CONSUMERS' PERCEPTIONS OF GREEN PRODUCT PURCHASES

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Introduction

Green products are gaining much popularity in the market as consumers become very concerned about the environment and consider living in a healthier lifestyle of which they develop a strong preference and demand for purchasing environmentally friendly products (Akehurst, Afonso, & Goncalves, 2012; Norazah, 2013; Royne, Levy, & Martinez, 2011). They rely on products with clear green brand attributes and benefits that reduce adverse environment impact and incorporate environmental information into their product evaluations and purchase decision making (Raska & Shaw, 2012). Green brand is related to a "brand which offers a significant eco-advantage over the incumbents and able to attract consumer who set high priority to be green in their purchase" (Grant, 2008).

Companies such as Cisco, Hewlett Packett, and Nike, make known to their consumers that they incorporate sustainability into their business practices and the marketing functions (Raska & Shaw, 2012; Royne *et al*., 2011; Sheth, Sethia, & Srinivas, 2011). Their green marketing activities include manufacturing, differentiating, pricing and promoting products and services which can satisfy consumers' environmental needs (Chen & Chang, 2012). Besides consumer products, transportation industry also emphasize on environmental benefits by introducing energy utilization efficiency in car manufacturing with a mixture of partly electric and partly conventional components, known as hybrid cars by car makers such as Honda, Toyota, etc. (Marcus & Fremeth, 2009; Oliver & Lee, 2010). This type of car helps to minimise the excessive greenhouse gas emissions on the earth and control risks of climate changes.

Companies which comply with green marketing activities and environmental trends may enjoy an increase in its corporate image, a raise in product value, and an enhancement in its competitive advantage. Thus, these companies carefully reduce the perceived risk in their products through the enhancement

of perceived value to increase customer green purchase intention by giving trustworthy information to customers. However, there is a lack of research examining the effects of consumer perceptions on green marketing strategies toward green behaviors (Cronin, Smith, Gleim, Ramirez, & Martinez, 2011). The study aims to determine the perception of consumers towards green product purchases.

This paper is structured as follows. It starts with the introduction that describes the background of green products, followed by a review of literature in the subsequent section. The paper then continues to elaborate on the methodology used to conduct the survey, before analysing the resultant data. Conclusion and directions for future research are explicated in the last section.

Literature Review

Green perceived value refers to "a consumer's overall appraisal of the net benefit of a product or service between what is received and what is given based on the consumer's environmental desires, sustainable expectations, and green needs" (Patterson & Spreng, 1997). Perceived value is one of the most powerful forces in today's marketplace and an underlying source of competitive advantage (Patterson & Streng, 1997). Many companies can enhance consumer purchase intention through product value (Steenkamp & Geyskens, 2006). Next, green perceived risk is defined as "the expectation of negative environmental consequences associated with purchase behavior" (Peter & Ryan, 1976). Perceived risk is a combination of negative consequence and uncertainty, which affect customer purchase decisions and behaviours (Aaker, 1996; Chaudhuri, 1997; Mitchell, 1992; Peter & Ryan, 1976; Stone & Gronhaug, 1993). Perceived risk negatively influences customer trust (Chen & Chang, 2012; Eid, 2011; Koehn, 2003). If consumers perceive high risk towards a product, they would be reluctant to trust the product completely (Mitchell, 1999).

Green trust refers to "a willingness to depend on a product, service, or brand based on the belief or expectation resulting from its credibility, benevolence, and ability about its environmental performance" (Chen, 2010). It can also be described as a "psychological state comprising the intention to accept vulnerability based on positive expectations of the intention or behaviour of another" (Rousseau, Sitkin, Burt, & Cramer, 1998). Preceding research asserted that investing resources to increase green perceived value and to decrease green perceived risk is helpful in enhancing green trust and green purchase intentions (Chang & Chen, 2008; Chen & Chang, 2012; Corritore, Kracher, & Wiedenbeck, 2003; Eid, 2011; Harridge-March, 2006). Consumer satisfaction can directly affect the consumer trust and would form a higher

level of trust on the products if they have already had a satisfactory experience with the products of vendors. As a result, a long-term trust relationship with the vendors can be established through these satisfied customers (Ganesan, 1994).

Green purchase intention is conceptualized as "the likelihood that a consumer would buy a particular product resulting from his or her environmental needs" (Morrison, 1979, p. 65). Consumers give preference to products having eco-friendly features over other traditional products in their purchase considerations (Ali & Ahmad, 2012). Income, price and product functionality influence consumers' buying decision of which they are willing to pay extra amount of money to purchase green products and do not compromise over the quality of the green products (Norazah, 2013; Ramayah, Lee, & Mohamad, 2010; Rehman & Dost, 2013). Theory of Planned Behavior asserts that green purchase intention is a pivotal determinant of actual buying behaviour of consumers (Rehman & Dost, 2013).

Methodology

This study applied a quantitative method based on the development of a structured self-administered questionnaire. About 350 structured questionnaires were administered among students in a public higher learning institution in the Federal Territory of Labuan, Malaysia who have knowledge about green products in a period of one month (from 1 July 2014 to 31 July 2014). 300 useful questionnaires were collected, yielding an effective response rate of 86%. Convenience sampling was utilized for this purpose. Their participation was purely voluntary.

The questionnaires were divided into three parts. The first part of the questionnaire gathered characteristics of respondents' demographic profile, including gender, age, education attained, and monthly income. The second section acquired information on respondents' experience of green product purchases such as frequency of green product purchases for the past 6 months, monthly expenses for green products, and types and characteristics of green products purchased. The final part attempted to uncover subjects' perception of green product purchases based on multiple-item measurement instruments. The instrument comprised of 5-items for green perceived value adapted from Patterson and Spreng (1997), and 5-items for green perceived risk compiled from the work of Jacoby and Kaplan (1972), Murphy and Enis (1986), and Sweeney, Soutar, and Johnson (1999).

The remaining dimensions include green trust with 5-items adapted from Chen (2010), and green purchase intentions with 3-items compiled from the work of Chang and Chen (2008) and Pavlou (2003). This multiple-item

measurement of instruments was measured on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Data collected were then computed in the Statistical Package for the Social Sciences (SPSS) computer program version 21.0 for descriptive analysis.

Data Analysis

Descriptive analysis of demographic characteristics of the respondents such as gender, age, and education level is detailed in Table 1. Out of the 300 participating respondents, 48 percent were male and 52 percent were female. More than half of the participating subjects were between 21 and 30 years old (63 percent). Respondents were mostly Diploma-educated (39.3 percent) and Master-educated (39.3 percent). The highest percentage of the respondents have a monthly income of less than RM2000 (60 percent). 26 percent claimed that their monthly income is between RM2001 to RM4000. Another 14 percent of the respondents earned monthly income of more than RM4001.

Table 1: Demographic Characteristics of the Respondents

Variable	Frequency	Percentage
Gender		
Male	144	48.0
Female	156	52.0
Age (years)		
<20	11	3.7
21-30	189	63.0
31-40	59	19.7
>40	41	13.6
Education attained		
Certificate qualifications	31	10.4
Diploma	118	39.3
Bachelor	33	11.0
Master	118	39.3
Monthly income (RM)		
<2000	179	59.7
2001-3000	34	11.3
3001-4000	43	14.3
4001-5000	30	10.0
>5001	14	4.7

Green product purchase experience

Table 2 displays respondents' experience with green product purchases. When asked about their monthly expenses for green products, 168 out of 300 respondents who have had experience purchasing green products selected

"RM101-RM150". More than half (56 percent) of the respondents reported purchasing green products 1 to 5 times, followed by 34 percent who purchased 6-15 times, and 10 percent who bought green products more than 15 times in the past 6 months (see Table 2). In their experience of purchasing green products, 33 percent of the respondents purchased skin care product, 31 percent preferred organic products, while 20 percent chose electronic products. Another 16 percent applies green behaviour by choosing to use public transport than driving their own car. The main characteristic for choosing green product is quality (44 percent), followed by price (26 percent), convenience (21 percent), and concern for health (9 percent).

Table 2: Experience with Green Product Purchases

	Frequency	Percentage
Frequency of green product purchase in past 6 months		
1-5 times	168	56.0
6-10 times	68	22.6
11-15 times	35	11.7
>15 times	29	9.7
Types of green product purchased		
Organic	92	30.7
Electronic	61	20.3
Transport	48	16.0
Skin care product	99	33.0
Monthly expenses for green product		
< RM100	66	22.0
RM101 – RM150	97	32.3
RM151 – RM200	70	23.3
> RM201	67	22.4
Characteristic of green product purchased		
Price	78	26.0
Quality	132	44.0
Convenience	64	21.3
Concern for health	26	8.7

Description of green products usage

The descriptive statistics that cover frequencies and percentages of each factor items of green perceived value, green perceived risk, green trust, and green purchase intention are presented in this section. The multi-item statements are designed on a five-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). Considerable variation exists in the mean values among the factor items with the majority of respondents selecting 1 = strongly agree or 2 = agree for most of the items.

Table 3 shows the data obtained from the questionnaire on the respondents' perception of **green perceived value**. The survey findings evidenced that all green perceived value factor items have mean values ranging between 1.787 to 2.080. The first refers to the statement 'Green product's environmental functions provide very good value for me' while the latter appeared for the statement 'I purchase green product because it is environmental friendly'. Among five of the green perceived value factor items, respondents highly rated (2 = agree) to the statements 'I purchase green product because it has more environmental benefit than other products' (M = 2.023), 'Green product's environmental performance meets my expectations' (M = 2.017), and 'I purchase green product because it has more environmental concern than other products' (M = 2.007). Such empirical evidence indicates that consumers have generally high green product environmental awareness.

Table 3: Respondents' Perception towards Green Perceived Value

Variable items	Mean
Green product's environmental functions provide very good value for me.	1.787
Green product's environmental performance meets my expectations.	2.017
I purchase green product because it has more environmental concern than other products.	2.007
I purchase green product because it is environmental friendly.	2.080
I purchase green product because it has more environmental benefit than other products.	2.023

The respondents perception related to **green perceived risk** is described in Table 4. Specifically, statement 'There is a chance that using this product will negatively affect the environment' score the highest mean value of 3.510, followed by 'Using this product would damage my green reputation or image' (M=3.507). In other words, respondents disagree that green product could cause harm to the environment and tarnish their image. Respondents also disagree to the statement that there is a chance that they would get environmental penalty or loss if they use green product, with a mean value of 3.480. Another perspective of disagreement appears on item 'There is a chance that there will be something wrong with environmental performance of green product' (M = 3.233) while statement 'There is a chance that green product will not work properly with respect to its environmental design' scored the lowest mean values, 3.180. These results imply that respondents mainly rated disagree on all items of green perceived risk factor.

Table 4: Respondents' Perception towards Green Perceived Risk

Variable items	Mean
There is a chance that there will be something wrong with environmental performance of green product.	3.233
There is a chance that green product will not work properly with respect to its environmental design.	3.180
There is a chance that I would get environmental penalty or loss if I use green product.	3.480
There is a chance that using this product will negatively affect the environment.	3.510
Using this product would damage my green reputation or image.	3.507

Table 5 emphasizes on **green trust** factor items. Statement 'Green product's environmental concern meets my expectations' being the most popular (M = 2.297), and the statement 'Green product keeps promises and commitments for environmental protection' (M = 2.240) being the second most popular. Their main concern is on the stated elements during green product evaluation and purchase decision making. This is followed by the statement 'I feel hat green product's environmental performance is generally dependable' with mean score of 2.150 while the statement 'I feel that green product's environmental reputation is generally reliable' being the least popular (M = 2.077). The outcome infers that respondents expressed agree to all green trust factor items.

Table 5: Respondents' Perception towards the Green Trust

Variable items	Mean
I feel that green product's environmental reputation is generally reliable.	2.077
I feel that green product's environmental performance is generally dependable.	2.150
I feel that green product's environmental claims are generally trustworthy.	2.137
Green product's environmental concern meets my expectations.	2.297
Green product keeps promises and commitments for environmental protection.	2.240

Most of the respondents agreed with questions relating to **green purchase intention**, which can be seen in Table 6. Majority of the respondents expect to purchase green products in the future because of its environmental performance (M = 2.093). Overall, the respondents expressed that they are glad to purchase green product because it is environmental friendly (M =2.003). The respondents also stated that they intend to purchase green

product because of its environmental concern (M = 1.953). Such empirical evidence shows that their green purchase intention is rewarding.

Table 6: Respondents' Perception towards Green Purchase Intention

Variable items	Mean
I intend to purchase green product because of its environmental concern.	1.953
I expect to purchase green product in the future because of its environmental performance	2.093
Overall, I'm glad to purchase green product because it is environmental friendly.	2.003

Conclusion and Recommendations

This study describes consumer perceptions of green product purchases. A descriptive investigation was performed on factors such as green perceived value, green perceived risk, green trust, and green purchase intention, which may be used to review the perception of consumers. The results inferred that most of the respondents have a positive perception towards green product purchases. They expressed that green product's environmental performance, values and benefits meet their expectations due to its environmental friendliness. They easily opt for purchasing green products based on the green-related statements or assurances presented on the product label: no animal testing, natural ingredients cosmetics, and wood product from sustainable forest, organic vegetables, and ozone friendly aerosols, bio-degradable and unleaded petrol (Norazah, 2013).

Additional perspectives that encourage consumers shift in their buying behaviour towards green lifestyle is that they feel the green product's environmental reputation is reliable, and its environmental performance is dependable. Furthermore, they feel that green product's environmental claims are trustworthy as they have strong belief that green product keeps promises and commitments for environmental protection. Results offer managerial implications whereby in order to boost up green product purchases, market sustainability and acceptance among consumer, it is imperative for manufacturers, retailers and marketers to promote positive perceptions of green products by developing creative and fruitful efforts and workable strategies.

Greater awareness on the significance of green product value and benefits of high quality and competitive price via effective educational programme or environment-related activities directed towards the community at large should be expanded by utilizing various cost effective marketing communication channels. For instance, public service announcement via

television to promote consumer to save the trees and save energy. Another example is to car pool, or use public transportation like taxis, buses, or trains, or use unleaded petrol and recycled products. Next, billboards with a short and simple message to encourage road users to keep the environment clean, e.g. do not litter while driving on the road. Another marketing communication strategy may use celebrity endorsements in the mass media to enlarge green product information or a message to protect the environment by going green. This will contribute towards the enhancement of consumer's knowledge and ecological behaviour in green product purchase decisions. As for theoretical implications, the results offer a new enhancement to the findings of earlier studies on green purchasing intention in Malaysia.

It is recommended for future research to enlarge the sample coverage across students regardless of university level or secondary level in Malaysia in order to improve the generalisation of the results, as different demographics may produce contrasting results and provide more accurate and holistic results. Furthermore generalisation of the findings could be improved by investigating a specific green product which offers diverse avenues for further research, besides examining the relationship between variables using multivariate data analysis such as structural equation modelling with the involvement of mediating and moderating effects.

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