

Chapter 3: Research Design and Methodology

This chapter firstly defines the scope of green personal care and cosmetic products for this study. The research methodology including the sample and data collection methods, questionnaire design and measurement of the research variables, and data analysis procedures are described.

3.1 Defining green personal care and cosmetic products

According to Pickett-Baker and Ozaki (2008), there is no such thing as a truly sustainable or green product, as all products we buy, own, use and abandon in our daily lives will create negative impact to the environment. Hence, a product that has low environmental negative impact or supplied by company with a reputation for reducing environmental impacts from their manufacturing processes, is regarded as an environmentally sustainable product.

According to Lee (2009), green purchasing behaviour refers to the consumption of products that are benign/ beneficial to the environment; recyclable/ conservable; or sensitive/ responsive to ecological concerns. Specifically it is measured by items such as organic products, labelled as environmentally safe, against animal-testing, contain no or fewer chemical,

ingredients certified environmentally-safe or organic stamp, support fair community trades, and products that use recycled/ recyclable packaging.

For the present study, Pickett-Baker and Ozaki (2008) and Lee (2009) concepts of green products shall be applied to give a holistic and clear definition on green personal care and cosmetic products.

3.2 Sample and Data Collection

Respondents of the study are Malaysian consumers that purchase personal care (bath and body, skin care, hair products) and cosmetic (make up, fragrance) products in their daily lives. Due to geographical and accessibility limitation, non-probability sampling method specifically convenience sampling was used to obtain data. Respondents were asked to fill in questionnaire distributed by online (Google Spreadsheet, email and social networking website i.e. Facebook) and offline methods (printed copy). Both online and offline data collection methods were deployed to compensate for the weaknesses of each method whereby people who have and do not have access to computer and internet were able to participate in this study as well. A total of 300 printed questionnaires were distributed in Klang Valley areas and local universities in West Malaysia. Only 192 responses were collected and valid for further analysis. For online method, a total of 110 valid responses were collected from respondents dispersed in all areas of Malaysia, which eventually made total usable data amounted at 302.

3.3 Questionnaire Design

The questionnaire was structured into 2 sections. Section A comprises questions for each independent and dependent variable. Section B comprises questions regarding respondents' demographic profile, i. e. gender, age, ethnic, marital status, highest level of education, occupation and monthly income.

Before respondents answer the questionnaire, they were informed on the cover letter about current trend of green products and the scope of personal care and cosmetic products that being studied in this research. Personal care products are bath and body, skin care, hair products; whereas cosmetic products include make up and fragrance.

Prior to actual data collection, a pilot test with a 10 sample size was conducted to refine the questionnaire. The questionnaire was checked to ensure that respondents have had no problem to understand and answer the questions, and they were able to follow instruction correctly.

3.3.1 Item Measurements

A total of 9 items were used to measure Consumer Values (i.e. health consciousness, environmental consciousness and appearance consciousness) which derived from Kim and Chung (2011) and Lee (2009). Five-point Likert scales which range from strongly disagree (=1) to strongly agree (=5) were used.

Attitude of consumers towards green personal care and cosmetic products was measured using 8 items which derived from Gil, Gracia and Sanchez (2000). Five-point Likert scales which range from strongly disagree (=1) to strongly agree (=5) were used. Among the 8 items, 2 items were negatively worded.

6 items from Kim and Chung (2011) and Huang, Wu, Wang and Boulanger (2011) were used to measure Subjective Norm variable. Five-point Likert scales which range from strongly disagree (=1) to strongly agree (=5) were used.

To measure consumers' perceived behavioural control, 5 items were developed which adapted from Kim and Chung (2011) and Huang, Wu,

Wang and Boulanger (2011). Five-point Likert scales which range from strongly disagree (=1) to strongly agree (=5) were used.

5 items from Bian and Moutinho (2011) were used for Product-image dimension variable, which include questions to measure consumers' perception on the product experiential benefits, symbolic benefits and functional benefits on green personal care and cosmetic products. Five-point Likert scales which range from strongly disagree (=1) to strongly agree (=5) were used. Among the 5 items, an item was negatively worded.

For Corporate-image dimension, 5 items from Yong, Kim, Claussen and Kim (2008) were used to measure consumers' perception on corporate that produce or sell green personal care and cosmetic products. Five-point Likert scales which range from strongly disagree (=1) to strongly agree (=5) were used. Among the 5 items, an item was negatively worded.

To measure consumers' past purchase experience, respondents were asked whether they have purchased any green personal care and cosmetic products before. If yes, respondents were directed to answer the following two questions: 1) Number of items (scale ranging from 'None' to '5 items and above'), and 2) Total money spent (scale ranging from 'None' to 'More

than RM100') on buying green personal care and cosmetic products in the past three months.

To measure consumers' purchase intention, 2 sets of different items were developed to cater to respondents that have and do not have purchase experiences on green personal care and cosmetic products. For respondents that do not have purchase experience, they will be directed to answer Purchase Intention part (A) to answer 5 items derived from Kim and Chung (2011), and Tsai, Chin and Chen (2010). For respondents that have purchase experience, they will be directed to answer Purchase Intention part (B) to answer 10 items derived from Kim and Chung (2011), and Lee (2011). The items developed can measure specifically what kind of green products respondents intend to purchase in future. Five-point Likert scales which range from strongly disagree (=1) to strongly agree (=5) were used.

Almost all of the items above have been rephrased to ensure that these items can be applied on green personal care and cosmetic products in Malaysia context. The summary of the item measurements and sources is shown on Table 3.1.

<p><i>Appearance consciousness (AC)</i></p> <p>Hee Yeon Kim and Jae-Eun Chung (2011), Consumer purchase intention for organic personal care products, Journal of Consumer Marketing</p>	<ol style="list-style-type: none"> 1. What I look like is an important part of who I am. 2. My appearance is responsible for much of what has happened to me in my life. 3. If I could look just as I wish, my life would be much happier. 4. I'm usually aware of my appearance. 	<p>Table 3.1 continued.</p> <p>- Similar -</p>
<p><i>Attitude (ATT)</i></p> <p>Gil, Gracia and Sanchez, (2000), Market segmentation and willingness to pay for organic products in Spain, <i>International Food and Agribusiness Management Review</i></p>	<ol style="list-style-type: none"> 1. Organic products are healthier (health benefit) 2. Organic products have superior quality. (quality) 3. Organic products are a fraud (fraud) 4. Organic products are more tasty (tasty) 5. Organic products are worse than conventional food (worse) (R) 6. Organic products are more expensive (expensive) (R) 7. Organic products are more attractive (attractive) 8. Organic products have no harmful effects (no harmful effects) 9. Organic products are in fashion (fashion) 	<ol style="list-style-type: none"> 1. Green personal care or cosmetics products are healthier. 2. Green personal care or cosmetics products have superior quality. 3. Green personal care or cosmetics products are a fraud (R). 4. Green personal care or cosmetics products are worse than conventional product (R). 5. Green personal care or cosmetics products are in fashion. 6. Green personal care or cosmetics products are more expensive. 7. Green personal care or cosmetics products are more attractive. 8. Green personal care or cosmetics products have no harmful effects.
<p><i>Subjective norm (SN)</i></p> <p>Hee Yeon Kim and Jae-Eun Chung (2011), Consumer purchase intention for organic personal care products, Journal of Consumer Marketing</p>	<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 	<ol style="list-style-type: none"> 1. People who influence my decisions would approve of me buying green personal care or cosmetics products. 2. People who are important in my life would encourage me to use green personal care or cosmetics products.

<p>Yi-Chun Huang, Yen-Chun Jim Wu, Yu-Chun Wang and Nolan Boulanger (2011), Decision Making In Online Auctions, Management Decision</p>	<p>to use organic body lotion/shampoo.</p> <ol style="list-style-type: none"> 1. My family influences me to purchase on online auctions. 2. My important friends influence me to purchase on online auctions. 3. Expert opinions influence me to purchase on online auctions. 4. Mass media reports influence me to purchase on online auctions. 	<p>Table 3.1 continued.</p> <ol style="list-style-type: none"> 3. My family influences me to purchase green personal care or cosmetics products. 4. My important friends influence me to purchase green personal care or cosmetics products. 5. Expert opinions influence me to purchase green personal care or cosmetics products. 6. Mass media reports influence me to purchase green personal care or cosmetics products.
<p><i>Perceived behavioral control (PBC)</i></p> <p>Hee Yeon Kim and Jae-Eun Chung (2011), Consumer purchase intention for organic personal care products, Journal of Consumer Marketing</p> <p>Yi-Chun Huang, Yen-Chun Jim Wu, Yu-Chun Wang and Nolan Boulanger (2011), Decision Making In Online Auctions, Management Decision</p>	<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. <ol style="list-style-type: none"> 1. I have the resources to purchase on online auctions. 2. I have the knowledge to purchase on online auctions. 3. I have the ability to purchase on online auctions. 4. Purchasing on online auctions is entirely within my control. 	<ol style="list-style-type: none"> 1. If I wanted to, I could easily buy green personal care or cosmetics products. <ol style="list-style-type: none"> 2. I have the resources to purchase green personal care or cosmetics products. 3. I have the knowledge to purchase green personal care or cosmetics products. 4. I have the ability to purchase green personal care or cosmetics products. 5. Purchasing green personal care or cosmetics products is entirely within my control.

<p><i>Product-image dimension (PID)</i> <i>(Brand-image perception)</i></p> <p>Xuemei Bian and Luiz Moutinho (2011), The role of brand image, product involvement, and knowledge in explaining consumer purchase behaviour of counterfeits: Direct and indirect effects, European Journal of Marketing</p>	<p><i>Satisfactory benefit</i></p> <ol style="list-style-type: none"> 1. The quality of the product merits the price. 2. In buying this product, you get value for money for the status. <p><i>Image benefit</i></p> <ol style="list-style-type: none"> 3. The product is a statement of your self-image. 4. This product brings you exclusivity. 5. This product can make you attract other people's attention. 6. This product can bring you prestige. <p><i>Functional benefit</i></p> <ol style="list-style-type: none"> 7. You can throw it away after a while. 8. This product may not function well. 	<p>Table 3.1 continued.</p> <ol style="list-style-type: none"> 1. The quality of the green personal care or cosmetics products merits the price. 2. Green personal care or cosmetics products are a statement of your self-image. 3. Green personal care or cosmetics products bring you exclusivity. 4. Green personal care or cosmetics products can make you attract other people's attention 5. Green personal care or cosmetics products may not function well.
<p><i>Corporate-image dimension (CID)</i> <i>(Brand-image perception)</i></p> <p>Yong Jae Ko, Kyoungtae Kim, Cathryn L Claussen, Tae Hee Kim (2008), The effects of sport involvement, sponsor awareness and corporate image on intention to purchase sponsors' products, International Journal of Sports Marketing & Sponsorship</p>	<ol style="list-style-type: none"> 1. Sponsors have good products/services. 2. Sponsors are well managed. 3. Sponsors only want to make money. 4. Sponsors are involved in the community. 5. Sponsors respond to consumer needs. 6. Sponsors are a good company to work for. 	<p>The company that produces green personal care or cosmetics products is as follow:</p> <p>-</p> <ol style="list-style-type: none"> 1. The company has good products/services. 2. The company is well managed. 3. The company only wants to make money. 4. The company is involved in the community. 5. The company responds to consumer needs.

<p><i>Purchase Intention (PI)</i></p> <p>Hee Yeon Kim and Jae-Eun Chung (2011), Consumer purchase intention for organic personal care products, <i>Journal of Consumer Marketing</i></p> <p>Tsai, Chin, & Chen (2010), The effect of trust belief and salesperson's expertise on consumer's intention to purchase nutraceuticals: applying the theory of reasoned action, <i>Social Behavior & Personality: An International Journal</i></p> <p>Kaman Lee (2009), Gender differences in Hong Kong adolescent consumers' green purchasing behavior. <i>Journal of Consumer Marketing</i></p>	<ol style="list-style-type: none"> 1. If organic body lotion/shampoo was available, I would buy it. 2. It is likely that I will purchase organic body lotion/shampoo. 3. I plan to buy organic body lotion/shampoo. <ol style="list-style-type: none"> 1. I intend to buy nutraceuticals in the next year. 2. I will try to buy nutraceuticals in the future. 3. I will pay more to buy nutraceuticals to benefit my health. <ol style="list-style-type: none"> 1. I often buy organic products. 2. I often buy products that are labelled as environmentally safe. 	<p>Table 3.1 continued.</p> <p><i>For respondents that do not have green personal care or cosmetics products purchasing experience:</i></p> <ol style="list-style-type: none"> 1. If green personal care or cosmetics products were available, I would buy it. 2. It is likely that I will purchase green personal care or cosmetics products. 3. I plan to buy green personal care or cosmetics products. <ol style="list-style-type: none"> 4. I will try to buy green personal care or cosmetics products in the future. 5. I will pay more to buy green personal care or cosmetics products to benefit my health. <p><i>For respondents that have green personal care or cosmetics products purchasing experience:</i></p> <ol style="list-style-type: none"> 1. If green personal care or cosmetics products were available, I would buy it. 2. It is likely that I will purchase green personal care or cosmetics products. 3. I plan to buy green personal care or cosmetics products. <ol style="list-style-type: none"> 4. I often buy organic green personal care or cosmetics products. 5. I often buy personal care or cosmetics products that are labelled as environmentally safe.
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	<ol style="list-style-type: none"> 3. I often buy products that are against animal-testing. 4. I often buy products that contain no or fewer chemical ingredients. 5. When I consider buying a product, I will look for a certified environmentally-safe or organic stamp. 6. I often buy products that support fair community trades. 7. I often buy products that use recycled/ recyclable packaging 	<p>Table 3.1 continued.</p> <ol style="list-style-type: none"> 6. I often buy personal care or cosmetics products that are against animal-testing. 7. I often buy personal care or cosmetics products that contain no or fewer chemical ingredients. 8. When I consider buying a personal care or cosmetic product, I will look for a certified environmentally-safe or organic stamp. 9. I often buy personal care or cosmetics products that support fair community trades. 10. I often buy personal care or cosmetics products that use recycled/ recyclable packaging
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3.4 Data Analysis Procedure

For the data analysis, the survey results were processed by using Statistical Package for Social Science (SPSS) 16.0. Before carrying out any statistical tests, certain computations were made and the negatively worded items were recoded to ensure consistency on the direction of scoring throughout the scale. For each variable, we examined the normality, Cronbach's alpha and factor analysis. Outliers identified were eliminated.

Mean scores were recorded to identify the patterns of green purchasing behaviour categorised by gender, education and monthly income level.

Secondly, multiple regressions was conducted to test Hypothesis 1, Hypothesis 2 and Hypothesis 3 in accordance with present research's first objective - To investigate the relationship between consumer values i.e. health consciousness, environmental consciousness, appearance consciousness and consumer's attitude towards buying green personal care and cosmetic products in Malaysia.

Thirdly, hierarchical regression was conducted to test Hypothesis 4 to Hypothesis 10 to answer research's second objective (To investigate the relationship between consumer's attitude and their purchase intention toward green personal care and cosmetic product), third objective (To examine the moderating effect of perceived behavioural control between attitude and purchase intention toward green personal care and cosmetic products), and fourth objective (To investigate the relationship between perceived behavioural controls, subjective norm, past experience and brand-image perception with purchase intention toward green personal care and cosmetic products).

With regard to examine Hypothesis 8 - the moderating effect of perceived behavioural control on attitude-purchase intention relationship, the two variables (Attitude and Perceived Behavioural Control) were standardised by converting to Z score in order to reduce problem of multicollinearity.