

Effects of Consumer Values and Past Experiences on Consumer Intention to
Buy Organic Personal Care Products: An Application of the Theory of
Planned Behavior

Thesis

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Abstract

Awareness of the destruction of natural resources has raised the issue of environmental protection, which in turn has created eco-friendly consumption. As the issue of environmental protection has gained attention, environmental ethics has had an impact on U.S. consumers' activities. As green products have gained popularity in the market, more consumers have looked for greener products such as organic and natural products. Following the organic food industry, organic personal care industry accounted for the second largest portion of sales in the U.S. organic industry and has shown an increase in market share and consumer demand.

The primary goal of this research is to investigate U.S. consumer purchase behavior of organic personal care products base on the Theory of Planned Behavior (TPB) by Ajzen (1985). In particular, this research examines 1) the influence of consumer values (i.e., health consciousness, environmental consciousness, and appearance consciousness) on attitude toward buying organic personal care products, 2) the influence of attitude, subjective norm, and perceived behavioral control on purchase intention for organic personal care products, 3) the effect of consumers' past experiences on their

purchase intentions for organic personal care products, and 4) the moderating influence of perceived behavioral control on the relationship between attitude toward buying organic personal care products and purchase intention for the products.

For this research, an organic shampoo and body lotion were used as sample products. An online survey was conducted with 207 online panel members, and multiple regression analysis was used to examine the proposed relationships. The findings of this research indicated that only two consumer values, environmental consciousness and appearance consciousness, influenced positive attitude toward buying organic personal care products. In addition, the results revealed that attitude, subjective norm, perceived behavioral control, and past experiences significantly predicted purchase intention for organic personal care products. Furthermore, the relationship between attitude and purchase intention was moderated by perceived behavioral control.

The findings of this study extended an application of the TPB. Additions, such as consumer values, past experiences, and perceived behavioral control (which moderated the attitude-purchase intention relationship), yielded an improvement on the TPB model. The results of this study also suggest that retailers can develop effective marketing strategies emphasizing ecological beauty, product safety, and affordable prices to increase consumers' intentions to buy organic personal care products.

Dedication

Dedicated to my father and mother for their unwavering love and support

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CHAPTER 1

INTRODUCTION

1.1. Overview

Since the early 1990s, awareness of the destruction of natural resources has raised the issue of environmental protection, which in turn has created eco-friendly consumption called “green consumerism” (Moisander, 2007). According to Pujari and Wright (1996), protection of the planet’s resources is one of the central issues facing the world. Because the environmental issue has increased consumers’ interests in purchasing green products, business firms have devised marketing strategies, known as green marketing (Reed, 2003), that are focused on ecologically-friendly products (Smith, 1990). As the issue of environmental protection has gained attention, environmental ethics has had an impact on U.S. consumers’ activities (Kangun, Carlson, & Grove, 1991; Martin & Simintiras, 1995; Todd, 2004). Specifically, U.S. consumer demand has led to the increase in diversity of green product categories, such as laundry detergents, personal

care products, and energy saving electronics (Martin & Simintiras, 1995; Schlegelmilch, Bohlen, & Diamantopoulos, 1996). As green products have gained popularity in the market, more consumers have looked for greener products (Nimse, Vijayan, Kumar, & Varadarajan, 2007).

Consumers' purchases of organic products grew an average annual rate of 20 percent between 1997 and 2003, resulting in total U.S. sales increasing from \$4 billion to \$10.8 billion (Hartman & Wright, 1999; Organic Trade Association, 2004). Consumer sales in the U.S. organic industry reached \$14.6 billion in 2005 (OTA, 2006). In particular, organic foods accounted for \$13.8 billion in consumer sales, and \$744 million resulted from the sale of non-food organic products including personal care products, nutritional supplements, fibers, household cleaners, flowers, and pet foods (OTA, 2006). This increase in the consumption of organic products shows "a greening of consumer lifestyle" (Lockie, Lyons, Lawrence, & Mummery, 2002, p. 24). However, last year, the sales of organic products increased only 4 percent compared with a year earlier due to the sluggish U.S. economy (Martin, 2008).

Following the organic food sector, the personal care sector accounted for the second largest portion of sales in the U.S. organic industry (OTA, 2006), and the personal care sector growth rate of 29 percent was the largest in the organic health and wellness product industry. The personal care sector offers dietary supplements and natural and

organic products (National Marketing Institute, 2007). D'Souza, Taghian, Lamb, and Peretiatkos (2006) claim that consumers' ecological concerns may be key factors in the marketing of cosmetic products. The top three companies in this industry, Burt's Bees, Jason Natural Cosmetics, and Tom's of Maine, together represent annual sales of \$150 million (Singer, 2007) and emphasize personal, societal, and environmental health and beauty in their marketing philosophies to address consumers' ecological concerns. In particular, Burt's Bees suggests that ethical choice maximizes the well-being of people, society, and the environment. Jason Natural Cosmetics claims that if the earth is beautiful, an individual's beauty will follow. Tom's of Maine defines 'natural care' as caring for people, communities, and the environment. These claims imply that companies selling organic personal care products link personal beauty, health, and safety with the well-being of the natural environment.

Although the fast growth in sales of organic and natural care products has intrigued researchers' interests, they have primarily only examined marketing strategies used by firms in this industry (Johri & Sahasakmontri, 1998; Todd, 2004). Few have examined consumer behavior regarding organic personal care products (Rajagopal, 2007). Without in-depth understanding of consumer behavior for this product category, it is difficult to devise effective marketing strategies. Furthermore, although there are numerous studies regarding consumers' attitudes and purchase behaviors regarding

organic products (Chen, 2007; Lockie et al., 2004; Magnusson, Arvola, Hursti, Åberg, & Sjöden, 2001; Padel & Foster, 2005; Zanolli & Naspetti, 2002; D'Souza et al., 2006), these studies have focused mainly on organic food products and were conducted outside of the U.S. Because organic products are viewed as promoting a healthy lifestyle, explained by the acronym LOHAS (Lifestyles of Health and Sustainability) (Essoussi & Zahaf, 2008), there should be some similarities in purchase motivations, attitudes, and behavioral intentions between organic foods and organic personal care products. However, some differences between these two product categories are also expected as eating food and using personal care products are distinct consumption behaviors.

1.2. Problem Statement

Even though the U.S. organic personal care sector has shown an increase in market share and consumer demand, empirical research on consumer purchasing behavior with regard to organic personal care products is lacking. In order to fill the gap in the literature regarding the organic personal care industry, the current study will examine the U.S. consumer's decision-making process for skin and hair products based on the Theory of Planned Behavior (TPB). The TPB has been applied to predict an individual's behavior across a broad array of contexts (Thorbjørnsen, Pedersen, & Nysveen, 2007) and has explained an individual's eco-friendly behavior (Bamberg, 2003;

Chan & Lau, 2001). It postulates that an individual's actual behavior is determined by his/her intention to perform the behavior, which in turn is influenced by the individual's attitude toward the behavior, his/her motivation to comply with subjective norms, and the perceived control he/she has over the behavior.

In the current weakened U.S. economy, the role of perceived behavioral control is expected to become more important for organic product consumption since prices of organic products are significantly higher than those of conventional products (Martin, 2008). Thus, the present study will examine the moderating influence of perceived behavioral control on the relationship between consumers' attitudes and purchase intentions, as well as its direct influence on purchase intentions.

In addition, consumers' values are a well-known antecedent to predict consumers' attitudes and behaviors because values motivate people to select actions or objects that fulfill their values (Allen, Ng, & Wilson, 2002; Grunert & Juhl, 1995). Previous studies have found that values concerning health and the environment influence organic food consumption (Baker, Thompson, Engelken, & Huntley, 2004; Chryssohoidis & Krystallis, 2005; Makatouni, 2002). Therefore, consumer values will be integrated with the TPB model to better understand consumers' purchase motivations of organic personal care products.

Finally, it is important to examine consumers' past experiences with other

organic products to predict purchase intentions for organic personal care products. Even though past experiences are not included in the TPB by Ajzen (1985), other researchers have argued that adding past experiences in the model enhances the prediction of behavior (Bagozzi & Kimmel, 1995; Bentler & Speckart, 1981; Sutton & Hallett, 1989) as an individual's behavior is influenced by learning (Bentler & Speckart, 1979). Thus, consumers' past experiences with other organic products are also included in the TPB model in this study.

1.3. Purpose of the Study

The purpose of this study is to examine consumer purchase behavior of organic personal care products based on the TPB by Ajzen (1985). In particular, it will focus on the consumption of organic skin and hair care products, which are considered to be the fastest growing and largest categories in this industry. Therefore, in the current study, several relationships are examined: 1) the relationship between consumer values and attitude toward buying organic skin/hair care products, 2) the relationship between attitude toward buying organic skin/hair care products and purchase intention for those products, 3) the relationship between subjective norm and purchase intention for organic skin/hair care products, 4) the relationship between perceived behavioral control and

purchase intention for organic skin/hair care products, 5) the relationship between consumer past experiences with other organic products and purchase intention for organic skin/hair care products, and 6) the moderating effect of perceived behavioral control on the relationship between attitude toward buying organic skin/hair care products and purchase intention for the products.

1.4. Significance of the Study

This study, for academia, will show the influencing factors on purchase intention for organic personal care products based on the TPB. First, by testing the robustness of consumer values, it will show whether green consumerism encourages consumers to engage in green consumption in spite of the economic downturn. In addition, it will explain whether an organic lifestyle is reflected in an individual's consumption pattern by examining the influence of his/her past experiences with other organic products on the consumption of organic personal care products. Lastly, this study will extend an application of the TPB by examining the moderating influence of perceived behavioral control on the relationship between attitude toward buying organic personal care products and purchase intention for them. The study may reveal an enhanced role of perceived behavioral control in the context of economic recession.

This study will also benefit the organic industry by providing a better understanding of the individual's consumption behavior in the context of organic personal care products. More specifically, the results of this study may help organic personal care product producers and retailers understand significant personal values influencing consumers' attitudes toward purchasing organic personal care products and other factors influencing their purchase intentions for these products. As a result, marketers may be able to devise effective marketing strategies that meet the values of existing and potential customers and that increase consumers' purchase intentions.

1.5. Definition of Terms

The terms used in the present study are defined as follows:

1. Attitude toward behavior: an individual's evaluation being favorable or unfavorable to perform the behavior (Ajzen, 1985).
2. Consumer value: "an enduring belief that a specific mode of conduct is personally or socially preferable to an opposite or converse mode of conduct or end state of existence" (Rokeach, 1973, p. 5).
3. Green consumer: a consumer who buys products that are harmless to the environment and society (Harper & Makatouni, 2002).
4. Green consumerism: "a purchasing choice that expresses a preference for less

environmentally harmful goods and services” (Sriram & Forman, 1993, p. 53).

5. Green marketing: “the application of marketing tools to facilitate exchanges that satisfy organizational and individual goals in such a way that the preservation, protection, and conservation of the physical environment is upheld” (Mintu & Lozada, 1993, p. 18).
6. Green product: “a product that contains recycled materials, reduces waste, conserves energy or water, uses less packaging, and reduces amount of toxics disposed or consumed” (Nimse et al., 2007, p. 131)
7. Natural personal care product: a personal care product that is made with “truly natural ingredients, or ingredients that are derived from nature” (Natural Products Association, 2008).
8. Organic personal care product: a personal care product that contains natural ingredients grown without or with a minimum use of conventional pesticides and artificial fertilizers (National Organic Program, 2008).
9. Personal care product: a product applied “externally on any part of the human body (e.g., hair, face and hand) for use in activities such as cleansing, moisturizing, coloring, and conditioning” (NSF International, 2008).
10. Past experience: an event in which an individual has previously been engaged.
11. Perceived behavioral control: the degree of perceived ease or difficulty over

performing the behavior (Ajzen, 1985).

12. Purchase intention: an individual's readiness to purchase a certain product that is predicted by attitude toward behavior, subjective norm, and perceived behavioral control (Ajzen, 1985).

13. Subjective norm: an individual's perception of the social pressure to which he/she should comply in regards to a specific behavior (Ajzen, 1985).

CHAPTER 2

REVIEW OF LITERATURE

2.1. Overview

This chapter introduces overall market information on the U.S. organic personal care product industry and organic standards. In addition, it reviews previous studies on organic products, including consumer values in the context of green products, and it presents the theoretical framework for this study based on the Theory of Planned Behavior (TPB) by Ajzen (1985, 1991). Finally, research hypotheses related to consumers' attitudes toward buying organic skin and hair care products and purchase intentions for these products are presented.

2.2. Overview of the U.S. Organic/Natural Personal Care Industry

The U.S. organic and natural personal care industry has reached \$7.8 billion in sales at an annual growth rate of 39.2 percent (Nutrition Business Journal, 2008). This

industry is classified into four product categories: skin care, hair care, oral care, and cosmetics (Packaged Facts, 2005). Of the \$5 billion in total sales for 2004, skin care products accounted for \$3 billion, hair care reached \$1 billion, oral care reached \$589 million, and cosmetics reached \$336 million in retail sales (PF, 2005). In other words, the skin care and hair care sectors accounted for 80 percent of the \$5 billion in total sales for the organic and natural personal care industry. For consumers seeking natural ingredients in personal care products, these two product categories are what consumers try first (Lewis, 2008). These categories have gained great popularity with both men and women (Tirone, 2007). The skin care category includes products for facial care, body care, and sun care, while the hair care category includes shampoos, conditioners, and hair colors (Organic Monitor, 2006).

In fact, natural personal care products have evolved from homemade products to professional products in the mass market due to consumer demand, which was influenced by the market trend of food consumption indicating consumers' concerns with ingredients and product safety (Bernstein, 2005). Thus, the increasing awareness of product contents and organic foods has resulted in a trend shifting from natural personal care to organic personal care (MacDonald, 2002).

One market study by the Natural Marketing Institute (2006) divided U.S. personal care consumers into five segments: indulgents (29%), naturalaires (21%),

seekers (18%), minimalists (17%), and uninvolveds (15%). The indulgents group consists of a balanced ratio of women and men who are interested in sensory experiences with personal care products. The naturalaires group is interested in products offering organic and natural ingredients, but is price-sensitive. Consisting of more women than men, the seekers group considers product performance and brand trust as important attributes, and the group is interested in natural, not organic, ingredients. On the other hand, the minimalists want to maintain their skin or hair without endeavors. Lastly, the uninvolveds group consists predominantly of men and is not interested in personal care products. Nevertheless, most consumers consider organic as possessing the concept of “being gentle, safe, and healthy” (Kolesnikov-Jessop, 2008). Approximately 80 percent of U.S. adult consumers are green motivated to some extent (NMI, 2008), and 60 percent of U.S. consumers said they would be willing to pay a premium of 11.7 percent for eco-friendly products (Ozanne & Vlosky, 2003). Additionally, Hume (1989) found that 90 percent of U.S. consumers are likely to purchase products from companies making efforts to protect natural resources.

2.3. U.S. Organic Standards for Personal Care Products

In the past, when there was no U.S. standard to define organic labeling for

personal care products, these products used organic labeling categories developed for agricultural products by the United States Department of Agriculture (USDA) through the National Organic Program (NOP) regulation: “100% organic,” “Organic” (at least 95% organic ingredients contained), “Made with organic ingredients” (at least 70%), and “Less than 70% organic ingredients” (NOP, 2008). In 2007, however, Organic and Sustainable Industry Standards (OASIS), a non-profit trade organization, developed the first American standard for organic personal care: “Organic” (85% minimum organic content) and “Made with organic” (70% minimum). The “Organic” label claim will increase its minimum organic content to 90% in two years (2010), and the group’s requirement for organic ingredients is higher than that required by the European standard ECOCERT (Kapsner, 2008). In addition, major players in the personal care industry, such as Aveda Corporation, L’Oreal, and Estee Lauder Companies, Inc., have participated in this organization as founding members (Natural Newswire, 2008).

2.4. Academic Research on the Organic Personal Care Industry

Two studies have examined green marketing strategies for organic personal care products; one focused on the product development of green cosmetics and toiletries in the context of the United Kingdom (Prothero & McDonagh, 1992), and the other

focused on promotional advertisements of U.S. companies offering natural personal care products (i.e., Burt's Bees, Tom's of Maine, and The Body Shop) (Todd, 2004). Both studies indicated that consumers' ecological awareness has had a major impact on the cosmetics industry and suggested that personal care companies consider the protection of ecology as their business philosophy to satisfy consumer needs. Several important marketing aspects with regard to environmental issues were discussed in these studies. Prothero and McDonagh (1992) emphasized eco-friendly packaging, waste generation, and animal welfare. On the other hand, Todd (2004) proposed a more pragmatic approach emphasizing a balance between product performance and environmental acceptability, which implies a balance between human beauty and natural beauty. Additionally, he interpreted aesthetics as "sensuous knowledge and perception of beauty" (Goldman, 2001, p. 256) and suggested a link between ethics and aesthetics in green consumerism research based on Brodsky's idea that "aesthetics is the mother of ethics" (as cited in Donskikh, 1995, p. 51). The results of Todd's analysis on marketing strategies of the three natural cosmetics companies (i.e., Burt's Bees, Tom's of Maine, and The Body Shop) supported a correlation between aesthetics and ethics. Hence, he suggested marketers in this industry make a connection between ethical production and beauty performance of products, which builds the connection between consumer choices of beauty products and ecological beauty.

Additionally, three studies have investigated consumer behavior toward organic cosmetics and toiletries in developing countries such as Thailand, Mexico, and Korea where green marketing is in an introductory stage compared to European countries (Johri & Sahasakmontri, 1998; Rajagopal, 2007; Seo, 2007). The findings of these studies indicated that consumer awareness of organic cosmetics and toiletries is enhanced by marketing communication, and buying decisions toward these items are influenced by product performance and value for cost. The studies showed that important product attributes such as ‘safe to skin’ and ‘natural ingredients’ contribute to a favorable attitude toward organic cosmetics and toiletries (Johri & Sahasakmontri, 1998; Seo, 2007). In addition, higher brand loyalty toward a national brand, rather than an international brand, was found in Thailand and Korea (Johri & Sahasakmontri, 1998; Seo, 2007).

As mentioned earlier, most existing research on the organic personal care industry has dealt with marketing strategies rather consumer behavior. The current study, therefore, will examine U.S. consumer purchase behavior of organic personal care products based on the TPB. The theoretical framework and development of hypotheses are discussed in the section below.

2.5. Theoretical Framework

2.5.1. Theory of Planned Behavior

The Theory of Planned Behavior (TPB) (Ajzen 1985) is used widely to understand the key determinants of deliberate human behavior. As a result, the TPB has received support in numerous research studies (Ajzen, 2001; Eagly & Chaiken, 1993) by many social psychologists and marketing researchers (Chen, 2007). The TPB is an enhanced model of the Theory of Reasoned Action, which only predicts behavior under people's volitional control. The TPB goes further by "incorporating the additional variable of perceived behavioral control (PBC) in the prediction of intentions and behaviors" (Bansal & Taylor, 2002, p. 408). The TPB hypothesizes that an individual's specific behavior is determined by his/her intention to perform the behavior. The TPB, further, predicts an individual's behavioral intention (BI) by three antecedents: attitude toward behavior (Att), subjective norm (SN), and perceived behavioral control (PBC).

Att refers to personal evaluations being favorable or unfavorable to perform the behavior and is determined by attitudinal beliefs (B_i) and outcome evaluation (E_i) (Ajzen, 1985). SN refers to the individual's perceptions of social pressure with which he/she should comply in regards to the behavior and is established by normative beliefs (NB_j) and the individual's motivation (MC_j) to follow what his/her significant others think (Ajzen, 1985). Finally, PBC refers to the degree of perceived ease or difficulty of

performing the behavior and is influenced by control beliefs (Ck) and perceived power of the control factor (Pk) (Ajzen, 1985). Thus, the formula to predict BI is presented as follows:

$$B \sim BI = Att \cdot w_1 + SN \cdot w_2 + PBC \cdot w_3 = (\sum B_i E_i) w_1 + (\sum N B_j M C_j) w_2 + (\sum C_k P_k) w_3,$$

(w₁, w₂, and w₃ refer to relative weights)

The TPB has been applied previously to predict green consumer behavior, and robustness of the theory has been confirmed (Bamberg, 2003; Chan & Lau, 2001; Chen, 2007; Kalafatis, Pollard, East, & Tsogas, 1999). For example, with timber-based products, Kalafatis et al. (1999) used the TPB to examine green purchasing behavior in Greece and the United Kingdom. Bamberg (2003) in Germany and Chen (2007) in Taiwan used this theory to predict eco-friendly behavior with brochures of green electronics and organic food products, respectively.

2.5.2. Application to This Study

In this study, the TPB is used as the framework to explain the antecedents of intention to buy organic skin/hair care products. Attitude, subjective norm, and perceived behavioral control are included in the proposed model. Consumer values is also added to the TPB as an antecedent of attitude toward purchasing organic skin and hair care

products, and past experiences with organic products is added as one of the predictors of behavioral intention. The research model of this study is presented in Figure 1. Specific relationships in the model are explained in the section below.

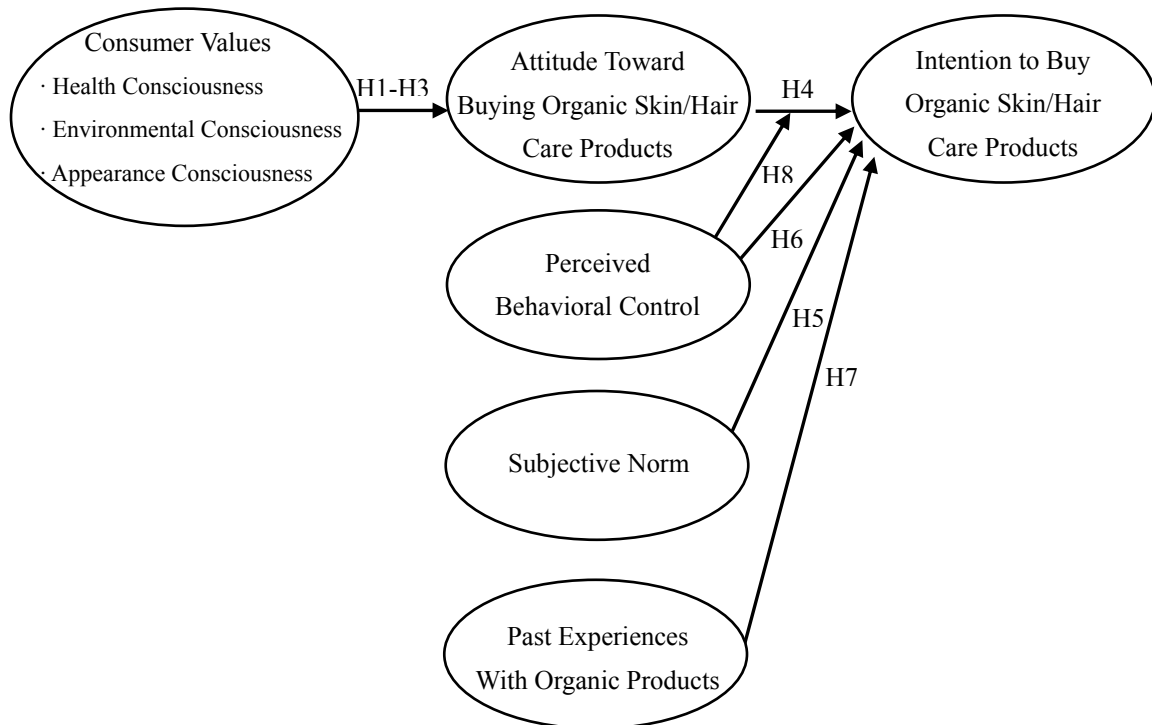


Figure 1. Research framework based on the TPB

2.6. Hypotheses Development

2.6.1. Consumer Values and Attitude Toward Buying Organic Skin and Hair Care Products

Several definitions of ‘value’ exist in various contexts. In one instance, value is considered “the consumer’s overall assessment of the utility of a product based on perceptions of what is received and what is given” (Zeithaml, 1998, p. 14), which focuses on consumer benefits or the worth of using a product. In another instance, value is defined as a belief about desirable end states (Feather, 1990; Rokeach, 1973; Schwartz, 1987), which focuses on a psychological aspect. The term ‘value’ in this study reflects the latter, which is viewed as the most fundamental element of an individual’s belief system (Vaske & Donnelly, 1999). This study expects that consumers with different value systems will show different behaviors toward organic personal care products because one’s values, such as important life goals or standards, are guiding principles in one’s life (Rokeach, 1973).

As mentioned earlier, attitudes toward a specific behavior refer to personal evaluations being favorable or unfavorable to perform the behavior (Ajzen, 1985). Accordingly, values may influence formation of an individual’s attitude by guiding him/her to look for objects that will satisfy his/her values (Grunert & Juhl, 1995; Poortinga, Steg, & Vlek, 2004). For example, people who value a healthy life may have

favorable attitudes toward objects that contribute to a healthy life (i.e., fitness club, dietary supplement, healthy food, etc.). Research has shown that values may provide a basis for consumers' evaluations and consumers' preferences for products (Allen, 2002; Howard, 1977).

Given the fact that values influence consumer attitudes, we need to know what kinds of values are related to consumer attitudes toward purchasing organic personal care products. According to the relevant literature on organic food consumption, it appears that values concerned with health and environment influence attitudes toward buying organic food (Baker et al., 2004; Chryssohoidis & Krystallis, 2005; Makatouni, 2002). These two values are proposed to be relevant to organic skin/hair care products because the products are related to skin health and environmental protection as discussed below. In addition, unlike food products, skin/hair care products affect consumers' appearances and consumers use these products to manage their appearances (Marcoux, 2000). Therefore, the current study proposes three consumer values that may influence attitudes toward buying organic skin and hair care products: health consciousness, environmental consciousness, and appearance consciousness. Each relationship is discussed in detail below.

Health consciousness

Health consciousness guides people to engage in healthy behaviors (Becker, Maiman, Kirscht, Haefner, & Drachman, 1977). Health conscious consumers care about the desired state of well-being and put forth an effort to maintain a healthy life (Gould, 1988; Kraft & Goodell, 1993; Newsom, McFarland, Kaplan, Huguet, & Zani, 2005). In the context of skin/hair care product purchases, consumers with high health consciousness may consider whether a product is safe to skin and body; therefore, they may be more seriously concerned with the types of ingredients used to make the product than are consumers with low health consciousness (Johri & Sahasakmontri, 1998).

Aveda's 1997 slogan emphasized product safety associating the health issue, "Would you moisturize with petroleum? What you put on your body should be as healthy and natural as what you'd put into it" (as cited in Seo, 2007, p. 2). The slogan asserts that what people apply topically to their bodies is as important as what they eat. Because organic skin/hair care products are known to exclude chemical ingredients such as sodium laureth sulfate (SLS), diethanolamine (DEA), preservatives derived from formaldehyde, mineral oil, and other non-sustainable ingredients that cause dermatitis and cancer (MacDonald, 2002), it is argued that a consumer's health consciousness is positively related to his/her attitude toward purchasing organic skin/hair care products. Thus, H1 is proposed as follows:

H1: Health consciousness will positively influence attitude toward buying organic skin/hair care products.

Environmental consciousness

Environmental consciousness guides people to make purchasing decisions that are greener (Schlegelmilch, et al., 1996). Environmentally conscious people are apt to change their purchasing behaviors to improve the environment (Chase, 1991), and they are willing to pay higher prices for green products (Ottman, 1992; Salzman, 1997).

Facing issues surrounding environmental destruction from harmful substances and animal testing of ingredients and/or finished products, the personal care industry has developed organic products produced without the use of pesticides, synthetic chemicals, and animal testing (Prothero & McDonagh, 1992). In addition, some companies have used recyclable packaging, which also reflects concern about disposal problems (Kumar, 2005). These changes made by companies may help reduce pollution from the production and discard processes.

Along with findings that a consumer's environmental awareness is viewed as a pre-condition for green consumption (Dembkowski, 1998; Peattie, 2001; Polonsky & Mintu-Wimsatt, 1995), environmental concern is an important determinant of consumer behavior toward organic products (Paladino, 2005). It is assumed that a consumer's

environmental consciousness is positively related to attitude toward purchasing organic skin/hair care products and thus H2 is proposed as follows:

H2: Environmental consciousness will positively influence attitude toward buying organic skin/hair care products.

Appearance consciousness

Appearance consciousness leads people to be interested in cosmetics, clothing, and accessories that express or alter their images (Lee & Lee, 1997). Appearance enhancement relates to personal goals to seek facial and bodily attractiveness (Cash & Cash, 1982; Miller & Cox, 1982; Todd, 2004). Consumption of personal care products is a purchasing behavior that satisfies one's needs for beauty and care of one's general appearance (Todd, 2004). Some people who strongly desire to maintain a youthful look and improve their appearances have been looking for chemical-free personal care products (Tirone, 2007). For example, hair loss and pimples, which are caused by pollutants and chemicals, influence an individual's appearance. It has been shown that organic hair care products can help reduce scalp irritations, boost hair growth, and keep hair healthy with plant-based ingredients such as grape seeds and rosemary, and that organic skin care products can help nourish and protect skin from irritants (Aburjai &

Natsheh, 2003).

Because organic skin/hair care products are made with a minimum of chemical and artificial substances and may provide softer and less harsh products than conventional counterparts, it is expected that a consumer's appearance consciousness is positively related to attitude toward buying organic skin/hair care products. Thus, H3 is proposed as follows:

H3: Appearance consciousness will positively influence attitude toward buying organic skin/hair care products.

2.6.2. Attitude toward Buying Organic Skin and Hair Care Products

According to the TPB (Ajzen, 1985), an individual is more likely to undertake a certain behavior if he/she has a positive attitude toward undertaking the behavior.

Numerous studies support the positive relationship between consumers' attitudes and behavioral intentions for green purchasing in different cultures, such as Asian, U.S., and European, and in different product categories, such as organic foods and timber-based products (Chan & Lau, 2001; Chen, 2007; Kalfatis et al., 1999; Mangnusson et al., 2003; Michaelidou & Hassan, 2008; Tarkiainen & Sundqvist, 2005). It is assumed that there is a

positive relationship between attitude towards buying organic cosmetics and purchase intention of them. Thus, H4 is proposed as follows:

H4: Consumers' attitudes toward buying organic skin/hair care products will have a positive influence on their intentions to buy organic skin/hair care products.

2.6.3. Subjective Norm on Buying Organic Skin and Hair Care Products

As mentioned earlier, subjective norm reflects one's perceived social pressure to perform a certain behavior. If consumers believe that significant others think organic skin care products are good, then consumers will have more intention to buy these products. On the contrary, if consumers believe that people important to them have negative opinions toward the products, then consumers will have less intention to purchase organic skin care products. Subjective norm has a significant effect on behavioral intention in the context of behavior related to skin management (Hillhouse, Turrisi, & Kastner, 2000), and a strong relationship between subjective norm and intention has been shown in research on green consumer behavior (Bamberg, 2003; Kalafatis et al., 1999). For example, previous studies on organic food purchases

supported the effect of subjective norm on purchase intention for organic foods (Chen, 2007; Sparks & Shepherd, 1992). Therefore, it is assumed that subjective norm may strongly influence purchase intention for organic skin/hair care products; hence, H5 is proposed as follows:

H5: Consumers' subjective norms will have a positive influence on their intentions to buy organic skin/hair care products.

2.6.4. Perceived Behavioral Control on Buying Organic Skin and Hair Care Products

As mentioned earlier, perceived behavioral control refers to the degree of control that an individual perceives over performing the behavior (Chen, 2007; Kang, Hahn, Fortin, Hyun, & Eom, 2006). Thus, those who perceive a higher degree of personal control tend to have stronger behavioral intention to engage in a certain behavior (Ajzen, 1991). In general, resources such as time, money, and skills are known as influencing factors on perceived behavioral control (Ajzen, 1991). In particular, when people believe they have more resources, their perceptions of control are high and hence their behavioral intentions increase. Therefore, it is assumed that intention to buy organic skin/hair care products is higher when consumers perceive more control over buying these products;

therefore, H6 is proposed as follows:

H6: Consumers' perceived behavioral control over buying organic skin/hair care products will have a positive influence on their intentions to buy organic skin/hair care products.

2.6.5. Past Experiences with Organic Products

Many researchers have argued that consideration of consumers' past behaviors can provide better predictions of behavioral intentions (Bagozzi, Wong, Abe, & Bergami, 2000; Conner & Armitage, 1998) based on the assumption that consumers' behaviors result from learning (Bentler & Speckart, 1979). Shim & Drake (1990) investigated the effect of previous non-store experiences on intentions to use the Internet for searching and purchasing and the results indicated that consumers with previous experiences have strong intentions to shop online. With respect to research on green purchasing behavior, consumers' past experiences with green products may be "crucial in forming the product-specific perception that would lead to future purchase intention"; in turn, consumers' past experiences influence their purchases or use of green products (D'Souza et al., 2006, p. 150). Therefore, it is expected that an individual's past green purchasing behavior, guided

by his/her values, may increase future intention to purchase other green products. It is assumed that consumers who have more experiences with other organic products are more likely to purchase organic skin/hair care products. Thus, H7 is proposed as follows:

H7: Consumers' past experiences with other organic products will have a positive influence on their intentions to buy organic skin/hair care products.

2.6.6. The Moderating Effect of Perceived Behavioral Control on Attitude-Intention Relationship

Although numerous studies have shown that a person may have a favorable attitude toward a certain behavior, he/she might not have the intention to accomplish the behavior when perceiving difficulties to do so (Chen, 2007). Vermeir and Verbeke (2006) claimed that the relationship between a consumer's attitude and intention is inconsistent because purchase intention for organic foods may be influenced by factors such as price. In the current economic recession, because of higher prices of green products compared with conventional products, consumers become more price-sensitive when purchasing green products (Mandese, 1991). If consumers perceive that they cannot afford organic personal care products at a higher price, they may choose not to purchase them even

though they have positive attitudes toward buying the products. That is, positive attitudes toward buying organic skin and hair care products may not always lead to intention to purchase the products. Accordingly, it is expected that the positive relationship between attitude and intention may be moderated by the degree of perceived behavioral control, which is defined as an individual's confidence in his/her ability to accomplish a given behavior (Ajzen, 1985). Conversely, the influence of attitude on intention to buy organic skin and hair care products will be less when an individual's perceived behavioral control is low, rather than high. Based on this argument, H8 is proposed as follows:

H8: The greater perceived behavioral control is, the stronger the positive relationship between attitude and intention to buy organic skin/hair care products.

2.7. Summary of Hypotheses

H1: Health consciousness will positively influence attitude toward buying organic skin/hair care products.

H2: Environmental consciousness will positively influence attitude toward buying organic skin/hair care products.

H3: Appearance consciousness will positively influence attitude toward buying organic skin/hair care products.

H4: Consumers' attitudes toward buying organic skin/hair care products will have a positive influence on their intentions to buy organic skin/hair care products.

H5: Consumers' subjective norms will have a positive influence on their intentions to buy organic skin/hair care products.

H6: Consumers' perceived behavioral control over buying organic skin/hair care products will have a positive influence on their intentions to buy organic skin/hair care products.

H7: Consumers' past experiences with other organic products will have a positive influence on their intentions to buy organic skin/hair care products.

H8: The greater perceived behavioral control is, the stronger the positive relationship between attitude and intention to buy organic skin/hair care products.

CHAPTER 3

RESEARCH METHODS

3.1. Overview

In the previous chapters, the research framework and hypotheses were developed. As depicted in the research framework based on the TPB, the present study examined consumer values as an antecedent of attitude toward buying organic skin/hair care products and examined attitude toward buying these products, subjective norm, perceived behavioral control, and past experiences with organic products as antecedents of purchase intention for organic skin/hair care products. In this chapter, the specific research procedures and methods used in this study are discussed.

3.2. Sample and Data Collection

The sample consisted of 207 U.S. consumers; the survey questionnaires were

distributed to individuals who agreed to participate and who were 18 years of age or older. An online survey was employed to assess purchasing behavior for organic skin/hair care products because an online survey may help reduce limitations such as geographic boundaries and respondent time pressure (Alreck & Settle, 2004; Curasi, 2001; Malhotra, 2004). A California company specializing in online marketing research recruited participants for this study at the beginning of April 2009. Using G*Power 3.0, a minimum required sample size was calculated (i.e., effect size $f^2=0.15$, α error prob=0.05, and power=0.95 as suggested by Cohen (1988)) and thus at least 129 respondents were needed. A quota sample drawn from 2.5 million online panel members was selected in terms of age and residence in the United States; respondents completed the fifteen-minute self-administered survey. Before data collection for the main survey, two pretests were conducted to validate and improve the survey instrument during March 2009.

A total of 2587 questionnaires was distributed to online panel members and 207 questionnaires were returned, giving a response rate of 8%. Of the 207 responses collected, 5 questionnaires were omitted due to a low rate of response. As a result, 202 usable questionnaires were obtained for data analysis.

3.3. Instrument Development

The survey questionnaire included questions on consumer values, attitude toward buying organic skin/hair care products, subjective norm, perceived behavioral control, past experiences with organic products, and purchase intention for organic skin/hair care products. Questions on demographic and socioeconomic characteristics were also included. The questionnaire was developed based on the TPB and prior literature.

Based on market share reports and store observations, the most available product from the skin care category and the hair care category were chosen as targets for the questionnaire: organic body lotion and organic shampoo. In the recent past, shampoo represented 30.3% of U.S. sales in natural/organic hair care (Morrison & Schmitt, 2001), while facial/body lotions and creams accounted for 58% of natural skin care sales (Tirone, 2007). To help participants understand organic personal care products, the definition of organic personal care products was provided and product labels from an organic body lotion and an organic shampoo were presented as examples on the survey questionnaire. In addition, the questionnaire guided participants to imagine themselves looking for a new body lotion/shampoo in a store that provides various options.

The survey questionnaire consisted of three sections. The first section contained questions about consumer values and past experiences with organic products. The second contained questions about attitude toward organic body lotion/shampoo, subjective norm, perceived behavioral control, and purchase intention for organic body

lotion/shampoo. The last section contained questions about demographic and socioeconomic characteristics (see Appendix A).

3.3.1. Consumer Values

Health consciousness (HC)

To capture participants' health consciousness, five items were assessed; Four items ($\alpha=0.92$) were adapted from Gould (1990) and one item was adapted from Cash and Labarge (1996). Each item (e.g., "I reflect on my health a lot," "I'm involved with my health") was measured on a seven-point scale anchored from *strongly disagree* (1) to *strongly agree* (7). These question items are listed in Table 1.

Environmental consciousness (EC)

To measure environmental consciousness, three items ($\alpha=0.80$) were chosen from the Environmental Attitudes and Knowledge Scales by Maloney and Ward (1973). Each item (e.g., "When I think of the ways industries are polluting the environment, I get frustrated and angry") was measured on a seven-point scale anchored from *strongly disagree* (1) to *strongly agree* (7). These question items are listed in Table 1.

Appearance consciousness (AC)

To measure appearance consciousness, four items (e.g. “What I look like is an important part of who I am,” “I’m usually aware of my appearance”) were assessed on a seven-point scale anchored from *strongly disagree* (1) to *strongly agree* (7). Three items ($\alpha=0.84$) were adapted from Cash and Labarge (1996) and one item was chosen from the Self-Consciousness Scale (SCS) by Fenigstein, Scheier, & Buss (1975). These question items are listed in Table 1.

3.3.2. Attitude (ATT)

To measure attitude toward buying organic skin/hair care products, four items were measured using the scale adapted from Conner, Warren, Close, and Sparks (1999), who reported a reliability of $\alpha=0.75$. Each item (e.g., “For me buying organic body lotion/shampoo would be”) was measured on a seven-point semantic differential scale (e.g., *bad/good*, *unpleasant/pleasant*). These question items are listed in Table 1.

3.3.3. Subjective Norm (SN)

Four items were used to measure participants’ subjective norm in purchasing

organic skin/hair care products. Two items ($\alpha=0.75$) were adapted from Bansal and Taylor (2002) and another two items ($\alpha=0.78$) were adapted from Lin (2007). Each item (e.g., “People who influence my decisions would approve of me buying organic body lotion/shampoo”) was measured on a seven-point scale anchored from *unlikely* (1) to *very likely* (7). These question items are listed in Table 1.

3.3.4. Perceived Behavioral Control (PBC)

Perceived behavioral control was measured using three items on a seven-point scale adapted from Ajzen (2002) and Bansal and Taylor (2002). Respondents were asked about perceived capability (e.g., “I believe that I have the resources and the ability to buy organic body lotion/shampoo,” “For me, buying organic body lotion/shampoo would be possible”) with the scale anchored from *strongly disagree* (1) to *strongly agree* (7). These question items are listed in Table 1.

3.3.5. Past Experiences (PE)

One item was measured (e.g., “please report the number of organic products purchased”).

3.3.6. Purchase Intention (PI)

Strength of participant intention to buy organic skin/hair care products was assessed with three items. Two items ($\alpha=0.96$) were adapted from Michalidou and Hassan (2008) and one item was adapted from Lin (2007). Each item was measured on a seven-point scale anchored from *strongly disagree* (1) to *strongly agree* (7) (e.g., “It is likely that I will purchase organic body lotion/shampoo,” “If organic body lotion/shampoo is available, I buy it”). These question items are listed in Table 1.

Construct	Item
<i>Health consciousness (HC)</i>	1. I reflect on my health a lot.
1-4: Gould (1990)	2. I'm generally attentive to my inner feelings about my health.
5: Cash & Labarge (1996)	3. I'm involved with my health.
	4. I'm aware of the state of my health throughout the day.
	5. Good health is of major importance in a happy life.
<i>Appearance consciousness (AC)</i>	1. What I look like is an important part of who I am.
AC1-3: Cash & Labarge (1996)	2. My appearance is responsible for much of what has happened to me in my life.
AC4: Fenigstein, Scheier, & Buss (1975)	3. If I could look just as I wish, my life would be much happier.
	4. I'm usually aware of my appearance.

Continued

Table 1. Survey instrument

Table 1 continued

Construct	Item
<i>Environmental consciousness (EC)</i> (Maloney & Ward, 1973)	<ol style="list-style-type: none"> 1. When I think of the ways industries are polluting the environment, I get frustrated and angry. 2. I would be willing to stop buying products from companies guilty of polluting the environment. 3. I become irritated when I think about the harm being done to plant and animal life by pollution.
<i>Attitude (ATT)</i> (Conner, Warren, Close, & Sparks, 1999)	<ol style="list-style-type: none"> 1. Unpleasant - Pleasant 2. Bad - Good 3. Harmful - Beneficial 4. Negative – Positive
<i>Subjective norm (SN)</i> 1-2: Bansal & Taylor (2002) 3-4: Lin (2007)	<ol style="list-style-type: none"> 1. People who influence my decisions would approve of me buying organic body lotion/shampoo. 2. People who are important in my life would approve of me buying organic body lotion/shampoo. 3. People who influence my behavior would encourage me to use organic body lotion/shampoo. 4. People who are important in my life would encourage me to use organic body lotion/shampoo.
<i>Perceived behavioral control (PBC)</i> 1-2: Ajzen (2002) 3: Bansal & Taylor (2002)	<ol style="list-style-type: none"> 1. For me buying organic body lotion/shampoo would be possible. 2. If I wanted to, I could easily buy organic body lotion/shampoo. 3. I believe that I have the resources and the ability to buy organic body lotion/shampoo.

Continued

Table 1 continued

Construct	Item
<i>Purchase Intention (PI)</i>	1. If organic body lotion/shampoo was available, I would buy it.
1-2: Michalidou and Hassan (2008)	2. It is likely that I will purchase organic body lotion/shampoo.
3:Lin (2007)	3. I plan to buy organic body lotion/shampoo.

Note. Items are the final items which determined based on the results of pretests

3.4. Data Analysis

To achieve the objectives of this study, descriptive statistics, factor analysis, reliability test, and multiple regression analysis were used with SPSS (Statistical Package for the Social Sciences). Descriptive statistics were used to depict demographic and socioeconomic characteristics. Factor analysis was performed to assure the unidimensionality of each construct, and Cronbach's alpha was obtained to examine the reliability of each scale.

After examining the psychometric characteristics of measures, averages of constructs with multiple items were obtained for use in Multiple Regression. Regarding past experiences with organic products, it was computed by assigning a value of 1 (*not at all*) to 7 (*a great many times*) to the responses (*never, once or twice, 3-5 times, 6-10 times, 11-15 times, 16-20 times and more than 20 times*). Multiple regression analysis was used

to test proposed hypotheses in this study. This technique aims to explain the variability of a dependent variable influenced by two or more independent variables in the linear regression equation (Hair, Black, Babin, Anderson, & Tatham, 2006). In addition, it accounts for the proportion of variability of the dependent variable predicted by the linear combination of the independent variable with R^2 , which indicates the goodness of fit of the model. Thus, two multiple regression formulas in this study were presented as follows:

$$ATT = a + \alpha_1 HC + \alpha_2 EC + \alpha_3 AC + \varepsilon_1$$

$$PI = \beta_0 + \beta_1 ATT + \beta_2 SN + \beta_3 PBC + \beta_4 PE + \beta_5 ATT \times PBC + \varepsilon_2$$

(α_i ($i=0,1,2,3$), β_i ($i=1,2,\dots,5$) refer to regression coefficients, $\varepsilon_1, \varepsilon_2$ refer to random errors)

The moderating effect of perceived behavior control on the relationship between attitude toward buying organic skin/hair care products and purchase intention for the products was examined by including an interaction term in the PI model.

CHAPTER 4

RESULTS

4.1. Overview

This chapter provides the research findings for the hypotheses proposed in this study. Prior to hypotheses testing, validity and reliability of the measurements are discussed. In addition, descriptive statistics for the research variables, as well as for the demographic information of the sample, are presented.

4.2. Preliminary Analysis

4.2.1. Pretests

Before data collection for the main survey, two pretests were conducted to validate and improve the survey instrument during March 2009. The first pretest was

conducted as an online survey to validate the survey instrument and obtain appropriate items regarding product attributes of a shampoo and a body lotion. Besides the initial questionnaire developed for the main survey, additional open-ended questions regarding the important product attributes of a shampoo and a body lotion were asked. 206 participants were recruited by an online market research company. The participants consisted of 100 females and 104 males (two respondents did not answer the question). The mean age of participants was 44.6 years, with a range of 19 to 86 years. With the first pretest data, factor analysis was performed to assure the unidimensionality of each construct, and Cronbach's alpha was obtained to examine the reliability of each scale using SPSS. Constructs having factor loadings below .40 (Raubenheimer, 2004) and Cronbach's alpha below .70 (Nunnally, 1978) are considered for revision. One construct, health consciousness, had a low reliability ($\alpha=.54$ with 4 items; I'm very self conscious about my health; I'm usually aware of my health; I see a doctor for a checkup yearly; I exercise regularly). In addition, regarding items measuring the product attributes of a shampoo and a body lotion, 'attractive packaging' was shown as the least important attribute for each product and thus it was deleted. Instead, 'shininess' and 'cleanness' were included as one of shampoo attributes and 'greasiness' as one of body lotion attributes, based on respondents' comments on the open-ended questions.

The construct of health consciousness which had a low reliability in the first

pretest was revised with additional relevant measures (13 items). In order to validate the revised health consciousness construct, the second pretest was conducted with 45 undergraduate students at a Midwest University. They were recruited from a consumer sciences class and received extra credit as an incentive to participate in the survey. Based on the results of factor analysis and reliability test, items were deleted when item-total correlations were lower than .50 (Doll & Torkzadeh, 1988) and factor loadings were lower than .40. Thus, out of 13 items, 5 items ($\alpha=.82$) were selected to use for the main survey.

4.2.2. Sample Description

Descriptive statistics of the sample consisted of respondents' demographic characteristics and past experiences with organic products. Detailed information on the sample is presented in Table 2.

Demographic and socioeconomic characteristics

The mean age of respondents was 44.3 years, with a range of 18 to 91 years. The sample was evenly distributed across the age groups. More specifically, 18.0% of the respondents were under 25, 19.0% were between the ages of 25 and 34, 14.0% were

between 35 and 44, 22.5% were between 45 and 54, 12.0% were between 55 and 64, and 14.5% were over 64. Approximately 55% of the respondents were married and 53.5% of the respondents were females. Approximately 87% of the respondents were Caucasian American, and other ethnic groups combined accounted for about 14%: Black/African American (6.5%), Hispanic/Latino American (4.5%), Asian American (2.0%), and Native American (0.5%). The education level of respondents varied. About 26.0% were high school graduates or below, 33.0% had completed a 2-year college or technical school, 28.5% held bachelor's degrees, and 12.5% held graduate or professional degrees. Thus, over 70% of respondents had completed a degree beyond high school, and the mean of annual income for respondents was in the range of \$37,500 - \$62,000. About 75% of the respondents lived in either urban (29.9%) or suburban (44.8%) areas; the remainder lived in a rural area (25.4%). Additionally, about 20% of the respondents lived in the West, 31.8% in the Midwest, 28.9% in the South, and 19.4% in the Northeast.

	Demographics	Frequency	%
Gender	Female	108	53.5
	Male	94	46.5
Marital Status ^a	Married	108	54.5
	Single	90	45.5

Continued

Table 2. Sample description

Table 2 continued

	Demographics	Frequency	%
Age ^b	18-24	36	18.0
	25-34	38	19.0
	35-44	28	14.0
	45-54	45	22.5
	55-64	24	12.0
	Over 64	29	14.5
Ethnic Background ^c	Caucasian American	174	86.6
	Black/African American	13	6.5
	Hispanic/Latino American	9	4.5
	Asian American	4	2.0
	Native American	1	.5
Education ^d	High school or below	52	26.0
	2-year college/Technical school	66	33.0
	4-year college	57	28.5
	Graduate or professional degree	25	12.5
Income ^e	Less than \$25,000	45	22.6
	\$25,000~\$49,999	72	36.2
	\$50,000~\$74,999	43	21.6
	\$75,000~\$100,000	20	10.1
	\$100,000+	19	9.5
Living Area ^f	Urban	60	29.9
	Suburban	90	44.8
	Rural	51	25.4

Note. ^a Four respondents did not answer the question; ^b Two respondents did not answer the question; ^c One respondents did not answer the question; ^d Two respondents did not answer the question; ^e Three respondents did not answer the question; ^f One respondents did not answer the question

Consumers' past experiences

Information about respondents' shopping experiences with organic products

was obtained (see Table 3). Nearly 60% of the respondents had purchased organic products over the past three months. Among this 60%, about 75% had experiences with organic food, 35.5% with organic dietary supplements, and 29.8% with organic personal care products. In the questionnaire, each respondent was asked to write down the name of a store where he/she had purchased organic products. Nearly 55% provided the name of a store; about 74.5% of these stores were traditional grocery stores and 25.5% were organic specialty stores. Furthermore, respondents were asked to rate the importance of each product (i.e., shampoo and body lotion) attribute. Each item was measured on a seven-point scale (1: strongly disagree – 7: strongly agree). For shampoo, ‘cleansing function ($M=6.12$),’ ‘value for the money ($M=5.81$),’ and ‘easiness to rinse ($M=5.57$)’ were considered important, and ‘skin safety ($M=5.75$),’ ‘moisture ($M=5.59$),’ and ‘greasiness ($M=5.47$)’ were considered the most important attributes for the body lotion. Finally, the respondents were asked to indicate how likely they perceived organic shampoo and body lotion to have particular product attributes. Most respondents perceived that organic shampoo would leave their hair clean ($M=5.00$) and that it would not be tested on animals ($M=5.17$), and they perceived that organic body lotion would be safe for their skin ($M=5.29$) and that it would not be tested on animals ($M=5.15$). Although respondents perceived that both products are ‘good value for the money’, the mean scores ($M_{\text{shampoo}}=3.92$, $M_{\text{body lotion}}=4.00$) were relatively lower than those of other attributes.

		Frequency	%
Number of organic products purchased (in past three months) ^a	Never	80	39.8
	Once or Twice	47	23.3
	3-5 times	38	18.8
	6-10 times	21	10.4
	11-15times	10	5.0
	16-20 times	2	1.0
	More than 20 times	3	1.5
Organic products purchased (in past three months) ^b	Foods	91	75
	Health supplements	43	35.5
	Personal care products	36	29.8
	Household products/cleaners	33	27.3
	Clothing	15	12.4
	Flowers	11	5.8
	Pet foods	7	2.9
	Other	1	.8
Store type	Organic specialty	38	25.4
	Traditional	88	74.6

Note. ^a One respondents did not answer the question; ^b Percentage is calculated by Frequency / the number of respondents who have purchased organic products in past three months.

Table 3. Respondents' past experiences with organic products

4.2.3. Mean Comparison

As mentioned earlier, this study examined consumer purchase behavior of organic personal care products with two product categories, organic shampoo and organic body lotion. Thus, prior to hypothesis testing, a paired-samples t-test was conducted to examine whether a significant difference in attitude and purchase intention existed

between the two products. Each item was measured on a seven-point scale. The results of the t-test revealed that there were no differences in attitude ($t(201)=-1.72$, $p=.09$) and purchase intention ($t(201)=-1.63$, $p=.10$) between the two products (see Table 4).

Therefore, the data for these two products were combined to test hypotheses. For the constructs with multiple measures, mean scores of the three consumer values (i.e., health consciousness, environmental consciousness, appearance consciousness) and the TPB constructs (i.e., attitude, subjective norm, perceived behavioral control, and purchase intention) were calculated for multiple regression analyses.

	<i>Shampoo</i> Mean (SD)	<i>Body Lotion</i> Mean(SD)	<i>df</i>	<i>t</i>	<i>Sig.</i>
Attitude	4.87 (1.47)	4.76 (1.66)	201	-1.72	.09
Purchase Intention	3.97 (1.73)	3.83 (1.83)	201	-1.63	.10

Table 4. Paired sample t-test for attitude and purchase intention in product type difference

4.2.4. Construct Validity (Factor Analysis)

To assess unidimensionality of each construct in the model, an exploratory factor analysis with varimax rotation was conducted on all 26 items. The number of factors was identified by eigenvalue and variance. The factor loadings of the 26 items

were ranged from .80 to .98. All items associated with each variable loaded on one factor. Thus, seven factors were extracted with an eigenvalue greater than 1.0, and each factor accounted for 68.67% to 95.65% of the variance.

Each factor was labeled according to its characteristics. Factor 1, labeled as ‘health consciousness,’ had an eigenvalue of 3.62 and accounted for 72.43% of the variance. Factor 2, labeled as ‘environmental consciousness,’ had an eigenvalue of 2.65 and accounted for 88.18% of the variance. Factor 3, labeled as ‘appearance consciousness,’ had an eigenvalue of 2.38 and accounted for 68.67% of the variance. Factor 4, labeled as ‘attitude,’ had an eigenvalue of 3.83 and accounted for 95.65% of the variance. Factor 5, labeled as ‘subjective norm,’ had an eigenvalue of 3.63 and accounted for 90.74% of the variance. Factor 6, labeled as ‘perceived behavioral control,’ had an eigenvalue of 2.81 and accounted for 93.58% of the variance. Factor 4 to Factor 6, the TPB predictors combined, accounted for 93.40% of the variance. Lastly, Factor 7, labeled as ‘purchase intention,’ had an eigenvalue of 2.86 and accounted for 95.52% of the variance. The results from the factor analysis are presented in Table 5.

4.2.5. Construct Reliability

To examine the internal consistency of the constructs, Cronbach’s alpha

coefficient, which is used widely to assess internal consistency, was calculated for each construct. In addition, items not correlating significantly with their own construct (item-total correlation below .50) are considered for elimination (Doll & Torkzadeh, 1988). Based on this premise, one item (item-total correlation .47) from the scale of appearance consciousness warranted exclusion, so only three items of appearance consciousness were retained. The coefficient generally increases when the correlations between items in a scale increase. Cronbach's alpha .70 or greater indicates reliability of the construct (Nunnally, 1978). Cronbach's alpha for these research constructs ranged from .77 to .98, which provides good support for the internal consistency reliability (see Table 5).

	Factor loading	Item-total correlation	% of variance explained	Cronbach's alpha
<i>Health consciousness</i>			72.43	.90
HC1	.81	.71		
HC2	.84	.75		
HC3	.88	.81		
HC4	.87	.78		
HC5	.85	.76		
<i>Environmental consciousness</i>			88.18	.93
EC1	.92	.83		
EC2	.95	.88		
EC3	.95	.88		

Continued

Table 5. Construct validity and reliability

Table 5 continued

	Factor loading	Item-total correlation	% of variance explained	Cronbach's alpha
<i>Appearance consciousness</i>			68.67	.77
AC1	.86	.66		
AC2	.80	.56		
AC3 ^a	(.67)	(.47)		
AC4	.83	.60		
<i>Attitude</i>			95.65	.98
ATT1	.98	.97		
ATT2	.98	.97		
ATT3	.96	.96		
ATT4	.97	.95		
<i>Subjective norm</i>			90.74	.97
SN1	.95	.91		
SN2	.96	.92		
SN3	.95	.91		
SN4	.95	.91		
<i>Perceived behavioral control</i>			93.58	.96
PBC1	.97	.93		
PBC2	.97	.93		
PBC3	.96	.91		
<i>Past experiences^b</i>				
<i>Purchase intention</i>			95.52	.98
PI1	.97	.93		
PI2	.98	.96		
PI3	.98	.96		

Note. ^a AC3 has a low item-total correlation and thus it was deleted; ^b The construct has a single indicator

4.3. Hypotheses Testing

The hypothesis test consisted of two parts. The first part of the proposed model, which examined the relationship between consumer values and attitude toward buying organic shampoo and body lotion (Hypotheses 1 through 3), was tested using multiple regression analysis. The second part of the proposed model established the relationships between attitude, subjective norm, perceived behavioral control, and past experiences with intention to buy organic shampoo and body lotion (Hypotheses 4 through 7), and it also examined the moderating effect of perceived behavioral control on the relationship between attitude and purchase intention toward organic shampoo and body lotion (Hypothesis 8). Hierarchical multiple regression analysis was conducted to test the second part of the proposed model.

4.3.1. Part 1 (Hypotheses 1-3)

H1: Health consciousness will positively influence attitude toward buying organic skin/hair care products.

H2: Environmental consciousness will positively influence attitude toward buying organic skin/hair care products.

H3: Appearance consciousness will positively influence attitude toward buying organic

skin/hair care products.

Before testing hypotheses 1 through 3, normality of the dependent variable was checked using the one sample Kolmogorov–Smirnov test. The result of the test revealed that the dependent variable follows the normal distribution ($p=0.10 > .05$). Thus, without any transformation on the variable, multiple regression analysis was conducted to test the hypotheses with attitude toward buying organic shampoo and body lotion as the dependent variable and three consumer values (i.e., health consciousness, environmental consciousness, and appearance consciousness) as independent variables. Additionally, multicollinearity was tested and serious multicollinearity was not detected (Tolerance $>.1$, VIF < 10) (Marquardt, 1970). The means and standard deviations of the variables are reported in Table 6. In this data analysis, listwise deletion was performed for missing data and thus the final sample size was $N=202$. The regression model that predicted attitude toward purchasing organic shampoo and body lotion from health consciousness, environmental consciousness, and appearance consciousness was statistically significant, $F(3, 198) = 36.62, p < .001$ and the R^2 value was .36. This indicated that the model explained 36% of the variance in attitude toward buying organic shampoo and body lotion (see Table 6).

The first hypothesis postulated that a consumer's health consciousness would positively influence attitude toward buying organic shampoo and body lotion. Health

consciousness did not influence consumers' attitudes when the effects of the other two predictors were considered ($\beta=.15$, $p=.08 > .05$). This means that, statistically, no significant relationship between health consciousness and attitude toward buying organic shampoo and body lotion was found. However, when simple regression was conducted, the result was significant, $F(1, 200) = 43.98$, $p < .001$ and the R^2 value was .18. Therefore, when health consciousness only was considered as a predictor of attitude, the significantly positive effect was revealed. Thus, H1 was not supported.

The second hypothesis postulated that a consumer's environmental consciousness would positively influence attitude toward buying organic shampoo and body lotion. The results revealed a significant relationship between environmental consciousness and attitude, $\beta=.46$, $p < .001$. The positive beta value indicates that respondents' environmental consciousness positively influenced their attitudes toward buying organic shampoo and body lotion. That is, consumers who are more environmentally conscious are likely to have more positive attitudes toward organic personal care products. Therefore, H2 was supported.

The third hypothesis postulated that a consumer's appearance consciousness would positively influence attitude toward buying organic shampoo and body lotion. In support of H3, the results showed respondents with higher appearance consciousness had more favorable attitudes toward buying organic personal care products, $\beta=.16$, $p=.04$.

Therefore, H3 was supported.

Predictor	Min.	Max.	Mean	SD	Regression analysis				Collinearity	
					β	S.E.	t	Sig.	TOL	VIF
HC	1.00	7.00	4.92	1.23	.15	.09	1.75	.08	.75	1.33
EC	1.00	7.00	4.72	1.48	.46	.07	6.78	.00	.63	1.60
AC	1.00	7.00	4.46	1.28	.16	.08	2.08	.04	.73	1.37

Note. $R^2=.36$, $F(3, 198) = 36.62$, $p < .001$.

Table 6. Multiple regression analysis predicting attitude toward buying organic personal care products

4.3.2. Part 2 (Hypotheses 4-8)

H4: Consumers' attitudes toward buying organic skin/hair care products will have a positive influence on their intentions to buy organic skin/hair care products.

H5: Consumers' subjective norms will have a positive influence on their intentions to buy organic skin/hair care products.

H6: Consumers' perceived behavioral control over buying organic skin/hair care products will have a positive influence on their intentions to buy organic skin/hair care products.

H7: Consumers' past experiences with other organic products will have a positive

influence on their intentions to buy organic skin/hair care products.

H8: The greater perceived behavioral control is, the stronger the positive relationship between attitude and intention to buy organic skin/hair care products.

Before testing hypotheses 4 through 8, normality of the dependent variable was checked using the one sample Kolmogorov–Smirnov test. The result of the test revealed that the dependent variable follows the normal distribution ($p=0.20 > .05$). Additionally, multicollinearity was tested and serious multicollinearity was not detected (Tolerance $>.1$, VIF < 10) (Marquardt, 1970). In the second part of the study, hence without any transformation on the variable, hierarchical multiple regression analysis was employed to predict purchase intention toward organic shampoo and body lotion and the independent variables were entered in three steps. At Step 1, for the investigation of consumers' intentions to buy organic shampoo and body lotion, the three TPB constructs were entered. At Step 2, consumers' past experiences with organic products were entered into the first hierarchical regression model. In this way it was possible to examine the predictive utility of the TPB variables and the additional predictive utility of consumers' past experiences. At Step 3, in order to examine the moderating role of perceived behavioral control on the attitude-purchase intention relationship, the interaction term between attitude and perceived behavioral control as the independent variable was added to the second hierarchical regression model. The means and standard deviations are

reported in Table 7. In this data analysis, listwise deletion was performed for missing data, and thus the final sample size was $N=201$.

At Step 1, inclusion of attitude, subjective norm, and perceived behavioral control explained 64% of the variance in purchase intention, $F(3, 197) = 114.48, p < .001$ (see Table 7). Thus, the three predictors combined together significantly predicted purchase intention toward organic shampoo and body lotion. Additionally, the results revealed that all three predictors had significant relationships with purchase intention.

H4 proposed that attitude toward buying organic shampoo and body lotion would positively influence purchase intention for those products. The results showed a positively significant relationship between attitude and purchase intention, $\beta=.39, p < .001$. That is, the results indicated that the more positive the attitude toward buying organic shampoo and body lotion, the higher the purchase intention toward the products. Therefore, H4 was supported.

H5 proposed that subjective norm would positively influence purchase intention toward organic shampoo and body lotion. The results showed a significant relationship between subjective norm and purchase intention, $\beta=.31, p < .001$. The beta value indicates that subjective norm positively influenced respondents' purchase intentions toward buying organic shampoo and body lotion. That is, the results indicated that the more positive the subjective norm on buying organic shampoo and body lotion,

the higher the purchase intention toward the products. Therefore, H5 was supported.

H6 proposed that perceived behavioral control would positively influence purchase intention toward organic shampoo and body lotion. A significant relationship between perceived behavioral control and purchase intention was also revealed, $\beta=.19$, $p=.00$, implying that higher perceived behavioral control increases purchase intention toward buying organic shampoo and body lotion. Thus, H6 was supported.

At Step 2, the addition of consumers' past experiences with organic products was related to a significant improvement in the variance explained (R^2 change = .02, F change = 14.08, $p < .001$) (see Table 7). H7 proposed that consumers' past experiences with organic products would positively relate to their purchase intentions toward organic shampoo and body lotion. The results revealed a significant relationship between consumers' past experiences and purchase intention, $\beta=.22$, $p < .001$. The positive beta value indicates that respondents who had more experiences with organic products were likely to purchase organic shampoo and body lotion. Thus, H7 was supported.

At Step 3, before conducting the regression analysis, two variables (attitude and perceived behavioral control) were standardized to produce revised sample means of zero to reduce the problems of multicollinearity and to enhance the interpretation of the nature of a significant interaction. To assess the moderating effect of perceived behavioral control, the interaction term between attitude and perceived behavioral control as the

independent variable was added to the regression equation at Step 2.

Predictor	Mean	SD	Step 1		Step 2		Collinearity	
			β	t	β	t	TOL	VIF
ATT	4.81	1.49	.46	-6.35**	.39	5.46**	.43	2.35
SN	4.24	1.60	.32	5.12**	.31	5.13**	.53	1.90
PBC	4.78	1.58	.23	4.08**	.19	3.43*	.63	1.58
PE	2.26	1.39			.22	3.75**	.75	1.38
ΔR^2			.64		.02			
ΔF			114.48**		14.08**			

Note. * $p < 0.01$; ** $p < .001$. The mean of PI is 3.90 (SD=1.68).

Table 7. Hierarchical regression analysis predicting purchase intention for organic personal care products

A significant increment in the amount of the variance was explained when the interaction term between attitude and perceived behavioral control was included. The addition of the interaction term accounted for a further 3% of the variance in purchase intention (R^2 change = .03, F change = 16.95, $p < .001$) (see Table 8), indicating that the attitude-intention relationship is moderated by perceived behavioral control. Therefore, H8 was supported. The final model with all variables under consideration accounted for 69% of the variance in purchase intention toward organic shampoo and body lotion, $F(5, 195) = 85.64$, $p < .001$ (see Table 8).

Predictor	<i>Step 2</i>		<i>Step 3</i>			Collinearity	
	β	t	β	$\beta_{\text{standardized}}$	t	TOL	VIF
ATT	.39	5.46**	.43	.38	6.15**	.42	2.38
SN	.31	5.13**	.33	.32	5.71**	.52	1.92
PBC	.19	3.43*	.23	.22	4.22**	.62	1.63
PE	.22	3.75**	.17	.14	2.97*	.72	1.40
ATTXPBC			.10	.18	4.17**	.86	1.16
ΔR^2	.66		.03				
ΔF	95.08**		16.95**				

Note. * $p < 0.01$; ** $p < .001$

Table 8. Hierarchical regression analysis predicting the moderating effect of perceived behavioral control on attitude-purchase intention relationship

Furthermore, the significant interaction between attitude and perceived behavioral control was also examined using simple slope analysis (Aiken & West, 1991), which assessed the significance of the regression coefficients for attitude at two levels, low (one SD below the mean) and high (one SD above the mean) levels of perceived behavioral control. This analysis shows how the relationship between attitude and purchase intention varies as a function of perceived behavioral control. That is, attitude has a weaker influence on purchase intention when the level of perceived behavioral control is low, relative to when it is high (see Figure 2).

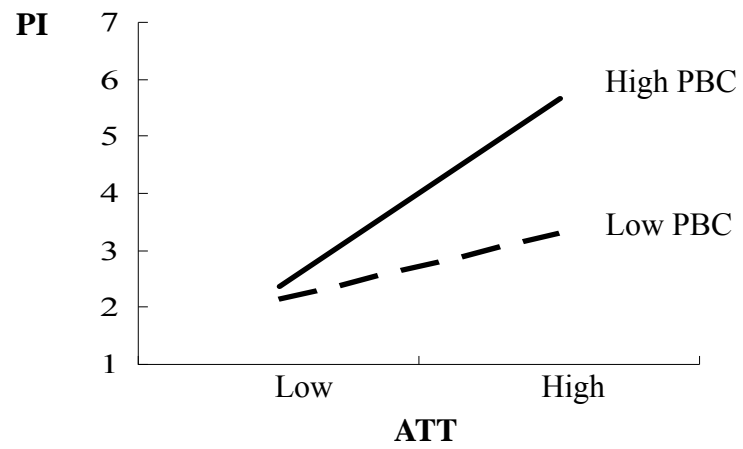


Figure 2. Simple regression slopes of purchase intention on attitude for low and high levels of perceived behavioral control

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1. Overview

This chapter consists of three sections. In the first section, the empirical research findings are summarized according to proposed hypotheses. Research implications and contributions based on these findings are discussed in the second section. Finally, limitations of the study and recommendations for future research are presented.

5.2. Empirical Findings

The present research sought to apply the TPB by Ajzen (1985) to investigate consumer purchase behavior of organic personal care products. First, this research examined how consumer values (i.e., health consciousness, environmental consciousness, and appearance consciousness) influence consumers' attitudes toward buying organic

personal care products. Secondly, the study investigated how the three TPB variables (i.e., attitude, subjective norm, and perceived behavioral control) affect consumers' intentions to buy organic personal care products. Furthermore, the relationship between consumers' past experiences with organic products and their intentions to buy organic personal care products was examined. Lastly, this research explored the moderating role of perceived behavioral control on the relationship between attitude and purchase intention toward organic personal care products. Table 9 provides a summary of the hypotheses test results.

5.2.1. The Effect of Consumer Values on Attitude Toward Buying Organic

Personal Care Products

The relationships between consumer values and attitude toward buying organic personal care products were examined. Health consciousness, environmental consciousness, and appearance consciousness were examined as consumer values. The effects of these three consumer values on attitude were tested with multiple regression analysis (H1 to H3).

Health Consciousness

The research findings revealed that a consumer's health consciousness has no

impact on attitude toward buying organic personal care products. This result contrasts with the researcher's expectation, and it is inconsistent with the findings of prior research, which suggest that consumers with high health consciousness are concerned with product ingredients and look for skin-safe products (Johri & Sahasakmontri, 1998). Although this study found an insignificant relationship between health consciousness and attitude, it does not necessarily mean that health concern is not important for using organic personal care products, as skin health is related to appearance enhancement. In addition, when only health consciousness was considered as a determinant of attitude toward buying organic personal care products, the positive relationship between health consciousness and attitude became significant. Thus, the results indicate that attitude toward buying organic personal care products is explained more by environmental consciousness and appearance consciousness than by health consciousness, whereas health consciousness played a significant role in explaining attitude and an important motives for buying organic foods (Tarkiainen & Sundqvist, 2005; Wandel & Bugge, 1997).

Environmental Consciousness

As previous researchers have emphasized the influence of environmental concerns on consumer behavior regarding green products, the research findings provided supporting evidence that a consumer's environmental consciousness has a significant

effect on his/her evaluation of buying organic personal care products. That is, highly environmentally conscious people are likely to have favorable attitudes toward buying organic personal care products. This result is consistent with previous research showing that environmental concern is an important determinant of consumer behavior toward organic products (Paladino, 2005). Among the three consumer values, environmental consciousness was found to be the most important in predicting consumers' attitudes toward organic personal care products.

Appearance Consciousness

As expected, the research findings revealed that consumers' appearance consciousness influences their attitudes toward buying organic personal care products. That is, people have more favorable attitudes toward buying organic personal care products when they are conscious about their appearances. This finding provided supporting evidence that appearance conscious consumers might look for chemical-free products to improve their appearance (Tirone, 2007).

5.2.2. Effects of Three TPB Constructs and Past Experiences on Purchase Intention

The Theory of Planned Behavior (TPB) (Ajzen, 1985) was used as the

theoretical framework to predict consumers' intentions to buy organic personal care products. With the addition of past experiences to the TPB model, this research examined attitude, subjective norm, perceived behavioral control, and past experiences as predictors of consumers' purchase intentions. The influences of the four predictors on purchase intention were tested with hierarchical multiple regression analysis (H4 to H6). In the regression analysis, the modified TPB that included past experiences was able to explain 67% of the variance in purchase intentions. The results from the regression analysis supported that all four predictors have significant relationships with purchase intention toward organic personal care products.

Attitude Toward Buying Organic Personal Care Products

The results of this study showed that the relationship between attitude toward buying organic personal care products and purchase intention was positive and significant. That is, the more favorable attitude toward buying organic personal care products, the greater intention to buy the products consumer have. This result is in line with previous research on consumer purchase behavior of green products, which reported the strong association between attitude and intention. The findings of this study also indicated that among four predictors of the purchase intention, attitude is the most significant predictor of purchase intention for organic personal care products, in line with prior research

showing that attitude has a relatively strong correlation with intention among three predictors of behavioral intention (Azjen, 1991; Conner & Armitage, 1998; Trafimow & Finlay, 1996).

Subjective Norm on Buying Organic Personal Care Products

The results of this study revealed that following attitude, subjective norm is the second most important antecedent of purchase intention toward organic personal care products. This result is consistent with previous research on green consumer behavior, which indicates a strong positive relationship between subjective norm and purchase intention (Bamberg, 2003; Kalafatis et al., 1999). As prior research has shown that subjective norm has a significant effect on behavioral intention in the context of behavior related to skin management (Hillhouse, Turrisi, & Kastner, 2000), the result also provided supporting evidence that subjective norm has a positive relationship with intention to buy organic personal care products. If consumers believe that significant others think organic skin care products are good, then consumers have greater intentions to buy these products than when people important to them have negative opinions toward the products.

Perceived Behavioral Control on Buying Organic Personal Care Products

In examining the influence of perceived behavioral control on intention to buy

organic personal care products, the results revealed that perceived behavioral control was positively related to purchase intention toward the products, in line with many previous studies (e.g., Kang et al., 2006). In particular, when people believe they have more resources to buy organic personal care products, their purchase intentions are higher than when they perceive less control over buying the products. That is, if people perceive that resources (i.e., money) are unavailable to buy organic personal care products, this fact is likely to interrupt their purchase intentions toward the products. However, perceived behavioral control proved to be a less important antecedent to predict intention to buy organic personal care products than did past experiences, which is discussed in the following section.

Past Experiences with Organic Products

As previous studies have suggested that consumers' past behaviors can provide better predictions of behavioral intentions (Bagozzi, Wong, Abe, & Bergami, 2000; Conner & Armitage, 1998), the addition of past experiences to the TPB model improved the prediction of consumers' purchase intentions. As discussed above, the influence of past experiences with organic products was greater than that of perceived behavioral control. The results revealed that past experiences with organic products had a positive effect on purchase intention toward organic personal care products. Further, the more

experience with organic products an individual had, the higher his/her intention to buy organic personal care products was. This finding supported the claim by D'Souza et al. (2006) that consumers' past experiences with green products influence their purchase intentions toward other green products.

5.2.3. The Moderating Effect of Perceived Behavioral Control on Attitude-Purchase Intention Relationship

In order to examine the moderating effect of perceived behavioral control on the relationship between attitude and purchase intention toward organic personal care products, it was first hypothesized that attitude has a positive influence on intention. As mentioned earlier regarding this study, all three TPB predictors were positively correlated with intention to buy organic personal care products. With this supporting evidence, the moderating role of perceived behavioral control on the attitude-intention relationship (H7) was tested with hierarchical multiple regression analysis. The attitude-perceived behavioral control interaction term as a predictor of purchase intention was added to the modified TPB. The results of the hierarchical regression analysis revealed that the interaction term had a significant effect on purchase intention, indicating that perceived behavioral control moderates the attitude-intention relationship. That is, the strength of

the attitude-intention relationship increased as perceived behavioral control increased. As a person might not have the intention to accomplish a behavior when perceiving difficulties to do so even though he/she might have a favorable attitude toward the behavior (Chen, 2007), this finding indicates that the strength of the relationship between attitude and purchase intention toward organic personal care products varies depending on the level of perceived behavioral control.

	Hypothesis	Result
Part 1		
H1	Health consciousness → Attitude	Not supported
H2	Environmental consciousness → Attitude	Supported
H3	Appearance consciousness → Attitude	Supported
Part 2		
H4	Attitude → Purchase intention	Supported
H5	Subjective norm → Purchase intention	Supported
H6	Perceived behavioral control → Purchase intention	Supported
H7	Past experiences with organic products → Purchase intention	Supported
H8 ^a	Perceived behavioral control → (Attitude→Purchase intention)	Supported

Note. ^a Moderating effect was tested on the relationship in parenthesis.

Table 9. Summary of the hypotheses test results

5.3. Implications

5.3.1. Theoretical Implications

This study attempted to examine U.S. consumers' purchasing behaviors of organic personal care products based on the Theory of Planned Behavior. The study provides more insight into consumer behavior regarding organic personal care products by examining the factors that influence consumers' attitudes toward buying organic personal care products and consumers' purchase intentions for the products. Although a number of studies have investigated consumers in the context of the European organic food industry, few have examined the U.S. organic industry. Understanding factors that influence consumers' evaluations and purchase intentions for organic personal care products is important for the retailers in this industry.

First, this research examined consumer values (i.e., health consciousness, environmental consciousness, and appearance consciousness) as an antecedent of attitude toward buying organic personal care products. Although the effect of health consciousness on attitude was not fully supported when combined with environmental consciousness and appearance consciousness, environmental consciousness was observed to be the most important predictor of attitude toward buying organic personal care products. These results are in line with previous studies that showed that consumers who are concerned about the environment are likely to engage in green consumption (Bang,

Ellinger, Hadjiarcou, & Traichal, 2000). Therefore, this study's findings provided the robustness of consumer values, indicating that green consumerism encourages consumers to engage in green consumption despite the weakened U.S. economy. Additionally, appearance consciousness also has a positive effect on attitude toward buying organic personal care products. This result provides a difference in consumer purchase behavior regarding organic foods and organic personal care products.

Second, in developing the research model, this study added consumers' past experiences to the TPB constructs as an independent variable. The results showed that this variable (consumers' past experiences) provides better prediction of behavioral intentions, and that all four predictors (i.e., attitude, subjective norm, perceived behavioral control, and past experiences) are significantly correlated with purchase intention for organic personal care products. The findings of this research revealed that an individual's past experiences with other organic products have a significant impact on purchase intention for organic personal care products, which provides evidence that an organic lifestyle is reflected in an individual's consumption pattern.

Lastly, this study extended an application of the TPB by examining the moderating influence of perceived behavioral control on the relationship between attitude toward buying organic personal care products and purchase intention for them. The addition of the attitude X perceived behavioral control interaction term yield a significant

improvement on the TPB model. This finding provides empirical evidence that the strength of the relationship between attitude and purchase intention toward organic personal care products varies depending on the level of perceived behavioral control.

5.3.2. Managerial Implications

This research provides valuable insights for organic personal care product retailers and manufacturers by indicating the significant impact of a consumer's environmental consciousness on his/her evaluation being favorable or unfavorable to buy their products. Even for beauty related products, environmental consciousness plays a more crucial role in consumers' positive attitudes toward organic personal care products than does appearance consciousness. In addition, the research findings revealed that attitude is the most important determinant of purchase intention among the four predictors. The findings of this study suggest that creating a positive attitude toward buying organic personal care products may be a significant consideration for retailers to increase consumers' purchase intentions for the products. As a result, this study suggests that retailers develop effective marketing strategies emphasizing ecological beauty or product safety to satisfy the values of potential consumers.

In addition, as this research shows the significant moderating role of perceived

behavioral control on the relationship between attitude and behavioral intention, a favorable attitude toward buying organic personal care products more strongly influences purchase intention for the products at the higher level of perceived behavioral control. In the current economic recession, people might perceive organic products as being more expensive than alternatives. However, preliminary analysis also indicated that people considered 'value for the money' as an important product attribute when they purchase a shampoo or a body lotion. This research suggests, then, that retailers might try to change consumers' perceptions of higher prices to affordable prices using marketing strategies (e.g., discount, advertisement, new product development) and thus it would make consumers believe that they would be capable to buy organic personal care products. Consequently, increasing consumers' perceived behavioral control over purchasing organic personal care products may possibly create a stronger relationship between their attitudes and purchase intentions toward the products.

Furthermore, the results of this study showed that consumers' past experiences with organic products positively influenced their purchase intentions for organic personal care products. Over 70% of respondents who had experiences with organic products have purchased organic foods. The findings of this study suggest that organic personal care product retailers might attract potential consumers by displaying their products near the organic food sections at a grocery store. Or organic personal care product retailers might

develop combined management activities called co-marketing with organic food product retailers. Co-marketing strategies may result in an increase of potential consumers' awareness of organic personal care products. Moreover, the findings indicated that more people were likely to purchase organic products at a conventional grocery store than at an organic specialty store. Thus, organic product retailers might increase the availability of organic personal care products at conventional stores, as well as at organic specialty stores, in order to enlarge consumers' accessibility to the products.

Ultimately, this research will also benefit consumers. If retailers and marketers devise their marketing strategies based on the research suggestions, consumers may have organic personal care products in the market with more affordable prices. In addition, consumer satisfaction with these organic personal care products would increase if these marketers offer organic personal care products that enhance their appearances as well as that are more ecologically friendly.

5.4. Limitations

Several potential limitations should be considered for an appropriate interpretation of the research findings. First, generalizability of the findings should be cautioned because the sample might be biased against representing the general U.S. population. Although the attempt was to capture a sample representative of the population,

the demographics of the sample showed that a majority of respondents were Caucasian Americans (86.6%) and were living in either urban or suburban areas (75%). In addition, compared to the U.S. population (28% had attained at least a bachelor's degree) (US Census Bureau, 2005), the sample was skewed to the higher education level (i.e., 41% had held at least a bachelor's degree and 74% had completed at least a 2-year college). Therefore, the research findings may not be generalizable to other populations with regard to living area, ethnic identity, and education level.

Second, since an online survey was employed for this research, only people who had access to a computer and the Internet were able to participate in this study. Thus, lower education and living in rural areas might be linked to less accessibility to the Internet for these respondents. In addition, although two scenarios guided respondents to imagine themselves in potential purchase situations, an online survey may not adequately reflect the reality of shopping for organic personal care products.

Lastly, two product categories (i.e., shampoo and body lotion) of personal care products were selected to examine consumer purchase behavior of organic personal care products. Although the results revealed there were no product differences in attitude and intention, the findings of this study may not be applicable to other product categories of organic personal care products or to other organic products.

5.5. Suggestions for Future Research

Based on the findings of this study and the study's limitations, several suggestions for future research are made. First, further study needs to obtain greater generalizability with respondents from diverse population groups with regard to ethnicity, education level, and living area (urban vs. rural) and generalizability with a variety of product categories.

Second, this study conducted an online survey. Even though the online survey provided the sample from a variety of geographic locations in the US, only people who had access to a computer and the internet were able to participate in this study. In addition, even though two scenarios guided respondents to imagine themselves in potential purchasing situation, because of its reliance on the hypothetical, the online survey might not adequately reflect the reality of shopping for organic personal care products. Thus, future research could use both methods, an online and offline survey such as a mall-intercept method, to compensate for the weakness of each method.

Third, this research was designed as a cross-sectional study and thus it did not reflect consumers' actual purchase behaviors. Future research could conduct a longitudinal study to examine whether consumers' purchase intentions positively affect their actual purchase behaviors and how, with application of the TPB model, consumers' past experiences affect their actual purchases of organic personal care products.

Additionally, conducting the longitudinal study may also allow examination of whether consumer values are considered enduring beliefs.

In addition, as suggested that the TPB is open to the addition of predictors (Ajzen, 1991), future research could consider other external variables, such as consumers' product knowledge, to examine the effects on the TPB variables. Doing so would provide valuable theoretical and practical implications. Product knowledge refers to how much a consumer knows about a product and product knowledge is related to consumer awareness (Lin & Zhen, 2005). It is also known that consumer knowledge influences consumer decision behaviors such as product evaluation, attitude, and purchase decision (Lin & Chen, 2006; Zhu, 2004). However, no research exists on the role of consumer knowledge of organic products on attitude and purchase intention toward the products. Future research could use the TPB model to investigate the effect of consumer knowledge of personal care products on attitude and purchase intention toward the products. It might imply that advancing a consumer's knowledge of organic products and product benefits would facilitate a consumer's organic purchasing behavior.

Lastly, this study investigated consumers' attitudes and purchase intentions toward buying organic personal care products based on the TPB. It would also be valuable to explore the factors that influence consumers' attitudes and purchase intentions toward stores offering organic products. Future research might help organic product

retailers understand how consumer values influence attitude toward the stores, which is based on evaluations of store attributes. In addition, it could suggest that establishing a positive attitude toward stores might play an important role in increasing consumers' store purchases as well as enhancing store preferences. As a result, this would provide additional practical marketing implications for retailers and marketers.

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APPENDIX A: Online Survey Questionnaire

Thank you very much for responding this request!

This survey examines your intention to purchase organic personal care products and asks about your experience with organic products. It will take about 15 minutes to finish the questionnaire and your responses will be kept confidential. Your participation is voluntary and will enable us to have a better understanding of consumption behavior of organic personal care products.

Please return your completed questionnaire. Thank you again for your cooperation.

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Organic personal care products are made with ingredients without or with a minimum use of chemicals, pesticides, herbicides, and fertilizers.

They include product categories such as skin care (e.g. body lotion, facial cleanser) and hair care (e.g. shampoo, conditioner). Here are examples of product ingredients for an 'organic shampoo' and an 'organic body lotion'.

<p>Nourishing Lavender Organic Shampoo</p> <p>Lavender Shampoo will gently cleanse your scalp and hair while adding vital nutrients. Certified organic lavender floral water and healing botanicals nourish, soothe, and revitalize dry or stressed hair for healthy luster and shine. No animal testing.</p> <p>Ingredients:</p> <p>An Infusion of Yucca, Calendula, Chamomile, Kelp and Ginkgo Biloba, Certified Organic Lavender Floral Water, Olefine Sulfonate, Cocamidopropyl Betaine, Cocamide DEA, Organic Aloe Vera Gel, Vitamin B-5, Soy Protein, Jojoba Oil, Tetrasodium Edta, Vegetable Glycerine, Citric acid, Pure Essential Oils of Lavender, Ylang Ylang, Lemon, and Lime.</p>	<p>Every day Calm & Nourishing Body Lotion</p> <p> With extracts of Rosemary & Anti-Oxidizing Pomegranate Oil</p> <p>Ingredients:</p> <p>Mixed with Anti-Oxidant rich Pomegranate & Macadamia Nut Oils, a concentrated Aloe Vera and Vitamin A packed Carrot Oil. Scented with a comforting and uplifting blend of Green Mandarin, Ylang Ylang & Rose Geranium to tone the body whilst helping to relax the mind.</p> <p>Contains 94.24% certified organic ingredients</p>
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- 1 Over the past three months, which, if any, of following [Types of Organic Products] have you purchased? Please check ALL that apply.

- ☐ Foods
- ☐ Clothing
- ☐ Health supplements
- ☐ Household products/cleaners
- ☐ Pet foods
- ☐ Flowers
- ☐ Personal care products
- ☐ No purchase
- ☐ Other, please specify

- 2 Please report the number of organic products that you have purchase over the past three months.

- ☐ Never
- ☐ Once or twice
- ☐ 3-5times
- ☐ 6-10times
- ☐ 11-15times
- ☐ 16-20times
- ☐ More than 20times

- 3 Please report the name of store where you usually shop for organic products.

- 4 Please rate the following statements by clicking the number that best represents your belief.

1 2 3 4 5 6 7
Strongly Disagree Average Strongly Agree

What I look like is an important part of who I am.

1 2 3 4 5 6 7

My appearance is responsible for much of what has happened to me in my life.

1 2 3 4 5 6 7

If I could look just as I wish, my life would be much happier.

1 2 3 4 5 6 7

I'm usually aware of my appearance.

1 2 3 4 5 6 7

- 5 Please rate the following statements by clicking the number that best represents your belief.

1	2	3	4	5	6	7
Strongly Disagree			Average			Strongly Agree
When I think of the ways industries are polluting the environment, I get frustrated and angry.						
1	2	3	4	5	6	7
I would be willing to stop buying products from companies guilty of polluting the environment.						
1	2	3	4	5	6	7
I become irritated when I think about the harm being done to plant and animal life by pollution.						
1	2	3	4	5	6	7
I reflect on my health a lot.						
1	2	3	4	5	6	7
I'm generally attentive to my inner feelings about my health.						
1	2	3	4	5	6	7
I'm involved with my health.						
1	2	3	4	5	6	7
I'm aware of the state of my health throughout the day.						
1	2	3	4	5	6	7
Good health is of major importance in a happy life.						
1	2	3	4	5	6	7

- 6 Please rate the following statements by clicking the number that best represents your stance.

1	2	3	4	5	6	7
Strongly Disagree			Average			Strongly Agree
My personal identity is very important to me.						
1	2	3	4	5	6	7
Being able to take care of myself is a primary concern for me.						
1	2	3	4	5	6	7
I'm comfortable with being the center of attention due to praise or rewards.						
1	2	3	4	5	6	7
I enjoy being unique and different from others.						
1	2	3	4	5	6	7
For the most part, I make decisions on my own.						
1	2	3	4	5	6	7
It doesn't bother me if my idea or behavior is different from others.						
1	2	3	4	5	6	7

To answer the following section, please picture yourself looking to buy a new SHAMPOO in a store that offers various options.

Please rate the following statements by clicking the number that best represents your feeling about the statement below (Question 7 to 10).

7 For me buying **ORGANIC SHAMPOO** would be,

Unpleasant						Pleasant
1	2	3	4	5	6	7

8 For me buying **ORGANIC SHAMPOO** would be,

Bad						Good
1	2	3	4	5	6	7

9 For me buying **ORGANIC SHAMPOO** would be,

Harmful						Beneficial
1	2	3	4	5	6	7

10 For me buying **ORGANIC SHAMPOO** would be,

Negative						Positive
1	2	3	4	5	6	7

11 Please rate the importance of each attribute when you buy **Shampoo** by clicking the number.

1	2	3	4	5	6	7
Not important at all						Very important
It leaves hair soft.						
1	2	3	4	5	6	7
It is easy to rinse.						
1	2	3	4	5	6	7
It prevents dandruff.						
1	2	3	4	5	6	7
It is a good value for the money.						
1	2	3	4	5	6	7
It provides volume.						
1	2	3	4	5	6	7
It helps reduce hair loss.						
1	2	3	4	5	6	7
It is not tested on animals.						
1	2	3	4	5	6	7
It leaves hair clean.						
1	2	3	4	5	6	7
It has a good fragrance.						
1	2	3	4	5	6	7
It leaves hair shiny.						
1	2	3	4	5	6	7
It is made with organic ingredients.						
1	2	3	4	5	6	7

12 Please rate the following statements by clicking the number that best represents your opinion.

1	2	3	4	5	6	7
Very Unlikely						Very Likely
People who influence my decisions would approve of me buying Organic Shampoo .						
1	2	3	4	5	6	7
People who are important in my life would approve of me buying Organic Shampoo .						
1	2	3	4	5	6	7
People who influence my behavior would encourage me to use Organic Shampoo .						
1	2	3	4	5	6	7
People who are important in my life would encourage me to use Organic Shampoo .						
1	2	3	4	5	6	7

13 Please rate the following statements by clicking the number that best represents your opinion.

1	2	3	4	5	6	7
Strongly Disagree			Average			Strongly Agree
For me buying Organic Shampoo would be possible.						
1	2	3	4	5	6	7
If I wanted to, I could easily buy Organic Shampoo .						
1	2	3	4	5	6	7
I believe that I have the resources and the ability to buy Organic Shampoo .						
1	2	3	4	5	6	7
I prefer Organic Shampoo to conventional.						
1	2	3	4	5	6	7
I frequently use Organic Shampoo .						
1	2	3	4	5	6	7
If Organic Shampoo was available, I would buy it.						
1	2	3	4	5	6	7
It is likely that I will purchase Organic Shampoo .						
1	2	3	4	5	6	7
I plan to buy Organic Shampoo .						
1	2	3	4	5	6	7

- 14 How likely is it that **ORGANIC** shampoo has the following characteristics?

1	2	3	4	5	6	7
Very Unlikely						Very Likely
Organic shampoo has a good fragrance.						
1	2	3	4	5	6	7
Organic shampoo is easy to rinse.						
1	2	3	4	5	6	7
Organic shampoo can prevent dandruff.						
1	2	3	4	5	6	7
Organic shampoo leaves hair clean.						
1	2	3	4	5	6	7
Organic shampoo softens hair.						
1	2	3	4	5	6	7
Organic shampoo is good value for the money.						
1	2	3	4	5	6	7
Organic shampoo can provide volume.						
1	2	3	4	5	6	7
Organic shampoo is not tested on animals.						
1	2	3	4	5	6	7
Organic shampoo helps reduce hair loss.						
1	2	3	4	5	6	7
Organic shampoo leaves hair shiny.						
1	2	3	4	5	6	7

To answer the next section questions, please picture yourself looking to buy a new **BODY LOTION** in a store that offers various options.

Please rate the following statement by clicking the number that best represents your feeling about the statement below (Question 15-18).

- 15 For me buying **ORGANIC BODY LOTION** would be,

Unpleasant						Pleasant
1	2	3	4	5	6	7

- 16 For me buying **ORGANIC BODY LOTION** would be,

Bad						Good
1	2	3	4	5	6	7

- 17 For me buying **ORGANIC BODY LOTION** would be,

Harmful						Beneficial
1	2	3	4	5	6	7

18 For me buying **ORGANIC BODY LOTION** would be,

Negative			Positive			
1	2	3	4	5	6	7

19 Please rate the importance of each attribute when you buy **Body Lotion** by clicking the number.

1	2	3	4	5	6	7
Not important at all						Very Important
It has a good fragrance.						
1	2	3	4	5	6	7
It is rapidly absorbed.						
1	2	3	4	5	6	7
It can moisturize your skin.						
1	2	3	4	5	6	7
It is safe for skin.						
1	2	3	4	5	6	7
It is not greasy.						
1	2	3	4	5	6	7
It is made with organic ingredients.						
1	2	3	4	5	6	7
It is not tested on animals.						
1	2	3	4	5	6	7
It is a good value for the money.						
1	2	3	4	5	6	7

20 Please rate the following statements by clicking the number that best represents your opinion.

1	2	3	4	5	6	7
Very Unlikely						Very Likely
People who influence my decisions would approve of me buying Organic Body Lotion .						
1	2	3	4	5	6	7
People who are important in my life would approve of me buying Organic Body Lotion .						
1	2	3	4	5	6	7
People who influence my behavior would encourage me to use Organic Body Lotion .						
1	2	3	4	5	6	7
People who are important in my life would encourage me to use Organic Body Lotion .						
1	2	3	4	5	6	7

- 21 Please rate the following statements by clicking the number that best represents your stance.

1	2	3	4	5	6	7
Strongly Disagree			Average			Strongly Agree
For me buying Organic Body Lotion would be possible.						
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
If I wanted to, I could easily buy Organic Body Lotion .						
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
I believe that I have the resources and the ability to buy Organic Body Lotion .						
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
I prefer Organic Body Lotion to conventional one.						
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
I frequently use Organic Body Lotion .						
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
If Organic Body Lotion was available, I would buy it.						
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
It is likely that I will purchase Organic Body Lotion .						
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
I plan to buy Organic Body Lotion .						
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7

- 22 How likely is it that **ORGANIC**BodyLotion has the following characteristics?

1	2	3	4	5	6	7
Very Unlikely						Very Likely
Organic Body Lotion is rapidly absorbed.						
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
Organic Body Lotion moisturizes your skin.						
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
Organic Body Lotion is safe for skin.						
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
Organic Body Lotion is not tested on animals.						
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
Organic Body Lotion is not greasy.						
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
Organic Body Lotion is good value for the money.						
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
Organic Body Lotion has a good fragrance.						
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7

- 23 What is your Gender?

- ☐ Female
☐ Male

- 24 What is your Age?

Age

25 Which area do you live in?

- ☐ Urban
- ☐ Suburban
- ☐ Rural

26 Which state do you live in? Please write it down.

27 What is your Marital status?

- ☐ Single
- ☐ Married

28 Do you have school-age children?

☐ YES ☐ NO

If yes, how old are they? Please write down their age.

29 What is your level of education?

- ☐ High school or below
- ☐ 2-year college/Technical school
- ☐ 4-year college
- ☐ Graduate or professional degree

30 What is your race or ethnic identity?

- ☐ White / European American
- ☐ Black / African American
- ☐ Hispanic / Latino American
- ☐ Asian / Asian American
- ☐ Native American
- ☐ Other, please specify

31 Please choose your annual income below.

- ☐ Under \$25,000
- ☐ \$25,000~\$49,999
- ☐ \$50,000~\$74,999
- ☐ \$75,000~\$100,000
- ☐ Over \$100,000

Thank you for your time and valuable input.

APPENDIX B: Human Subjects Approval Form



Office of Responsible Research Practices

300 Research Foundation
1960 Kenny Road
Columbus, OH 43210-1063

Phone (614) 688-8457

Fax (614) 688-0366

www.orrp.osu.edu

March 12, 2009

Protocol Number: 2009E0193
Protocol Title: EFFECTS OF CONSUMER VALUES AND PAST EXPERIENCES ON CONSUMER INTENTION TO BUY ORGANIC PERSONAL CARE PRODUCTS: AN APPLICATION OF THEORY OF PLANNED BEHAVIOR, Jae-Eun Chung, Hee Yeon Kim, Department of Consumer Sciences
Type of Review: Request for Exempt Determination
ORRP Staff Contact: Cheri M. Pettey
Phone: 614-688-0389
Email: pettey.6@osu.edu

Dear Dr. Chung,

The Office of Responsible Research Practices has determined the above referenced protocol exempt from IRB review.

Date of Exempt Determination: 3/5/2009
Qualifying Exemption Category: 2

Please note the following:

- Only OSU employees and students who have completed CITI training and are named on the signature page of the application are approved as OSU Investigators in conducting this study.
- No procedural changes may be made in exempt research (e.g., recruitment procedures, advertisements, instruments, enrollment numbers, etc.).
- Per university requirements, all research-related records (including signed consent forms) must be retained and available for audit for a period of at least three years after the research has ended.
- It is the responsibility of the Investigator to promptly report events that may represent unanticipated problems involving risks to subjects or others.

This determination is issued under The Ohio State University's OHRP Federalwide Assurance #00006378.

All forms and procedures can be found on the ORRP website – www.orrp.osu.edu. Please feel free to contact the ORRP staff contact listed above with any questions or concerns.

Cheri Pettey, MA, Certified IRB Professional
Senior Protocol Analyst—Exempt Research