand Loyalty, Perceived Quality, Brand Awareness/Associations (AA), and Overall Brand Equity (OBE) Descriptive Statistics and Correlations for Athletic Shoes**

Variables	PI	Gend.	Age	HHI	Ethn.	Loyalty	Quality	AA	OBE	CSII
Purchase Intent	1									
Gender	.07	1								
Age	-.15*	-.16*	1							
HHI	.24**	.11	-.19*	1						
Ethnicity	.16*	-.06	.05	-.02	1					
Loyalty	.66***	.10	-.14*	.26***	.11	1				
Quality	.49***	.11	-.06	.19**	.03	.56***	1			
AA	.54***	.09	-.16*	.22**	.07	.67***	.65***	1		
OBE	.67***	.09	-.16*	.23**	.11	.90***	.64***	.69***	1	
CSII	.38***	.07	-.36***	.23**	.11	.50***	.22**	.34***	.49***	1
<i>Means</i>	3.43	1.50	44.15	3.77	1.86	2.97	4.51	4.06	3.34	3.41
<i>Std Deviations</i>	1.99	.50	15.11	2.09	1.60	1.81	1.60	1.56	1.75	1.55

Note: Statistical Significance: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**Table 5.32 Yoo and Donthu Brand Loyalty, Perceived Quality, Brand Awareness/Associations (AA), and Overall Brand Equity (OBE) Hierarchical Multiple Regression Table for Athletic Shoes**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	$\beta$	t
<b>Step 1</b>	.31	.10**					
Gender				.17	.32	.04	.54
Age				-.02	.01	-.11	-1.41

HHI				.20	.08	.21**	2.65
Ethnicity				.21	.10	.17*	2.18
<b>Step 2</b>	.70	.49***	.39***				
Gender				.00	.25	.00	-.02
Age				-.01	.01	-.05	-.74
HHI				.06	.06	.06	.96
Ethnicity				.12	.08	.09	1.55
Loyalty				.31	.16	.29*	2.01
Quality				.12	.11	.10	1.11
AA				.08	.12	.06	.68
OBE				.31	.17	.27	1.82
<b>Step 3</b>	.70	.49***	.00				
Gender				.00	.25	.00	-.01
Age				-.01	.01	-.04	-.57
HHI				.06	.06	.06	.92
Ethnicity				.12	.08	.09	1.50
Loyalty				.30	.16	.28	1.92
Quality				.12	.11	.10	1.14
AA				.08	.12	.06	.68
OBE				.30	.17	.27	1.76
CSII				.04	.10	.03	.39

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

A summary table of all of the  $R^2$ ,  $R^2$  Change, and  $\beta$  values for the three theories for both the TV and athletic shoes are presented below (see Table 5.33). Looking at Step 2 for both the TV and athletic shoes, all three theories show a significant  $R^2$  change from Step 1, but TPB has the largest change and the highest  $\beta$ . In Step 3, all three theories had a significant  $R^2$  change from Step 2 for the TV, but none were significant for the athletic shoes. However, TPB again had the highest  $R^2$  and  $\beta$  for both products in Step 3.

**Table 5.33 Summary Table of  $R^2$  Changes for TV and Athletic Shoes**

	R <sup>2</sup>	R <sup>2</sup> Change	β
<b>TV</b>			
<i>Step 2</i>			
SET	.39***	.32***	.57***
TPB	.49***	.41***	.65***
Yoo & Donthu	.42***	.34***	.60***
<i>Step 3</i>			
SET	.48***	.08***	.53***
TPB	.52***	.03**	.59***
Yoo & Donthu	.43***	.02***	.54***
<b>Athletic Shoes</b>			
<i>Step 2</i>			
SET	.46***	.36***	.62***
TPB	.59***	.49***	.73***
Yoo & Donthu	.47***	.37***	.64***
<i>Step 3</i>			
SET	.47***	.01	.58***
TPB	.59***	.01	.70***
Yoo & Donthu	.47***	.00	.62***

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

## Discussion

The Yoo and Donthu model has been used more frequently to predict purchase intent (Londono, 2012) than Social Exchange Theory and Theory of Planned Behavior. Study 1 showed that TPB better predicted purchase intent for the TV and athletic shoes than both the Yoo and Donthu model and SET, thereby showing the strength of this theory in the consumer realm.

All of the results of Study 1 find that the models have better predictive power without the inclusion of CSII. For every multiple regression, the highest β is always in Step 2. Although the additional amount of variance explained by the inclusion of CSII is significant in most cases, it's



not nearly as big of a change as the inclusion of the theories. It seems that the theories on their own are more predictive than looking at how much they care about what others think. CSII was a significant change from Step 2 for all of the theories for the TV, but didn't provide a significant change for any of the theories for the athletic shoes. This makes it seem that consumers may care more about what others think when it comes to TVs rather than athletic shoes.

It was expected that the inclusion of CSII would be stronger/more beneficial in the SET and Yoo and Donthu models at predicting purchase intent. For both the TV and athletic shoes, the inclusion of CSII had the most positive impact on SET (explained an additional 8% for the TV and an additional 1% for the athletic shoes). CSII had the least effect on the Yoo and Donthu model by only explaining an additional 2% for the TV and nothing additional for the athletic shoes. Because TPB has a social influence aspect (subjective norms), it was expected that CSII would actually have the least effect on this model, however it fell in the middle with CSII explaining an additional 3% for the TV and only an additional 1% for the athletic shoes.

Looking at the individual variables within each theory and which are significant predictors, we can make assumptions about how consumers make purchasing decisions. In the case of both the TV and athletic shoes, the reward items from Social Exchange Theory are significant predictors of purchase intent. The cost items are significant for the TV, but at a lower level than the reward items. The cost items aren't significant for the athletic shoes. It can be conceived that consumers focus more on the rewards or benefits that buying the product would provide them than the associated costs or drawbacks of purchasing that product.

Within Theory of Planned Behavior, the only variable that is significant in predicting purchase intent for both the TV and athletic shoes is subjective norm. Subjective norms take into account what others might think or do in terms of purchasing the products. Since this is similar to CSII, the TV must be a more socially-judged product in that both subjective norms and CSII were significant for this product. Attitudes are also significant for the athletic shoes in predicting purchase intent, which could indicate that personal preferences play a larger role in athletic shoes than the TV.

None of the brand equity variables from the Yoo and Donthu model were significant predictors individually for the TV or athletic shoes. Considering the significance of the model

overall as well as when all of the Yoo and Donthu items are averaged together, it can be concluded that the variables work better in tandem than when being assessed individually.

## **Chapter 6 - Study 2**

Aaker (1996) suggests that including multiple product categories can enhance the validity of brand equity measures (p. 102). In the case of the current research, the model found to be the most predictive of purchase intent could be different than TPB, as was found in Study 1 for consumer durable goods, if other types of products were used (e.g., consumer non-durable goods). Study 2 was performed to assess if the most predictive model stays the same across product categories. If the most predictive model for Studies 1 and 2 differ, then that means how consumers view their relationships with brands are fundamentally different based on product category.

### **Participants**

The participants for this study were 150 consumers (based on the same power analysis criteria as Study 1) that belong to a sample company's panel. Just like Study 1, after the survey was programmed and tested, the sample company (same as Study 1) sent emails to their panel members to invite them to participate. The same quotas were enforced as in Study 1. Participants also received the same incentive (equivalent of \$5) for their involvement in this study.

### **Materials**

Two different consumer non-durable goods (one bar of soap and one tube of toothpaste; see Figures 6.1 and 6.2) were assessed in this study. These products were chosen based on their inclusion in Punj and Hillyer's (2004) study as well as these are products typically purchased at a grocery store, are consumed fairly often, don't require much product involvement, and are less expensive. These products were assessed through an online questionnaire.

#### **Figure 6.1 Picture of Soap**



**Figure 6.2 Picture of Toothpaste**



### ***Brand Names***

The brand names used in this study are Dial for the soap and Arm & Hammer for the toothpaste as they were viewed as having a medium brand value during pilot testing.

### ***Prices***

The prices associated with the two products are as follows: Soap = \$0.99; Toothpaste = \$4.59. These were chosen because they are the standard price for these actual products (listed at <http://www.walgreens.com>).

### ***Product Quality Ratings***

Product quality was given in terms of *Consumer Reports Magazine* ratings. The rating shown was one of medium product quality as to mimic an average product. However, it was found in pilot testing that the ratings were too low for participants to consider purchasing the products so the ratings were increased to 75 and 70 for the soap and toothpaste, respectively, for the current study (see Table 6.1).

**Table 6.1 Product Quality Wording for Soap and Toothpaste**

---

Soap

**Consumer Reports Score:** 75 out of 100 (Based on how well it kills germs and residue it leaves on skin)

Toothpaste

**Consumer Reports Score:** 70 out of 100 (Based on how well it protects enamel, length of time in which it protects teeth, how well it kills germs, and odor elimination performance)

***Word-of-Mouth Reviews***

Word-of-mouth was shown as customer reviews. These look like typical reviews one would see from other consumers on amazon.com, for example (see Table 6.2), which include an overall star rating and both positive and negative remarks about the product. Just like the TV and athletic shoes, the soap and toothpaste customer reviews were seen as too negative by several participants in the qualitative portion of pilot testing and therefore, the negative remarks were changed for the proposed research to make it slightly less negative. Just like Study 1, more reviews were added to be more realistic to what consumers would actually encounter when shopping online.

**Table 6.2 Word-of-Mouth/Reviews for Soap and Toothpaste**

---

Soap

**Average:** 4 stars out of 5

“My skin feels clean after using this soap, more so than other soaps. It just doesn’t really have a scent and I wish it did.”

“My mom bought Dial and I’ve continued throughout my life to buy it as well. It cleans well and keeps me smelling clean all day. My only complaint is that they’ve changed the shape from a rectangle to having a bit more hollowed out parts on the top and bottom.”

“Love this soap because it does a great job of sud-sing on my washcloth in my shower and best of all it rinses off clean.”

“Not really much to say since it’s soap, but it cleans well, disinfects, and seems to last longer than shower gels.”

### Toothpaste

**Average:** 4 stars out of 5

“I like the flavor and my teeth feel fresh for a long time. It just doesn’t whiten quite as well as I’d like.”

“Leaves my mouth feeling truly refreshed.”

“I love this toothpaste, especially the minty salty taste from the baking soda. Not for everyone, but for me, it’s the taste of clean.”

“After using this toothpaste, I’ve noticed my breath is nicer now and my teeth feel clean throughout the day. As far as the whitening, I’m sure it does somewhat whiten, but it’s not a huge difference or anything.”

### *Advertisements*

Print advertisements were created that included a picture of the product, the brand logo, a picture of a person (just their hands) using the product, and a slogan previously used by each respective brand (see Figures 6.3 and 6.4). The reason a real ad was not used for each product is that there are too many variables to control for. Based on the pilot study, a couple of changes were made to the advertisements. A larger picture of the toothpaste was included and the soap ad’s slogan was changed from the pilot testing (“Aren’t you glad you used Dial? Don’t you wish everybody did?”) to the current study because it included a social component that wasn’t there for the other products’ slogans and could have created a bias. The slogan used for the current study was also one that was used previously by the brand.

### **Figure 6.3 Print Advertisement for Soap**



**Figure 6.4 Print Advertisement for Toothpaste**



### **Measures and Procedure**

The measures and procedure were identical to Study 1 except for the products being assessed (soap and toothpaste). The order of the products was also randomized for each participant.

## Statistical Analyses

The same analyses from Study 1 were used in Study 2 except for the products being soap and toothpaste instead of TV and athletic shoes. The same steps in each theory's hierarchical multiple regression also remained the same.

Analyses for each product were conducted to ensure no violations of normality, linearity, and homoscedasticity. Correlations between the predictor variables (gender, age, HHI, ethnicity, SET/TPB/Yoo & Donthu, and CSII) were examined to test for multicollinearity. For both the soap (see Tables 6.3, 6.7, and 6.11) and toothpaste (see Tables 6.15, 6.19, and 6.23), most correlations were weak to moderate indicating no issue with multicollinearity. See Appendix B for a breakdown of all of the demographics collected in Study 2.

## Results

### *Soap*

All three theories were significant predictors of purchase intent for the soap after controlling for demographics. Like in Study 1, TPB ( $\beta = .60$ ) was the strongest predictor of purchase intent for the soap over SET ( $\beta = .52$ ) and the Yoo and Donthu model ( $\beta = .58$ ) and also explained the most variance (TPB= 47% vs. Yoo & Donthu= 43% and SET= 40%). The results from each theory will be discussed in more depth now.

### *Social Exchange Theory*

Social Exchange Theory was the least predictive theory for soap but was still significant ( $F(6, 143) = 15.63$ ;  $p < .001$ ); it explained the least amount of the variance (40%) compared to the other two theories (see Table 6.4). The first step of the hierarchical multiple regression had four demographic variables entered (gender, age, HHI, and ethnicity) which was statistically significant  $F(4, 145) = 2.57$ ;  $p < .05$ , however only 7% of the variance was explained. Within the variables entered, gender ( $\beta = -.19$ ,  $p < .05$ ) and household income ( $\beta = .17$ ,  $p < .05$ ) were significant predictors. In Step 2, SET was entered and the model now explained 35% of the total variance ( $F(5, 144) = 15.75$ ;  $p < .001$ ) and an additional 29% from Step 1 ( $R^2$  Change = .29;  $F(1, 144) = 64.04$ ;  $p < .001$ ). In Step 2, gender ( $\beta = -.23$ ,  $p < .01$ ) and SET ( $\beta = .54$ ,  $p < .001$ ) were significant predictors. In Step 3, CSII was entered and again, the model was significant  $F(6, 143)$

= 15.63;  $p < .001$  and explained an additional 4% of the variance from Step 2 ( $R^2$  Change = .04;  $F(1, 143) = 10.05$ ;  $p < .01$ ). Gender ( $\beta = -.21$ ,  $p < .01$ ) was again significant in Step 3 as was SET ( $\beta = .52$ ,  $p < .001$ ) and CSII ( $\beta = .23$ ,  $p < .01$ ).

**Table 6.3 SET Averaged Descriptive Statistics and Correlations for Soap**

Variables	PI	Gender	Age	HHI	Ethnicity	SET	CSII
Purchase Intent	1						
Gender	-.15*	1					
Age	-.06	-.27***	1				
HHI	.16*	.14*	-.12	1			
Ethnicity	.11	-.04	-.23**	.17*	1		
SET	.54***	.06	.04	.12	.06	1	
CSII	.29***	.06	-.42***	.18*	.18*	.09	1
<i>Means</i>	4.63	1.51	44.50	3.85	1.70	4.92	3.38
<i>Std Deviations</i>	1.71	.50	14.76	1.85	1.36	1.00	1.54

Note: Statistical Significance: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**Table 6.4 SET Averaged Hierarchical Multiple Regression Table for Soap**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	$\beta$	t
<b>Step 1</b>	.26	.07*					
Gender				-.65	.29	-.19*	-2.26
Age				-.01	.01	-.08	-.92
HHI				.15	.08	.17*	2.01
Ethnicity				.07	.11	.06	.69
<b>Step 2</b>	.60	.35***	.29***				
Gender				-.78	.24	-.23**	-3.22
Age				-.01	.01	-.12	-1.72
HHI				.10	.06	.11	1.52
Ethnicity				.03	.09	.03	.35
SET				.92	.12	.54***	8.00



<b>Step 3</b>	.63	.40***	.04**				
Gender				-.72	.23	-.21**	-3.10
Age				.00	.01	-.03	-.39
HHI				.07	.06	.08	1.13
Ethnicity				.02	.09	.01	.18
SET				.89	.11	.52***	7.90
CSII				.26	.08	.23**	3.17

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

To assess the individual contributors of SET (i.e., costs and rewards), another hierarchical multiple regression was completed to see which variables within SET are significant in predicting purchase intent (see Tables 6.5 and 6.6). The reward items ( $\beta = .69$ ,  $p < .001$ ) were found to be significant, but the cost items were not.

**Table 6.5 SET Costs and Rewards Descriptive Statistics and Correlations for Soap**

Variables	PI	Gender	Age	HHI	Ethnicity	Rewards	Costs	CSII
Purchase Intent	1							
Gender	-.15*	1						
Age	-.06	-.27***	1					
HHI	.16*	.14*	-.12	1				
Ethnicity	.11	-.04	-.23**	.17*	1			
Rewards	.69***	-.01	-.09	.15*	.15*	1		
Costs	-.02	.13	.23**	.01	-.13	.14*	1	
CSII	.29***	.06	-.42***	.18*	.18*	.37***	-.44***	1
<i>Means</i>	4.63	1.51	44.50	3.85	1.70	4.87	5.00	3.38
<i>Std Deviations</i>	1.71	.50	14.76	1.85	1.36	1.32	1.28	1.54

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 6.6 SET Costs and Rewards Hierarchical Multiple Regression Table for Soap**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	$\beta$	t
<b>Step 1</b>	.26	.07*					
Gender				-.65	.29	-.19*	-2.26
Age				-.01	.01	-.08	-.92
HHI				.15	.08	.17*	2.01
Ethnicity				.07	.11	.06	.69
<b>Step 2</b>	.70	.50***	.43***				
Gender				-.50	.22	-.15*	-2.31
Age				.00	.01	-.01	-.16
HHI				.08	.06	.08	1.33
Ethnicity				-.03	.08	-.02	-.38
Rewards				.88	.08	.68***	11.03
Costs				-.12	.09	-.09	-1.46
<b>Step 3</b>	.70	.50***	.00				
Gender				-.50	.22	-.15*	-2.29
Age				.00	.01	-.02	-.22
HHI				.08	.06	.08	1.34
Ethnicity				-.03	.08	-.02	-.38
Rewards				.89	.09	.69***	9.82
Costs				-.13	.10	-.10	-1.37
CSII				-.02	.09	-.02	-.21

Note: Statistical Significance: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

### ***Theory of Planned Behavior***

Theory of Planned Behavior was the most significant predictor of purchase intent for the soap ( $F(6, 143) = 21.01$ ,  $p < .001$ ) and explained the most variance (47%) (see Table 6.8). Step 1 again had the same four demographic variables entered and was significant ( $F(4, 145) = 2.57$ ;  $p < .05$ ). Step 2 added TPB and explained 45% of the total variance ( $F(5, 144) = 23.48$ ;  $p < .001$ ) and an additional 38% from Step 1 ( $R^2$  Change = .38;  $F(1, 144) = 100.14$ ;  $p < .001$ ). Gender ( $\beta = -.16$ ,  $p < .05$ ) continued to be significant in Step 2, as was TPB ( $\beta = .63$ ,  $p < .001$ ). CSII was

entered in Step 3 and explained a total of 47% of the variance ( $F(6, 143) = 21.01, p < .001$ ); an additional 2% from Step 2 ( $R^2 \text{ Change} = .02; F(1, 143) = 5.22; p < .05$ ). In Step 3, gender ( $\beta = -.15, p < .05$ ), TPB ( $\beta = .60, p < .001$ ) and CSII ( $\beta = .19, p < .01$ ) were significant.

**Table 6.7 TPB Averaged Descriptive Statistics and Correlations for Soap**

Variables	PI	Gender	Age	HHI	Ethnicity	TPB	CSII
Purchase Intent	1						
Gender	-.15*	1					
Age	-.06	-.27***	1				
HHI	.16*	.14*	-.12	1			
Ethnicity	.11	-.04	-.23**	.17*	1		
TPB	.65***	-.03	-.05	.16*	.10	1	
CSII	.29***	.06	-.42***	.18*	.18*	.22**	1
<i>Means</i>	4.63	1.51	44.50	3.85	1.70	5.26	3.38
<i>Std Deviations</i>	1.71	.50	14.76	1.85	1.36	1.07	1.54

Note: Statistical Significance: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**Table 6.8 TPB Averaged Hierarchical Multiple Regression Table for Soap**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	$\beta$	T
<b>Step 1</b>	.26	.07*					
Gender				-.65	.29	-.19*	-2.26
Age				-.01	.01	-.08	-.92
HHI				.15	.08	.17*	2.01
Ethnicity				.07	.11	.06	.69
<b>Step 2</b>	.67	.45***	.38***				
Gender				-.54	.22	-.16*	-2.43
Age				-.01	.01	-.06	-.92
HHI				.07	.06	.07	1.09
Ethnicity				.02	.08	.02	.26
TPB				1.01	.10	.63***	10.01

<b>Step 3</b>	.69	.47***	.02**				
Gender				-.52	.22	-.15*	-2.34
Age				.00	.01	.00	.03
HHI				.05	.06	.05	.84
Ethnicity				.01	.08	.01	.14
TPB				.96	.10	.60***	9.51
CSII				.18	.08	.16*	2.28

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

Another hierarchical multiple regression was completed to see which items within TPB (i.e., attitudes, subjective norms, perceived behavioral control) are significant in predicting purchase intent (see Tables 6.9 and 6.10). The subjective norm items are the only ones within TPB that are significant ( $\beta = .64$ ,  $p < .001$ ).

**Table 6.9 TPB Attitudes, Subjective Norms (SN), and Perceived Behavioral Control (PBC)**  
**Descriptive Statistics and Correlations for Soap**

Variables	PI	Gender	Age	HHI	Ethnicity	Attitude	SN	PBC	CSII
Purchase Intent	1								
Gender	-.15*	1							
Age	-.06	-.27***	1						
HHI	.16*	.14*	-.12	1					
Ethnicity	.11	-.04	-.23**	.17*	1				
Attitudes	.47***	-.03	.06	.10	-.01	1			
SN	.72***	-.05	-.12	.18*	.22**	.59***	1		
PBC	.44***	.05	-.01	.13	.05	.49***	.53***	1	
CSII	.29***	.06	-.42***	.18*	.18*	.07	.35***	.16*	1
<i>Means</i>	4.63	1.51	44.50	3.85	1.70	5.54	4.74	5.40	3.38
<i>Std Deviations</i>	1.71	.50	14.76	1.85	1.36	1.26	1.43	1.05	1.54

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 6.10 TPB Attitudes, Subjective Norms (SN), and Perceived Behavioral Control (PBC) Hierarchical Multiple Regression Table for Soap**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	$\beta$	t
<b>Step 1</b>	.26	.07*					
Gender				-.65	.29	-.19*	-2.26
Age				-.01	.01	-.08	-.92
HHI				.15	.08	.17*	2.01
Ethnicity				.07	.11	.06	.69
<b>Step 2</b>	.74	.55***	.48***				
Gender				-.48	.20	-.14*	-2.34
Age				.00	.01	-.03	-.43
HHI				.05	.05	.06	.94
Ethnicity				-.08	.08	-.06	-1.00
Attitudes				.03	.10	.02	.32
SN				.79	.09	.66***	8.40
PBC				.13	.11	.08	1.19
<b>Step 3</b>	.74	.55***	.00				
Gender				-.47	.20	-.14*	-2.29
Age				.00	.01	.00	-.03
HHI				.05	.05	.05	.83
Ethnicity				-.08	.08	-.06	-.99
Attitudes				.05	.10	.04	.47
SN				.76	.10	.64***	7.72
PBC				.13	.11	.08	1.15
CSII				.07	.07	.07	.97

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

*Yoo and Donthu Model*

The Yoo and Donthu model was also found to be a significant predictor of purchase intent for the soap ( $F(6, 143) = 18.21, p < .001$ ) (see Table 6.12). Just like the other two theories, Step 1 had four demographic variables entered and was significant ( $F(4, 145) = 2.57; p < .05$ ). Yoo and Donthu was added in Step 2 which was significant overall ( $F(5, 144) = 20.91; p < .001$ ) and explained 42% of the variance (an additional 36% from Step 1;  $R^2$  Change = .36;  $F(1, 144) = 88.14; p < .001$ ). Yoo and Donthu was the only significant predictor in Step 2 ( $\beta = .61, p < .001$ ). Step 3 again added CSII which was significant overall ( $F(6, 143) = 18.21, p < .001$ ) and explained an additional 1% of the variance, but was not a significant change. Yoo and Donthu was the only significant predictor in Step 3 ( $\beta = .58, p < .001$ ).

**Table 6.11 Yoo & Donthu Averaged Descriptive Statistics and Correlations for Soap**

Variables	PI	Gender	Age	HHI	Ethnicity	Y&D	CSII
Purchase Intent	1						
Gender	-.15*	1					
Age	-.06	-.27***	1				
HHI	.16*	.14*	-.12	1			
Ethnicity	.11	-.04	-.23**	.17*	1		
Y&D	.63***	-.10	.01	.16*	.14*	1	
CSII	.29***	.06	-.42***	.18*	.18*	.25*	1
<i>Means</i>	4.63	1.51	44.50	3.85	1.70	4.86	3.38
<i>Std Deviations</i>	1.71	.50	14.76	1.85	1.36	1.19	1.54

Note: Statistical Significance: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**Table 6.12 Yoo & Donthu Averaged Hierarchical Multiple Regression Table for Soap**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	B	t
<b>Step 1</b>	.26	.07*					
Gender				-.65	.29	-.19*	-2.26
Age				-.01	.01	-.08	-.92
HHI				.15	.08	.17*	2.01
Ethnicity				.07	.11	.06	.69

<b>Step 2</b>	.65	.42***	.36***							
Gender				-.44	.23	-.13	-1.91			
Age				-.01	.01	-.10	-1.46			
HHI				.06	.06	.07	1.01			
Ethnicity				-.02	.08	-.02	-.24			
Yoo & Donthu				.88	.09	.61***	9.39			
<b>Step 3</b>	.66	.43***	.01							
Gender				-.42	.23	-.12	-1.85			
Age				-.01	.01	-.05	-.63			
HHI				.05	.06	.05	.82			
Ethnicity				-.03	.08	-.02	-.30			
Yoo & Donthu				.83	.10	.58***	8.71			
CSII				.14	.08	.13	1.77			

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

The additional hierarchical multiple regression for the Yoo and Donthu model assessed the significance of the brand loyalty, perceived quality, brand awareness/associations, and overall brand equity items in predicting purchase intent (see Tables 6.13 and 6.14). The loyalty items were the only significant items ( $\beta = .55$ ,  $p < .001$ ).

**Table 6.13 Yoo and Donthu Brand Loyalty, Perceived Quality, Brand Awareness/Associations (AA), and Overall Brand Equity (OBE) Descriptive Statistics and Correlations for Soap**

Variables	PI	Gend.	Age	HHI	Ethn.	Loyalty	Quality	AA	OBE	CSII
Purchase Intent	1									
Gender	-.15*	1								

Age	-.06	-.27***	1							
HHI	.16*	.14*	-.12	1						
Ethnicity	.11	-.04	-.23**	.17*	1					
Loyalty	.71***	-.15*	-.02	.10	.16*	1				
Quality	.44***	-.09	.10	.14*	.08	.59***	1			
AA	.29***	.03	-.01	.15*	.05	.40***	.68***	1		
OBE	.65***	-.11	.02	.16*	.17*	.87***	.70***	.51***	1	
CSII	.29***	.06	-.42***	.18*	.18*	.35***	.10	-.02	.35***	1
<i>Means</i>	4.63	1.51	44.50	3.85	1.70	4.13	5.31	5.42	4.48	3.38
<i>Std</i>	1.71	.50	14.76	1.85	1.36	1.74	1.35	1.09	1.58	1.54
<i>Deviations</i>										

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 6.14 Yoo and Donthu Brand Loyalty, Perceived Quality, Brand Awareness/Associations (AA), and Overall Brand Equity (OBE) Hierarchical Multiple Regression Table for Soap**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	β	t
<b>Step 1</b>	.26	.07*					
Gender				-.65	.29	-.19*	-2.26
Age				-.01	.01	-.08	-.92
HHI				.15	.08	.17*	2.01
Ethnicity				.07	.11	.06	.69
<b>Step 2</b>	.72	.52***	.45***				
Gender				-.27	.21	-.08	-1.25
Age				-.01	.01	-.07	-1.17
HHI				.08	.06	.09	1.44
Ethnicity				-.05	.08	-.04	-.66
Loyalty				.54	.12	.55***	4.50
Quality				.02	.12	.01	.12
AA				-.06	.13	-.04	-.44



OBE				.18	.15	.17	1.23
<b>Step 3</b>	.72	.52***	.00				
Gender				-.27	.21	-.08	-1.25
Age				-.01	.01	-.07	-1.00
HHI				.08	.06	.09	1.41
Ethnicity				-.05	.08	-.04	-.65
Loyalty				.54	.12	.55***	4.48
Quality				.02	.12	.01	.13
AA				-.05	.13	-.03	-.40
OBE				.18	.15	.17	1.16
CSII				.01	.08	.01	.11

Note: Statistical Significance: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

### ***Toothpaste***

Just like with the soap, all three theories were significant. TPB ( $\beta = .63$ ) was the best predictor of the toothpaste over SET ( $\beta = .49$ ) and the Yoo and Donthu model ( $\beta = .54$ ) for both  $\beta$  and variance explained. The results for each of the three theories will be discussed now in the order of SET, TPB, and Yoo and Donthu.

#### ***Social Exchange Theory***

SET was a significant predictor of purchase intent ( $F(6, 143) = 26.74$ ;  $p < .001$ ), but explained the least amount of the variance (53%) compared to the other two theories for the toothpaste (see Table 6.16). The first step of the hierarchical multiple regression had four demographic variables entered (gender, age, HHI, and ethnicity) which was statistically significant  $F(4, 145) = 3.07$ ;  $p < .05$ , with 8% of the variance being explained. Within the demographics in Step 1, age was the only significant predictor ( $\beta = -.18$ ,  $p < .05$ ). In Step 2, SET was entered and the model now explained 42% of the total variance ( $F(5, 144) = 20.41$ ;  $p < .001$ ) and an additional 34% from Step 1 ( $R^2 \text{ Change} = .34$ ;  $F(1, 144) = 82.85$ ;  $p < .001$ ). In Step 2, gender ( $\beta = -.14$ ,  $p < .05$ ), age ( $\beta = -.14$ ,  $p < .05$ ), and SET ( $\beta = .58$ ,  $p < .001$ ) were significant predictors. CSII was entered in Step 3 and again, the model was significant ( $F(6, 143) = 26.74$ ;  $p$

< .001) and explained 53% of the total variance and an additional 11% from Step 2 ( $R^2$  Change = .11;  $F(1, 143) = 34.60$ ;  $p < .001$ ). SET ( $\beta = .49$ ,  $p < .001$ ) and CSII ( $\beta = .39$ ,  $p < .001$ ) were found to be significant predictors of purchase intent for the toothpaste in Step 3.

**Table 6.15 SET Averaged Descriptive Statistics and Correlations for Toothpaste**

Variables	PI	Gender	Age	HHI	Ethnicity	SET	CSII
Purchase Intent	1						
Gender	-.07	1					
Age	-.19*	-.27***	1				
HHI	.13	.14*	-.12	1			
Ethnicity	.18*	-.04	-.23**	.17*	1		
SET	.60***	.04	-.08	.05	.04	1	
CSII	.53***	.06	-.42***	.18*	.18*	.27***	1
<i>Means</i>	4.08	1.51	44.50	3.85	1.70	4.40	3.38
<i>Std Deviations</i>	1.71	.50	14.76	1.85	1.36	1.02	1.54

Note: Statistical Significance: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**Table 6.16 SET Averaged Hierarchical Multiple Regression Table for Toothpaste**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	$\beta$	t
<b>Step 1</b>	.28	.08*					
Gender				-.44	.29	-.13	-1.53
Age				-.02	.01	-.18*	-2.11
HHI				.10	.08	.10	1.27
Ethnicity				.15	.11	.12	1.45
<b>Step 2</b>	.64	.42***	.34***				
Gender				-.48	.23	-.14*	-2.09
Age				-.02	.01	-.14*	-2.08
HHI				.07	.06	.08	1.23
Ethnicity				.14	.08	.11	1.68
SET				.97	.11	.58***	9.10

<b>Step 3</b>	.73	.53***	.11***				
Gender				-.39	.21	-.12	-1.91
Age				.00	.01	.01	.13
HHI				.03	.06	.03	.55
Ethnicity				.11	.08	.09	1.49
SET				.82	.10	.49***	8.24
CSII				.43	.07	.39***	5.88

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

Just like the soap, a secondary hierarchical multiple regression was completed to see which items within SET (i.e., rewards and costs) are significant in predicting purchase intent (see Tables 6.17 and 6.18). The reward items ( $\beta = .62$ ,  $p < .001$ ) were found to be significant, but the cost items were not.

**Table 6.17 SET Costs and Rewards Descriptive Statistics and Correlations for Toothpaste**

Variables	PI	Gender	Age	HHI	Ethnicity	Rewards	Costs	CSII
Purchase Intent	1							
Gender	-.07	1						
Age	-.19*	-.27***	1					
HHI	.13	.14*	-.12	1				
Ethnicity	.18*	-.04	-.23**	.17*	1			
Rewards	.73***	-.03	-.15*	.15*	.11	1		
Costs	.06	.14*	.08	-.13	-.11	.23**	1	
CSII	.53***	.06	-.42***	.18*	.18*	.50***	-.25***	1
<i>Means</i>	4.08	1.51	44.50	3.85	1.70	4.43	4.34	3.38
<i>Std Deviations</i>	1.71	.50	14.76	1.85	1.36	1.29	1.27	1.54

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 6.18 SET Costs and Rewards Hierarchical Multiple Regression Table for Toothpaste**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	$\beta$	t
<b>Step 1</b>	.28	.08*					
Gender				-.44	.29	-.13	-1.53
Age				-.02	.01	-.18*	-2.11
HHI				.10	.08	.10	1.27
Ethnicity				.15	.11	.12	1.45
<b>Step 2</b>	.75	.56***	.48***				
Gender				-.18	.20	-.05	-.88
Age				-.01	.01	-.06	-1.04
HHI				.00	.05	.00	-.04
Ethnicity				.10	.07	.08	1.30
Rewards				.97	.08	.73***	12.24
Costs				-.11	.08	-.08	-1.41
<b>Step 3</b>	.76	.58***	.02**				
Gender				-.21	.20	-.06	-1.08
Age				.00	.01	.00	-.03
HHI				-.01	.05	-.01	-.11
Ethnicity				.09	.07	.07	1.29
Rewards				.81	.09	.62***	8.72
Costs				-.01	.09	-.01	-.15
CSII				.24	.08	.22**	2.86

Note: Statistical Significance: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

### ***Theory of Planned Behavior***

TPB is the best predictor of purchase intent for the toothpaste ( $\beta = .62$ ) and was significant overall ( $F(6, 143) = 36.96, p < .001$ ) (see Table 6.20). Just like the toothpaste SET analysis, demographics (gender, age, household income, and ethnicity) were entered into Step 1, which was found to be significant ( $F(4, 145) = 3.07; p < .05$ ). In step 2, TPB was added and explained 57% of the total variance ( $F(5, 144) = 37.45; p < .001$ ) and an additional 49% from Step 1 ( $R^2 \text{ Change} = .49; F(1, 144) = 161.42; p < .001$ ). TPB ( $\beta = .72, p < .001$ ) and ethnicity ( $\beta$

= .14,  $p < .05$ ) were significant predictors in Step 2. CSII was entered in Step 3 and explained a total of 61% of the variance ( $F(6, 143) = 36.96, p < .001$ ) and an additional 4% from Step 2 ( $R^2$  Change = .04;  $F(1, 143) = 15.58; p < .001$ ). In Step 3, ethnicity ( $\beta = .12, p < .05$ ), TPB ( $\beta = .62, p < .001$ ), and CSII ( $\beta = .25, p < .001$ ) were significant.

**Table 6.19 TPB Averaged Descriptive Statistics and Correlations for Toothpaste**

Variables	PI	Gender	Age	HHI	Ethnicity	TPB	CSII
Purchase Intent	1						
Gender	-.07	1					
Age	-.19*	-.27***	1				
HHI	.13	.14*	-.12	1			
Ethnicity	.18*	-.04	-.23**	.17*	1		
TPB	.73***	-.04	-.15*	.16*	.04	1	
CSII	.53***	.06	-.42***	.18*	.18*	.45***	1
<i>Means</i>	4.08	1.51	44.50	3.85	1.70	4.79	3.38
<i>Std Deviations</i>	1.71	.50	14.76	1.85	1.36	1.09	1.54

Note: Statistical Significance: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**Table 6.20 TPB Averaged Hierarchical Multiple Regression Table for Toothpaste**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	$\beta$	t
<b>Step 1</b>	.28	.08*					
Gender				-.44	.29	-.13	-1.53
Age				-.02	.01	-.18*	-2.11
HHI				.10	.08	.10	1.27
Ethnicity				.15	.11	.12	1.45
<b>Step 2</b>	.75	.57***	.49***				
Gender				-.19	.20	-.06	-.95
Age				-.01	.01	-.07	-1.09
HHI				-.01	.05	-.01	-.20
Ethnicity				.17	.07	.14*	2.40

TPB				1.12	.09	.72***	12.71
<b>Step 3</b>	.78	.61***	.04***				
Gender				-.17	.19	-.05	-.90
Age				.00	.01	.02	.35
HHI				-.03	.05	-.03	-.54
Ethnicity				.15	.07	.12*	2.19
TPB				.97	.09	.62***	10.52
CSII				.28	.07	.25***	3.95

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

Another hierarchical multiple regression was completed to see which items within TPB (i.e., attitudes, subjective norms, perceived behavioral control) are significant in predicting purchase intent (see Tables 6.21 and 6.22). The subjective norm items ( $\beta = .57$ ,  $p < .001$ ) are the only ones within TPB that are significant.

**Table 6.21 TPB Attitudes, Subjective Norms (SN), and Perceived Behavioral Control (PBC) Descriptive Statistics and Correlations for Toothpaste**

Variables	PI	Gender	Age	HHI	Ethnicity	Attitude	SN	PBC	CSII
Purchase Intent	1								
Gender	-.07	1							
Age	-.19*	-.27***	1						
HHI	.13	.14*	-.12	1					
Ethnicity	.18*	-.04	-.23**	.17*	1				
Attitudes	.58***	-.11	-.05	.11	-.01	1			
SN	.78***	-.02	-.22**	.13	.12	.67***	1		
PBC	.48***	.15*	-.1*4	.25***	-.01	.47***	.56***	1	
CSII	.53***	.06	-.42***	.18*	.18*	.30***	.54***	.30***	1
<i>Means</i>	4.08	1.51	44.50	3.85	1.70	4.91	4.21	5.30	3.38
<i>Std Deviations</i>	1.71	.50	14.76	1.85	1.36	1.28	1.47	.95	1.54

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 6.22 TPB Attitudes, Subjective Norms (SN), and Perceived Behavioral Control (PBC) Hierarchical Multiple Regression Table for Toothpaste**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	β	t
<b>Step 1</b>	.28	.08*					
Gender				-.44	.29	-.13	-1.53
Age				-.02	.01	-.18*	-2.11
HHI				.10	.08	.10	1.27
Ethnicity				.15	.11	.12	1.45
<b>Step 2</b>	.79	.63***	.55***				
Gender				-.21	.19	-.06	-1.12
Age				.00	.01	-.02	-.33
HHI				.00	.05	.00	.05
Ethnicity				.13	.07	.10	1.85
Attitudes				.13	.10	.09	1.32
SN				.76	.09	.66***	8.49
PBC				.14	.12	.08	1.18
<b>Step 3</b>	.81	.65***	.02**				
Gender				-.20	.18	-.06	-1.07
Age				.00	.01	.03	.58
HHI				-.01	.05	-.01	-.24
Ethnicity				.12	.07	.09	1.78
Attitudes				.14	.09	.11	1.51
SN				.66	.10	.57***	6.90
PBC				.14	.11	.08	1.25
CSII				.20	.07	.18**	2.76

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

### *Yoo and Donthu Model*

The Yoo and Donthu model fell in the middle in terms of its predictive power for the toothpaste ( $\beta = .54$ ) (see Table 6.24). The model was found to be a significant predictor overall ( $F(6, 143) = 27.42, p < .001$ ). Just like the other two theories, Step 1 had four demographic variables entered and was significant ( $F(4, 145) = 3.07; p < .01$ ). Step 2 included the Yoo and Donthu model was significant ( $F(5, 144) = 25.86; p < .001$ ) and explained 47% of the variance (an additional 40% from Step 1;  $R^2$  Change = .40;  $F(1, 144) = 108.01; p < .001$ ). The Yoo and Donthu model was the only significant predictor in Step 2 ( $\beta = .64, p < .001$ ). Again CSII was added in Step 3, which was significant overall ( $F(6, 143) = 27.42, p < .001$ ) and explained an additional 6% from Step 2 ( $R^2$  Change = .06;  $F(1, 143) = 19.02; p < .001$ ). Yoo and Donthu ( $\beta = .54, p < .001$ ) and CSII ( $\beta = .30, p < .001$ ) were significant in Step 3.

**Table 6.23 Yoo & Donthu Averaged Descriptive Statistics and Correlations for Toothpaste**

Variables	PI	Gender	Age	HHI	Ethnicity	Y&D	CSII
Purchase Intent	1						
Gender	-.07	1					
Age	-.19*	-.27***	1				
HHI	.13	.14*	-.12	1			
Ethnicity	.18*	-.04	-.23**	.17*	1		
Y&D	.67***	-.04	-.11	.17*	.12	1	
CSII	.53***	.06	-.42***	.18*	.18*	.42***	1
<i>Means</i>	4.08	1.51	44.50	3.85	1.70	4.59	3.38
<i>Std Deviations</i>	1.71	.50	14.76	1.85	1.36	1.11	1.54

Note: Statistical Significance: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**Table 6.24 Yoo & Donthu Averaged Hierarchical Multiple Regression Table for Toothpaste**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	$\beta$	t
<b>Step 1</b>	.28	.08*					



Gender				-.44	.29	-.13	-1.53
Age				-.02	.01	-.18*	-2.11
HHI				.10	.08	.10	1.27
Ethnicity				.15	.11	.12	1.45
<b>Step 2</b>	.69	.47***	.40***				
Gender				-.28	.22	-.08	-1.31
Age				-.01	.01	-.12	-1.80
HHI				.00	.06	.00	.01
Ethnicity				.10	.08	.08	1.26
Yoo &				1.00	.10	.64***	10.39
Donthu							
<b>Step 3</b>	.73	.54***	.06***				
Gender				-.25	.21	-.07	-1.22
Age				.00	.01	-.01	-.10
HHI				-.02	.06	-.02	-.37
Ethnicity				.09	.08	.07	1.15
Yoo &				.82	.10	.54***	8.41
Donthu							
CSII				.33	.08	.30***	4.36

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

The additional hierarchical multiple regression for the Yoo and Donthu model assessed the significance of the brand loyalty, perceived quality, brand awareness/associations, and overall brand equity items in predicting purchase intent (see Tables 6.25 and 6.26). The brand loyalty items ( $\beta = .25$ ,  $p < .05$ ) and overall brand equity items ( $\beta = .25$ ,  $p < .05$ ) were significant.

**Table 6.25 Yoo and Donthu Brand Loyalty, Perceived Quality, Brand Awareness/Associations (AA), and Overall Brand Equity (OBE) Descriptive Statistics and Correlations for Toothpaste**

Variables	PI	Gend.	Age	HHI	Ethn.	Loyalty	Quality	AA	OBE	CSII
Purchase Intent	1									
Gender	-.07	1								
Age	-.19*	-.27***	1							
HHI	.13	.14*	-.12	1						
Ethnicity	.18*	-.04	-.23**	.17*	1					
Loyalty	.66***	-.03	-.11	.08	.12	1				
Quality	.55***	-.13	-.03	.18*	.05	.59***	1			
AA	.21**	.15*	-.05	.20**	.01	.14*	.39***	1		
OBE	.67***	-.11	-.12	.10	.15*	.81***	.70***	.29***	1	
CSII	.53***	.06	-.42***	.18*	.18*	.53***	.34***	.01	.44***	1
<i>Means</i>	4.08	1.51	44.50	3.85	1.70	3.52	4.99	5.46	4.12	3.38
<i>Std Deviations</i>	1.71	.50	14.76	1.85	1.36	1.70	1.38	1.11	1.62	1.54

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 6.26 Yoo and Donthu Brand Loyalty, Perceived Quality, Brand Awareness/Associations (AA), and Overall Brand Equity (OBE) Hierarchical Multiple Regression Table for Toothpaste**

	R	R <sup>2</sup>	R <sup>2</sup> Change	B	SE	β	t
<b>Step 1</b>	.28	.08*					
Gender				-.44	.29	-.13	-1.53
Age				-.02	.01	-.18*	-2.11
HHI				.10	.08	.10	1.27
Ethnicity				.15	.11	.12	1.45
<b>Step 2</b>	.72	.52***	.44***				
Gender				-.18	.22	-.05	-.81
Age				-.01	.01	-.11	-1.67
HHI				.02	.06	.03	.43

Ethnicity				.08	.08	.07	1.09
Loyalty				.36	.10	.36***	3.49
Quality				.16	.11	.13	1.49
AA				.06	.10	.04	.54
OBE				.26	.12	.25*	2.12
<b>Step 3</b>	.74	.55***	.03**				
Gender				-.17	.21	-.05	-.82
Age				.00	.01	-.02	-.32
HHI				.00	.06	.00	.01
Ethnicity				.08	.08	.06	1.04
Loyalty				.25	.11	.25*	2.34
Quality				.13	.11	.11	1.27
AA				.10	.10	.07	.99
OBE				.27	.12	.25*	2.25
CSII				.26	.08	.24**	3.15

Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

A summary table of all of the  $R^2$ ,  $R^2$  Change, and  $\beta$  values for the three theories for both the soap and toothpaste are presented below (see Table 6.27). For both  $R^2$  change and  $\beta$  in Step 2, TPB had the largest values for both the soap and toothpaste. All three theories had significant  $R^2$  changes from Step 1 for both products. Moving to Step 3, TPB again had the highest  $R^2$  and  $\beta$  for both products. The  $R^2$  changes for the three theories for the toothpaste were the highest changes from Step 2 to Step 3 out of the two products.

**Table 6.27 Summary Table of  $R^2$ ,  $R^2$  Changes, and  $\beta$  for Soap and Toothpaste**

	$R^2$	$R^2$ Change	$\beta$
<b>Soap</b>			
<i>Step 2</i>			
SET	.35***	.29***	.54***
TPB	.45***	.38***	.63***

Yoo & Donthu	.42***	.36***	.61***
<i>Step 3</i>			
SET	.40***	.04**	.52***
TPB	.47***	.02**	.60***
Yoo & Donthu	.43***	.01	.58***
<b>Toothpaste</b>			
<i>Step 2</i>			
SET	.42***	.34***	.58***
TPB	.57***	.49***	.72***
Yoo & Donthu	.47***	.40***	.64***
<i>Step 3</i>			
SET	.53***	.11***	.49***
TPB	.61***	.04***	.62***
Yoo & Donthu	.54***	.06***	.54***

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Note: Statistical Significance: \*p<.05, \*\*p<.01, \*\*\*p<.001

## Discussion

The results from Study 2 show that the proven predictor of purchase intent (Yoo and Donthu model) is not the best for consumer non-durable goods like soap and toothpaste. Theory of Planned Behavior explained the most variance and was also the best predictor for both soap and toothpaste.

Consumer Susceptibility to Interpersonal Influence measures how much consumers' take into account other people's opinions when making their purchase decision. CSII made the most significant impact on the models when assessing the toothpaste. When CSII was added to the SET model, it explained an additional 11%, which is the largest increase across all theories no matter the product. The expectation of CSII being a stronger/more beneficial in the SET and Yoo and Donthu models at predicting purchase intent than for TPB was substantiated in the toothpaste, but not for the soap. For the soap, the inclusion of CSII had a significant impact on SET (explained an additional 4%) and TPB (additional 2%), but it explained no additional

variance for the Yoo and Donthu model. The largest additional change in variance with the addition of CSII was for the toothpaste in SET (explaining an additional 11% of the variance) and the Yoo and Donthu model (additional 6%), and the least effect on TPB by only explaining an additional 4%.

Another finding for the soap is that gender was significant in predicting purchase intent in Step 1 of the multiple regression, but continued to be significant for SET and TPB through Step 3. According to Safe Cosmetics Action Network (2011), “American women use 12 personal care products a day, and men average six products daily.” Soap being a personal care product could explain why there is a gender difference in purchase intent.

After evaluating the individual variables within each theory, the soap and toothpaste had consistent results for both SET and TPB, with only a slight difference in the Yoo and Donthu model. For SET, the reward items were significant, while the cost items were not; thereby presuming the rewards or benefits that a product provides are more important in determining whether or not to purchase a product than the potential costs or consequences.

Subjective norms were the only significant predictor for both the soap and toothpaste meaning consumers take what others think into consideration when making purchasing decisions more so than their own attitudes or the amount of control they have in actually making that purchase.

With the Yoo and Donthu variables, brand loyalty was a significant predictor for both the soap and toothpaste. The overall brand equity items were also found to be significant for the toothpaste. Brand loyalty was one of the variables originally used to measure purchase intent (Aaker, 1991) so it’s understandable why it would be a significant predictor.

## **Chapter 7 - General Discussion**

Across multiple products and categories, Theory of Planned Behavior better predicted purchase intent overall indicating consumers view their relationship with products similarly across consumer durable and non-durable goods.

It’s interesting to note that purchase intent for consumer non-durable goods was higher (mean purchase intent for soap = 4.63; mean purchase intent for toothpaste = 4.08) than for consumer durable goods (mean purchase intent for TV = 3.83; mean purchase intent for athletic

shoes = 3.43) which makes sense given the nature of these products. Consumer non-durable goods are cheaper, meant to be used faster, and are less frequently researched before purchase; whereas consumer durable goods are more expensive, bought less frequently, and are more frequently researched before purchase.

All of the theories were significant predictors of purchase intent/brand equity which could be due to the strength of combining both customer-based and firm-based brand equity variables in the decision criteria for consumers.

### **Reasons Why Theory of Planned Behavior is the Best Predictor**

Thinking about why Theory of Planned Behavior is the best predictor of purchase intent amongst Social Exchange Theory and the Yoo and Donthu model, TPB includes something the other two don't, external factors. Attitudes toward buying the product in TPB is similar to assessing costs and rewards from SET and brand loyalty, perceived quality, brand awareness/associations, and overall brand equity in Yoo and Donthu as they are all based on consumers' perceptions and personal feelings about a product. TPB, however, also includes subjective norms and perceived behavioral control which are external to consumers' preferences in that they have to assess what others would do/think and how much control they actually have over the situation (or how much control they don't have). It can be posited that the addition of these external assessments makes TPB a more predictive model of purchase intent.

It could also be said that consumers take what others think and the amount of control they have over buying a product into account more than their own feelings which makes TPB a better predictor of purchase intent. The subjective norm was a significant predictor for all four of the products tested in Studies 1 and 2 meaning that consumers are more likely to consider how they would be viewed by others if they were to buy the product or whether others would buy the product themselves when making their purchase decision.

Also of note is that Consumer Susceptibility to Interpersonal Influence had the largest impact on the toothpaste followed by the TV. CSII explained significantly more variance than the theories alone for these two products, but was not always a significant addition for the soap and athletic shoes. Since consumer durable goods are often more visible to other people, one would think these products may have more of a social component than ones that aren't seen as often (i.e., consumer non-durable goods). For example, the athletic shoes one wears would be

seen in public whereas the toothpaste someone uses is often limited to the confines of one's bathroom. This unexpected social component of both consumer durable and non-durable goods could indicate why TPB better predicted purchase intent.

Since subjective norms are social pressures and the customer reviews that were presented in the research can be seen as a recommendation from other consumers of whether or not to buy the product, this may be a reason why subjective norms were a significant predictor within TPB. Based on qualitative feedback, the customer reviews played a large role in consumers' likelihood to buy the products in the current research, especially for the TV and athletic shoes. It could be argued that it plays a role in the subjective norm (what others would do/have done), which could explain why TPB better predicted purchase intent than the other theories.

Although perceived behavioral control was not significant in predicting purchase intent for any of the products as an individual variable, it still could have had an impact on why TPB was the best predictor overall as it has no analogous variable within SET or the Yoo and Donthu model. Also, perceived behavioral control was the one variable added to Theory of Planned Behavior from its predecessor, Theory of Reasoned Action (TRA), due to the limitations of TRA and the added predictive power gained by the inclusion of perceived behavioral control.

### **Reasons Why Social Exchange Theory is Not the Best Predictor**

Social Exchange Theory has been used the least often in consumer research compared to the other two theories. All of the SET assessments in the current research were significant in predicting purchase intent, but simply the other theories were better. SET has its roots in Social Psychology as a way to assess social relationships between people, but since consumer purchase decisions are multi-faceted and SET has the fewest individual variables that make it up, it's possible the theory is missing/not measuring some key consumer-specific evaluations that the TPB and Yoo and Donthu models aren't.

Another possible reason SET isn't the best predictor is that the assumptions it makes about relationships may not hold true for consumer decision making. According to West and Turner (2007), SET assumes "1) relationships are interdependent and 2) relational life is a process" (p. 188). There are not many products that consumers would consider themselves to be in an interdependent relationship with or feel they'll work through a process with.

Even though within SET, rewards were significant for all products assessed and the overall model was significant for both studies, the potential for miscalculating purchase intent based on a lack of sufficient variables and not meeting relational assumptions could have hampered the predictive power of the model.

### **Reasons Why the Yoo and Donthu Model is Not the Best Predictor**

The Yoo and Donthu model has been used the most often out of the three theories tested in this research to predict purchase intent (Londono, 2012). It was created with the specific purpose to measure purchase intent/brand equity where the other two theories weren't. However all of the variables are measured from individual consumers' perceptions and preferences. The lack of external factors beyond consumers' control could impact its predictive power compared to TPB. The Yoo and Donthu model, like the others, was significant in predicting purchase intent for all four products tested in this research and was the second most successful theory in doing so. Like SET, the inclusion of only internal factors to consumers could have limited its predictive power.

According to Christodoulides and De Chernatony (2010), a limitation of the Yoo and Donthu model is that they combined brand awareness and brand associations into one dimension when Aaker (1991) and Keller (1993) stated these are theoretically different constructs. Brand awareness and brand associations are correlated, but are nevertheless different and others (like Christodoulides and De Chernatony, 2010) argue these being measured together affects the predictive power and theoretical underpinnings of their model.

The brand of the product is probably the most important factor in Yoo and Donthu's measurement of brand equity and since brands with medium brand value were used in this research so as to not favor one theory over another, this could have affected the predictive power of the Yoo and Donthu model.

### **Limitations and Directions for Future Research**

Although all of the theories were significant predictors of purchase intent and measuring brand equity, there are several limitations that can be addressed in future research. This research was completed entirely online and asked consumers to imagine they were to buy these products



online. Consumers may not typically buy these types of products online as it's not as convenient or they need to try out the product before purchase. For example, athletic shoes typically need to be tried on and consumers could do an initial online search, however, most would probably not actually purchase them online. Consumer non-durable goods aren't tried in store, however, because they require less research and are cheaper, the majority of consumers wouldn't typically buy soap and toothpaste online but rather during grocery shopping. No questions were asked as to their propensity to purchase products online in general. In the future, research could be done with consumers offline, either while in-store, in a mock store, or after they've visited a store and looked at the products being tested (but didn't purchase). This would allow a more realistic shopping experience leading to a potentially more accurate rating of purchase intent.

Another limitation is that the consumers in this research were not necessarily in the market to buy these products, making it an unrealistic task for them. Also, there were no questions as to their likelihood to buy any product within the product categories tested. It's therefore possible that someone participating in this research would never be willing to purchase a TV, for example. Future research could include only consumers who are planning on purchasing from these product categories within a set impending time frame.

This research only measured purchase intent/brand equity for product brands (consumer packaged goods), rather than looking at any service brands. Services are utilized widely in society and according to Christodoulides and De Chernatony (2010), many service brands are on Interbrand's annual top brands list. Future studies could also include service brands to test which theory best predicts purchase intent/brand equity. The predictive strength of TPB would be assessed across multiple consumer categories, not just product categories.

The research suggests there is a social component to consumers intending to purchase these products based on the strength of subjective norms in TPB. It's possible that the CSII scale items may have primed consumers to think about social influence and made the subjective norm items more meaningful.

There was a gender bias shown for the consumer non-durable goods chosen since they were personal care products and women use and buy more of these products. Other consumer non-durable goods that do not have this bias would be good to include in future research.

## **Conclusion**

The sheer number of products and brands offered in the marketplace has grown to be almost unmanageable to consumers. Many different variables factor into consumers' purchase decision, which could be partially why measuring customer-based brand equity has been difficult over the years. Research has the potential to single out which constructs work best in one area, but it seems that no one construct will ever be able to measure brand equity for every product or service, category or industry, or for every culture. Theory of Planned Behavior has been shown to be a valid predictor for TV's, athletic shoes, soap, and toothpaste, however, it's not clear whether this theory can span all categories, industries, and cultures, but has the potential of being a relatively wide-ranging predictive tool.

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## **Appendix A - Survey/Scale Questions**

### **Intro Statement**

The purpose of this research is to see how consumers perceive different products. You will see 2 different types of products and will be asked a series of questions about them. This study will take approximately 35 minutes. Your answers will be kept completely anonymous. If you have any questions or concerns about this research, you can email Heather Hilgenkamp. If you'd like to contact Kansas State University's IRB Chair, you can reach Rick Scheidt at 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506 or (785) 532-3224.

Please read the following statement before continuing:

I understand this project is research, and that my participation is completely voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent at any time, and stop participating at any time without explanation, penalty, or loss of benefits, or academic standing to which I may otherwise be entitled.

If you have read and understand this consent form, and willingly agree to participate in this study under the terms described, please click NEXT to continue.

### **Demographics**

- 1) Are you:
  - a. Male
  - b. Female
- 2) What is your current age: \_\_\_\_\_
- 3) In what state do you live? \_\_\_\_\_
- 4) Are you:
  - a. Married
  - b. Separated/divorced
  - c. Widowed
  - d. Living with a partner
  - e. Never married/single
  - f. Prefer not to answer
- 5) What is your current employment status? Are you:



- a. Employed full-time
  - b. Employed part-time
  - c. Self-employed
  - d. Student
  - e. Retired
  - f. Unemployed
  - g. Prefer not to answer
- 6) What is the highest level of education you have completed?
- a. Less than high school
  - b. High school graduate
  - c. Some college
  - d. College graduate
  - e. Graduate school or higher
  - f. Technical school
  - g. Prefer not to answer
- 7) Which of the following best describes your total annual household income, before taxes, for the past year?
- a. Less than \$25,000
  - b. \$25,000 to less than \$40,000
  - c. \$40,000 to less than \$50,000
  - d. \$50,000 to less than \$75,000
  - e. \$75,000 to less than \$100,000
  - f. \$100,000 to less than \$150,000
  - g. \$150,000 to less than \$200,000
  - h. \$200,000+
  - i. Prefer not to answer
- 8) Which of the following best describes you?
- a. White or Caucasian
  - b. Black or African-American
  - c. Asian or Pacific Islander
  - d. Native American or Alaskan Native

- e. Latino or Hispanic
- f. Other race (please specify) \_\_\_\_\_
- g. Prefer not to answer

### **Consumer Susceptibility to Interpersonal Influence Scale**

- 1) I often consult other people to help choose the best alternative available from a product class.
- 2) If I want to be like someone, I often try to buy the same brands that they buy.
- 3) It is important that others like the products and brands I buy.
- 4) To make sure I buy the right product or brand, I often observe what others are buying and using.
- 5) I rarely purchase the latest fashion styles until I am sure my friends approve of them.
- 6) I often identify with other people by purchasing the same products and brands they purchase.
- 7) If I have little experience with a product, I often ask my friends about the product.
- 8) When buying products, I generally purchase those brands that I think others will approve of.
- 9) I like to know what brands and products make good impressions on others.
- 10) I frequently gather information from friends or family about a product before I buy.
- 11) If other people can see me using a product, I often purchase the brand they expect me to buy.
- 12) I achieve a sense of belonging by purchasing the same products and brands that others purchase.

\*Note: These items will be asked on a 7-point Likert scale where 1= strongly disagree and 7= strongly agree.

### **Intention Scale**

- 1) I intend to purchase this PRODUCT.
- 2) I am likely to purchase this PRODUCT based on the brand name alone.
- 3) I am likely to purchase this PRODUCT based on the price alone.
- 4) I am likely to purchase this PRODUCT based on the customer review alone.

- 5) I am likely to purchase this PRODUCT based on the advertisement alone.
- 6) I am likely to purchase this PRODUCT based on the *Consumer Reports* score alone.

\*Note: The first item will be asked on a 7-point Likert scale where 1= strongly disagree and 7= strongly agree. The rest of the items will be on a 7-point Likert scale where 1= very unlikely and 7=very likely.

## **Social Exchange Theory Items**

### ***Costs and Rewards Quantitative Items***

- 1) I feel like this PRODUCT is “worth it” in terms of overall value.
- 2) This PRODUCT will last a long time.
- 3) I expect this PRODUCT to meet my needs.
- 4) The quality ratings for this PRODUCT are helpful in making my decision.
- 5) This PRODUCT is too expensive. (r)
- 6) This brand name means I will be satisfied with this PRODUCT.
- 7) I don’t know if I can trust this PRODUCT based on the customer review. (r)
- 8) The brand name for this PRODUCT is not strong. (r)
- 9) I’m not convinced of this PRODUCT based on the advertisement. (r)
- 10) The price is appropriate for this PRODUCT.
- 11) The customer review is beneficial to my purchase decision of this PRODUCT.
- 12) I find the PRODUCT’s quality ratings to be unbelievable. (r)
- 13) This advertisement proves that this PRODUCT is a good buy.

\*Note: These items will be asked on a 7-point Likert scale where 1= strongly disagree and 7= strongly agree. (r) indicates reverse scoring.

### ***Costs and Rewards Qualitative Items***

- 1) If you were to describe this PRODUCT to a friend, what would you say?
- 2) What positives do you see this PRODUCT having?
- 3) What are the negatives of this PRODUCT?

- 4) How does the information presented about this PRODUCT affect your willingness to buy this product?
- 5) Do you feel this PRODUCT would be worth buying? Please explain your reasoning for this.

\*Note: These items will be asked as open ended questions.

## **Theory of Planned Behavior Items**

### *Attitude*

The PRODUCT I just saw is:

- 1) A bad value \_\_\_\_\_ A good value
- 2) Low quality \_\_\_\_\_ High quality
- 3) A bad brand \_\_\_\_\_ A good brand
- 4) Not good based on the customer reviews \_\_\_\_\_ Good based on the customer reviews
- 5) A bad price \_\_\_\_\_ A good price
- 6) Not a good buy based on the ad \_\_\_\_\_ A good buy based on the ad

\*Note: These items will be asked on a 7-point semantic differential scale.

### *Perceived Norm*

- 1) Most people who are important to me would probably purchase this PRODUCT.
- 2) Knowing all of this information about this PRODUCT, most consumers would buy this PRODUCT.
- 3) This PRODUCT is a popular choice amongst consumers.
- 4) My friends/family would recommend I buy this PRODUCT.

\*Note: These items will be asked on a 7-point Likert scale where 1= strongly disagree or very unlikely and 7= strongly agree or very likely.

### *Perceived Behavioral Control*

- 1) I am confident that I can find this PRODUCT in stores or online.
- 2) My buying this PRODUCT is up to me.
- 3) I will share the decision of purchasing this PRODUCT with someone else.

\*Note: These items will be asked on a 7-point Likert scale where 1= true and 7= false.

## **Yoo & Donthu Brand Equity Items**

### ***Brand Loyalty***

- 1) I consider myself to be loyal to BRAND NAME.
- 2) BRAND NAME would be my first choice.
- 3) I will not buy other brands if BRAND NAME is available at the store.

\*Note: These items will be asked on a 7-point Likert scale where 1= strongly disagree and 7= strongly agree.

### ***Perceived Quality***

- 1) The likely quality of BRAND NAME is extremely high.
- 2) The likelihood that BRAND NAME would be functional is very high.

\*Note: These items will be asked on a 7-point Likert scale where 1= strongly disagree and 7= strongly agree.

### ***Brand Awareness/Associations***

- 1) I can recognize BRAND NAME among other competing brands.
- 2) I am aware of BRAND NAME.
- 3) Some characteristics of BRAND NAME come to my mind quickly.
- 4) I can quickly recall the symbol or logo of BRAND NAME.
- 5) I have difficulty in imagining BRAND NAME in my mind. (r)

\*Note: These items will be asked on a 7-point Likert scale where 1= strongly disagree and 7= strongly agree. (r) indicates reverse scoring.

### ***Overall Brand Equity***

- 1) It makes sense to buy BRAND NAME instead of any other brand, even if they are the same.
- 2) Even if another brand has the same features as BRAND NAME, I would prefer to buy BRAND NAME.
- 3) If there is another brand as good as BRAND NAME, I prefer to buy BRAND NAME.
- 4) If another brand is not different from BRAND NAME in any way, it seems smarter to purchase BRAND NAME.

\*Note: These items will be asked on a 7-point Likert scale where 1= strongly disagree and 7= strongly agree.

### **Debriefing Statement**

Thank you for your participation. The study you just completed was developed to give us a much better understanding of consumers' thought processes and behavior. The main purpose of psychological research in general is to gather information. This information then may give psychological researchers insight into the thoughts and behaviors of a group of people. Studies like this may give insight on how consumers make decisions about products and services. With the products used in this study, many different variables such as price and advertising have an effect on how consumers react.

The main purpose of this study is to understand how consumers relate to brands: either by assessing rewards and costs or by assessing their attitudes, what others are doing, and how much control they have in buying a specific product.

If you have any questions, you may contact Dr. Gary Brase or Heather Hilgenkamp. You will receive your \$5 participation incentive from your panel company within the next week.

## Appendix B - Demographics

### Study 1

#### Demographics

Gender	N
Male	75
Female	75

Age	N
18-24	15
25-34	33
35-44	23
45-54	36
55-64	30
65-74	13
75-84	0

Region	N
Northeast	27
Midwest	33
South	55
West	35

Marital Status	N
Married	71
Separated/Divorced	25
Widowed	2
Living with a partner	12
Never married/single	40
Prefer not to answer	0

Employment Status	N
Employed full-time	69
Employed part-time	16
Self-employed	18
Student	4
Retired	18
Unemployed	24
Prefer not to answer	1

Education	N
Less than high school	1
High school graduate	21
Some college	49
College graduate	50
Graduate school or higher	23
Technical school	6
Prefer not to answer	0

Household Income	N
Less than \$25,000	26
\$25,000 to less than \$40,000	28
\$40,000 to less than \$50,000	10
\$50,000 to less than \$75,000	33
\$75,000 to less than \$100,000	21
\$100,000 to less than \$150,000	19
\$150,000 to less than \$200,000	4
\$200,000+	6
Prefer not to answer	3



Ethnicity	N
White or Caucasian	105
Black or African-American	13
Asian or Pacific Islander	11
Native American or Alaskan Native	2
Latino or Hispanic	9
Other race	8
Prefer not to answer	2

## Study 2

### Demographics

Gender	N
Male	74
Female	76

Age	N
18-24	11
25-34	36
35-44	25
45-54	36
55-64	30
65-74	9
75-84	3

Region	N
Northeast	26
Midwest	33
South	56
West	35

Marital Status	N
Married	82
Separated/Divorced	20
Widowed	5
Living with a partner	9
Never married/single	33
Prefer not to answer	1

Employment Status	N
Employed full-time	74
Employed part-time	16
Self-employed	15
Student	8
Retired	19
Unemployed	18
Prefer not to answer	0

Education	N
Less than high school	0
High school graduate	22
Some college	43
College graduate	54
Graduate school or higher	22
Technical school	9
Prefer not to answer	0

Household Income	N
Less than \$25,000	18
\$25,000 to less than \$40,000	24
\$40,000 to less than \$50,000	20
\$50,000 to less than \$75,000	33
\$75,000 to less than \$100,000	25
\$100,000 to less than \$150,000	23
\$150,000 to less than \$200,000	3
\$200,000+	1
Prefer not to answer	3

Ethnicity	N
White or Caucasian	107
Black or African-American	13
Asian or Pacific Islander	17
Native American or Alaskan Native	1
Latino or Hispanic	7
Other race	3
Prefer not to answer	2