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Factors Influencing Green Product Purchase Behavior among University Putra Malaysia Students

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Abstract: The issue of the environment such as increasing sea levels, air pollution, water pollution, and climate change, are affecting people all over. Since early times, human beings have been experiencing environmental degradation due to the development activities due to the rise of civilizations. A green product is designed to have as little environmental impact as possible over its entire life cycle, including after it is no longer being used. This study examines the factors influencing green product purchase behaviour among University Putra Malaysia (UPM) students. A total of 260 respondents were selected from the University of Putra Malaysia by using simple random sampling. The data was collected by using the administered questionnaire. The results of multiple linear regressions showed that the adjusted R^2 is 0.438, indicating that the variance of the dependent variable was explained by the knowledge, attitude, social appeal and emotional value. The result also showed only three variables were influencing; emotional value (ß =.333, $p \leq 0.01$) was the most influential factor, followed by knowledge (ß =.303, $p \leq 0.01$) and attitude (ß =.160, $p \leq 0.01$) among UPM students towards the green product purchase behaviour. This study concluded that emotional value, knowledge, and attitude were among the factors influencing green product purchase behaviour. Future research is recommended to conduct this study on other University students in Malaysia with larger samples and also can focus on the other factors which influence the students on green product purchase behaviour.

Keywords: *Green product purchase behaviour, knowledge, attitude, social appeal, emotional value*

1. Introduction

Various environmental issues, such as increasing sea levels, air pollution, water pollution, and climate change, are affecting people all over the world. The issue of the environment is not a new one. Since early times, human beings have been experiencing environmental degradation due to the development activities due to the rise of civilizations. According to Ogiemwonyi et al. (2019), some of the key issues highlighted are Malaysian consumers not fully aware of their environment and instituting damage to the planet which has posed a serious challenge. According to Das (2019), a green product is designed to have little environmental effect throughout its life span and even when it is no longer in use. Concerning green management, the environmental strategy approach represents a crucial aspect in the 'industrial' sector, notably focused on production processes, and therefore corporations adopt it independently from engagement in green product creation (Albino et al., 2009). Consumers' green buying behaviour, according to Nguyen (2006), is related to the purchase of environmentally friendly items. Kumar and Ghodeswar (2014) also state that green product purchase behaviour is also motivation to support environmental protection, the realization of environmental obligations, and a tendency to look for green product-related information and learn about green products.

In the green product purchase behaviour field, most of the authors are focused on the factors of green product purchase behaviour. This is because emphasises the importance of consumers perceiving the product as being suitable to match their motives relevant to the product domain. Actually, different authors focus on different green product purchase behaviour factors which make consumers buy environment-friendly products. There found a lot of factors such as green brand positioning, attitude toward green brands and green brand knowledge (Suki, 2006). According to Nguyen et al. (2016), collectivism, environmental attitude, subjective norms, perceived inconvenience, and long-term orientation are also factors that influence consumers' green product purchase behaviour. Moreover, Harizan and Haron (2012) state that the importance of green product knowledge is also important to determine green product purchase behaviour. Another researcher Martin and Simintiras (1995) also supports that environmental knowledge and attitudes are also the factors that determine green product purchase behaviour. According to Nguyen and Nguyen (2020), green consumption has usually assumed a common attitude–behaviour model for different

generations. Furthermore, Bukhari (2017) stated that the impact of supporting environmental protection, drive for environmental responsibility, green product experience, social appeal and environment friendliness on green product purchase decisions by taking green brand image as a mediator. Moreover, Suki (2016) stated that functional value, social value, emotional value, conditional value, and epistemic value are Malaysian consumers' environmental concerns as expressed in their purchase of green products.

In this research, the researcher has focused on four factors that determine the green product purchase behaviour among UPM students based on the above factors. There are knowledge, attitude, social appeal and emotional value. The main purpose of this study conducting is to examine the relationship between predictor factors and green product purchase behaviour among UPM students and predictor factors influencing green product purchase behaviour among UPM students. So, the dependent variable for this study is green product purchase behaviour and the independent variables are knowledge, attitude, social appeal and emotional value.

2. Literature Review

Green Product Purchase Behaviour: According to McEachern and McClean (2002), green consumerism is characterized as a concept that encompasses sustainable development, pollution reduction, non-renewable resource responsiveness, and animal welfare. Aside from that, Joshia and Rahman (2015) said that green purchasing behavior is a complicated form of ethical decision-making and is a type of socially responsible behavior. The green product examples are recycled paper products, products not tested on animals, green laundry detergents, green cleaning products, ozone-friendly aerosols, unleaded petrol, energy-saving appliances, products in recycled recyclable packaging and composable nappies. The socio-demographic factors of educational level, income level, age, and marital status were found to have a significant impact on the respondents' desire to purchase green products in a study on green purchasing in Malaysia (Rezai et al., 2011). Furthermore, according to Bryunina and Safaei (2011), respondents with a higher educational level had a larger intention to purchase organic food. Nezakati (2014) stated that people are highly aware of the green concept. However, compared with other factors, environmental knowledge had a relatively weak effect on green purchase intention (Zhuang, Luo and Riaz, 2021).

Most respondents among young consumers choose to buy environmentally friendly products (Iravani et al., 2012). Malaysian marketers must know that young consumer act as the main drivers to influence green consumption in addition to the highlighted factors in the works of literature (Ogiemwonyi et al., 2019). Unlike the previous studies, in the current study, the researchers have discussed the direct relationship between the green product buying attitude and green product purchase behaviour and found that there is a significant positive relationship between them (Jan, Ji and Yeo, 2019; Zhuang, Luo and Riaz, 2021). According to Chin (2019), there was a significant relationship between green brand knowledge and green product purchase behaviour and also there was a significant relationship between attitude and green products purchase behaviour. Furthermore, emotional value has the power to alter the relationship between other consumption values and green product choice behaviour (Khan and Mohsin, 2017). Mostafa (2007) stated that there was an influence of consumers' ecological knowledge and attitude on gender differences in green purchase behaviour.
H5: Predictor factors have a significant influence the green product purchase behaviour among UPM students.

Knowledge: According to Harizan and Haron (2012), knowledge of green products is necessary for developing a necessary mindset towards green consumption. Green product buying is difficult to do without a sufficient understanding of green products. Consumers make their attempts to learn about green products, gain green product-related knowledge and experience them by searching for information about green products on their own as well as enquiring from their friends and they refuse to buy products from those who are found accused of being polluters (Kumar and Ghodeswar, 2014). Soomro et al. (2020) stated that environmental knowledge was found positively related to green product purchase behaviour. According to Bukhari, Aqdas and Bhatti (2017), consumers are becoming aware of the importance of environmental protection and try to gain knowledge about the environmental friendliness of brands and products to make green product purchase. Moreover, customers having product knowledge are more interested in the design and style of green products and have a strong propensity to try something new to lessen their routine

purchases (Suki, 2016). However, Martin and Simintiras (1995) stated that the evidence from the results of correlation analysis that had no strong relationships exist knowledge towards the impact of green product purchase behaviour on the environment. According to Larsson and Khan (2011), the correlation between knowledge and green product purchase behaviour is statistically not significant. They also claimed that sometimes consumers have solid information about a product but do not purchase it owing to a variety of factors such as financial constraints, a lack of taste, or a lack of trust.

H1: There is a significant relationship between knowledge and green product purchase behaviour among UPM students.

Attitude: According to Ajzen (1991), a positive or negative attitude toward green product buying behaviour, may be defined as the degree to which a person evaluates or appraises green product purchasing behaviour to have a positive impact on the green product purchase behavior. Attitude and purchasing green products had the biggest impact followed by lifestyle (Myriam, Fahri, and Emine, 2016). Based on the study by Iravani et al. (2012), the attitude had positively influenced the green purchasing intention of young consumers and green product purchasing attitude consumers believed that it is very important to raise environmental awareness among Malaysian. Consumers with good views about green products are more likely to create a higher inclination to purchase green products, according to Mostafa (2009). Moreover, Honkanen and Young (2015) found that the consumers' attitude toward buying sustainable seafood was the most important factor in predicting their desire to buy sustainable seafood apart from influence from family, friends, and colleagues.

H2: There is a significant relationship between attitude and green product purchase behaviour among UPM students.

Social appeal: Kumar and Ghodeswar (2014) stated that social appeal describes social sentiments of environmentally friendly consumer behaviour for their willingness to be accepted and recognized in society. Besides that, social appeal means that consumer behavior is highly influenced by the opinion of others regarding their product choices and usage (Bearden and Rose, 1990). According to Kumar and Ghodeswar (2014), the social appeal was identified as an important factor affecting green product purchase decisions. The relationship was studied between social appeal and green product purchase behaviour and the significant relationship suggests that others' perceptions about one's behaviour have a considerable influence on consumers' purchase behaviour for green products. Consumers buy green products if they are publicly recognized symbols of supporting environmental protection convey the self-concept of consumers and communicate desirable social meaning. Bukhari, Aqdas and Bhatti (2017) stated that it was hypothesized that social appeal significantly impacts green product purchase behaviour. According to Suki (2015), social appeal significantly impacts the level of environment shown by consumers in the Malaysian context, in their purchase of green products. Peer behaviour and social norms do influence consumer purchase behaviour to 'go green' which leads to an upsurge in their social approval and makes a good impression among reference the circle of friends and family members are examples of such groups. However, a negative and insignificant relation has been reported in a study between social appeal and green product purchase behaviour because may owe to inadequate coverage of green products through conventional media (Khan and Mohsin, 2017).

H3: There is a significant relationship between social appeal and green product purchase behaviour among UPM students.

Emotional value: According to Hain (2017), the emotions that are evoked by ethical products, can be categorized as "feeling good", "feeling moral", and "feeling powerful". "Feeling good," "feeling moral," and "feeling strong" are said to be psychological drivers for buying green items. Lin and Huang (2012) stated that there is a positive influence on green product purchase behaviour is emotional value. People who regard going green as an act that helps safeguard the environment experience positive feelings of doing good for themselves and for society at large consumers would increase their intake of green products identifying themselves as environmental defenders, driven by the high emotional value attached to the products. Consumer emotions have a positive and direct impact on consumer green purchase intention and behaviour (Joshia and Rahman, 2015). However, Suki (2015) stated that emotional value and green product purchase behaviour have no significant effects. This is because many customers remain ignorant of global environmental issues, and are unaware of the presence of green products in the market.

H4: There is a significant relationship between emotional value and green product purchase behaviour among UPM students.

3. Research Methodology

This study is quantitative research whereby data is collected and analyzed statistically to answer research objectives and questions. The research questions are from previous research papers that help to conduct this research. Primary data is collected through a questionnaire. The questionnaire is distributed to the respondents by using the current technology which is WhatsApp App to many groups and also personally in the form of a Google form link. This research is conducted at University Putra Malaysia because the survey's target respondent was undergraduate and graduate UPM students. The researcher chooses this location as a sample for the study location. The students at University Putra Malaysia (UPM) were mostly aged in the young adult category. The young adult category was between 18-25 (Simpson, 2018). Based on the data from the UPM website, there found more than 20,000 are students undergraduate and postgraduate. So, the sample size groups for this study were UPM students from 16 faculties in the UPM. In this research, there were selected 260 UPM students as respondents. These respondents were selected randomly from 16 faculties in the UPM by using a simple random sampling method to collect the data from the students.

This research is quantitative. All of the data is gathered from primary and secondary sources, which include information from past study papers. During the survey, no one is forced to answer the questionnaire; rather, the questionnaire is distributed randomly and those who want to answer it were given the options. All of the questions in the questionnaire paper are from earlier research studies and create from the information that took from other authors' findings. This SPSS version 26 software helps to test the reliability test, correlation test and multiple linear regression to get accurate data.

4. Results and Discussion

Respondents' Background: The descriptive statistics were created for getting the frequency and valid percentage for 260 respondents. Table 1 shows the value of frequency and valid percentage for the demographic part which contains five main elements which are gender, age, ethnicity, faculty, current level of education and household income of the respondents. The main purpose of conducting this frequency is to look at the height and lowest data in the demographic part.

More than half of the respondents were female students (76.5%) meanwhile (23.5%) were male students. According to Sreen, Purbey and Sadarangani (2018), male respondents are more than female respondents. However, researchers stated that females are more influenced by subjective norms than men and females are more influenced by what others say which can increase green product purchase behaviour.

Furthermore, the data shows most of the respondents are aged 22 years old (46%); aged 23 years old (40.8%); aged 24 years old (6.9%); aged 21 years old (3.5%); aged 26 years old (1.2%); and aged 19, 20, 25 and 27 years old (0.4%) respectively. The next item was focused on ethnicity. The majority of respondents who participated in this survey are Malay students which (62.7%) whereas (19.2%) are Chinese students meanwhile (17.7%) of students are Indian students and other ethnicities (0.4%). Next, the table showed the student's faculty. The majority of respondents who participated in this survey are from Faculty of Human Ecology (41.2%); Faculty of Economics and Management (14.6%); Faculty of Educational Studies (12.7%); Faculty of Environmental Studies (8.8%); Faculty of Food Sciences and Technology and Faculty of Forestry (6.2%); Faculty of Science (5.8%); Faculty of Agriculture (3.1%); Faculty of Modern Language and Communication (0.8%) and Centre of Foundation Studies for Agricultural Science and also Faculty of Engineering (0.4%).

For the current level of education, the largest proportion is from the First Degree level (98.8%), followed by the Foundation level (0.4%), Master level (0.4%) and PhD level (0.4%) respectively. On the other hand, the next item is focused on the household income. Based on the survey, the student's families who are getting income less than MYR 2500 (47.3%), MYR 2500 until MYR 4849 (30.8%), MYR 4850 until MYR 10969 (18.8%), MYR 10970 until RM MYR 15039 (2.7%) and having income more than MYR 15039 (4%). So, the most of student's family income (47.3%) is less than MYR 2500.

Table 1: Respondents' Background

Variable		Frequency	Percentage (%)
Gender	Male	61	23.5
	Female	199	76.5
Age (years)	19	1	0.4
	22	1	0.4
	25	9	3.5
	22	120	46.2
	23	106	40.8
	24	18	6.9
	25	1	0.4
	26	3	1.2
	27	1	0.4
Ethnic	Malay	163	62.7
	Chinese	50	19.2
	Indian	46	17.7
	Others	1	0.4
Faculty	Centre of Foundation Studies for Agricultural Science	1	0.4
	Faculty of Agriculture	8	3.1
	Faculty of Biotechnology and Biomolecular Sciences	0	0
	Faculty of Computer Science and Information Technology	0	0
	Faculty of Design and Architecture	0	0
	Faculty of Economics and Management	38	14.6
	Faculty of Environmental Studies	23	8.8
	Faculty of Engineering	1	0.4
	Faculty of Educational Studies	33	12.7
	Faculty of Food Sciences and Technology	16	6.2
	Faculty of Forestry	16	6.2
	Faculty of Human Ecology	107	41.2
	Faculty of Medicine and Health Science	0	0
	Faculty of Modern language and Communication	2	0.8
	Faculty of Science	15	5.8
	Faculty of Veterinary Medicine	0	0
Current level of education	Foundation	1	0.4
	Diploma	1	0.4
	Degree	257	98.8
	Master	0	0
	PhD	1	0.4
Household income	Less than MYR 2500	123	47.3
	MYR 2500- MYR 4849	80	30.8
	MYR 4850- MYR 10969	49	18.8
	MYR 10970- MYR 15039	7	2.7
	More than MYR 15039	1	4

Table 2 shows the frequency distribution of commonly purchased green products among UPM students. The majority of the respondents stated the answer "Yes" to the question, commonly purchased green products. More than half of respondents (59.6%) are commonly purchased green products in their daily routine. However, about 40.4% of respondents stated not commonly purchased green products. So, the difference between the frequency distribution of commonly purchased green products is only 50 respondents.

Table 2: Frequency distribution of commonly purchased green products among the UPM students

Commonly purchased green product	Frequency	Percentage (%)
Yes	155	59.6
No	105	40.4
Total	260	100

Table 3 shows the frequency of purchasing green products in a month (times). Out of 260 respondents, only 3.5% and 2.3% of respondents purchase green products 4 to 6 times and more than 6 times in a month respectively. It clearly explained that most of the respondents purchase green products less than 2 times a month 55.8% of respondents. Meanwhile, there found 38.5% of respondents purchased green products 2 to 4 times a month. So, overall, the frequency is very high in less than 2 times which was 55.8% of respondents purchase green products in a month.

Table 3: Frequency of purchase of green products in a month (times)

Frequency of purchasing green products in a month (times)	Frequency	Percentage (%)
Less than 2	145	55.8
2 to 4	100	38.5
4 to 6	9	3.5
More than 6	6	2.3

Pearson Correlation Analysis: Table 4 shows the relationship between knowledge and green product purchase behaviour. There was found a positive significant relationship between knowledge and green product purchase behaviour ($r = .534$, $p = < .001$) and the p-value was smaller than the alpha level .001 that explains, the dependent and independent variables were significantly related to green product purchase behaviour. So, it concluded that there is a significant relationship was found between knowledge and green product purchase behaviour among UPM students and the alternative hypothesis (H1) was accepted. According to Wang, Ma and Bai (2019), the consumer's whole decision-making process can be influenced by knowledge while green product awareness is frequently thought to be a direct predictor of green purchasing intention.

Table 4: Relationship between Knowledge and green product purchase behaviour

Variable		Green product purchase behaviour	Knowledge
Green product purchase behaviour	Pearson Correlation	1	.534**
	Sig. (2-tailed)		.000
	N	260	260
Knowledge	Pearson Correlation	.534**	1
	Sig. (2-tailed)	.000	
	N	260	260

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

Pearson Correlation Analysis: Table 5 shows the relationship between attitude and green product purchase behaviour. There was found a positive significant relationship between attitude and green product purchase behaviour ($r = .404$, $p < .001$) and the alternative hypothesis (H2) was accepted. According to Jan, Ji and Yeo (2019), green product health and safety values also had a favourable impact on green product purchasing behaviour. Furthermore, consumer purchasing attitudes have a considerable beneficial impact on green product purchases.

Table 5: Relationship between Attitude and Green Product Purchase Behaviour

Variable		Green product purchase behaviour	Attitude
Green product purchase behaviour	Pearson Correlation	1	.404**
	Sig. (2-tailed)		.000
	N	260	260
Attitude	Pearson Correlation	.404**	1
	Sig. (2-tailed)	.000	
	N	260	260

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

Pearson Correlation Analysis: Table 6 shows the relationship between social appeal and green product purchase behaviour. The result shows social appeal was significantly related to the UPM student's green product purchase behaviour ($r = .395$, $p < .001$) and the alternative hypothesis (H3) was accepted. According to Zahid et al., (2018), one of the key components was also determined to be social appeal. In reality, the social appeal of green products distinguishes between customers who are up to date (i.e., are aware of current developments) and those who are 'out of date'.

Table 6: Relationship between the social appeal and green product purchase behaviour

Variable		Green product purchase behaviour	Social appeal
Green product purchase behaviour	Pearson Correlation	1	.395**
	Sig. (2-tailed)		.000
	N	260	260
Social appeal	Pearson Correlation	.395**	1
	Sig. (2-tailed)	.000	
	N	260	260

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

Pearson Correlation Analysis: Table 7 shows emotional value was significantly related to the UPM student's green product purchase behaviour ($r = .573$, $p < .001$) and the alternative hypothesis (H4) was accepted. According to Joshi, Uniyal and Sangroya (2021), consumers' perspectives about acquiring green items, as well as their emotional value, have been recognized as important predictors of their green purchase behaviour. Consumers that buy green products receive intrinsic pleasures for helping others, according to emotional value.

Table 7: Relationship between the emotional value and green product purchase behaviour

Variable		Green product purchase behaviour	Emotional value
Green product purchase behaviour	Pearson Correlation	1	.573**
	Sig. (2-tailed)		.000
	N	260	260
Emotional value	Pearson Correlation	.573**	1
	Sig. (2-tailed)	.000	
	N	260	260

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

So, overall, from the findings in Pearson correlation, all the variables have a significant and positive relationship between the green product purchase behaviour. Furthermore, the coefficient (r) for the

emotional value is higher than knowledge, attitude and social appeal which explain that emotional value has a strong relationship with the green product purchase behaviour among UPM students.

Multiple Linear Regression Analysis: Table 8 shows the Multiple Linear Regression analysis result. The knowledge significantly influenced UPM students on green product purchase behaviour with a p-value is .000 which means less than ($p < .001$) and the coefficient value showed that (ß = .303). However, the attitude and social appeal is not significantly influencing the UPM students and its p-value was more than .001 even though it correlated. Meanwhile, the emotional value also significantly influences the students because the beta value showed that (ß = .333, $p < .001$). So overall, from the test, the result was shown that emotional value significantly influences UPM students. According to Wang et al., (2021), consumers' perceived green responsibility favourably influences their green purchasing behaviour when they are experiencing good emotions, and it can significantly moderate the link between positive emotional appeals and green purchase behaviour. Furthermore, they also showed the adjusted R^2 (.438) which means it explains that 43.8% variance of dependent variables were explained by the knowledge, attitude, social appeal and emotional value.

Table 8: Multiple Linear Regression Analysis

Variables	Coefficient (ß)	p-value
Knowledge	.303	.000
Attitude	.160	.002
Social appeal	.074	.179
Emotional value	.333	.000
F = 51.500; R = .668 R^2 = .447; Sig. F = .000 Adjusted R^2 = .438; Sig. F = .000		

** Correlation significant at $p < .001$

5. Conclusion and Implications

As mentioned earlier these studies were focused on factors influencing green product purchase behavior among UPM students. Even though there are so many authors and researchers discussing green product buying from different aspects and angles, this study, explains more detail and explored the idea of green product purchase behaviour. Moreover, they are also examining the relationship between predictor factors and green product purchase behaviour among UPM students. From the findings, this study was found successfully examines the relationship between knowledge, attitude, social appeal, and emotional value with green product purchase behavior. All of the four independent variables (knowledge, attitude, social appeal and emotional value) had a significant relationship with green product purchase behaviour. However, only three predictor factors (emotional value, knowledge and attitude) influence the green product purchase behavior among UPM students. The most influencing factor is emotional value, followed by knowledge and attitude.

These studies only focus on the predictor factors which are knowledge, attitude, social appeal and emotional value that make purchase green products among students. All these variables are predictor factors which had a positive relationship with green product purchase behaviour. Other than predictor factors, there also have other factors which influence the consumer. So, for future research, the researchers can conduct research on other factors such as price sensitivity, satisfaction through green products and environmental protection which might influence the University students on green product purchases and can be conducted in large sample size. Researchers also can examine the relationship between ecological value, health value, economic value and safety value on green product purchase behaviour. Other than that, this research also can be conducted on other University students in Malaysia to know their green product purchases in these variables and the influence on their purchasing behaviour.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50 (2), 179-211.

Albino, V., Balice, A. & Dangelico, R. M. (2009). Environmental strategies and green product development: The behaviours of sustainability-driven companies. *Business Strategy and the Environment,* 18(2), 83-96.

Bearden, W. O. & Rose, R. L. (1990). Attention to social comparison information: an individual difference factor affecting consumer conformity. *Journal of Consumer Research*, 16(4), 461-471.

Bryunina, D. and Safaei, S. (2011). The influence of eco-labelled products on consumer buying behavior: By focusing on eco-labelled bread. *Doctoral Dissertation.* Malardalen University.

Bukhari, A., Aqdas, R. & Bhatti, U. (2017). Factors influencing consumer green product purchase decision by the mediation of green brand image. *International Journal of Research.* 4.

Das, P. (2016). What is a green product? – Examples, advantages, and challenges. feedough.com. Retrieved from https://www.feedough.com/green-product/

Danish, M., Saqib, A., Muhammad, A. & Hasan, Z. (2019). The influencing factors on choice behavior regarding green electronic products: Based on the green perceived value model. *Economies.* 7. 99. 10.3390/economies7040099.

Desmet, P., Overbeeke, K. & Tax, S. (2001). Designing products with added emotional value: Development and application of an approach for research through design. *The Design Journal.* 4, 32-47. 10.2752/146069201789378496.

Hain, M. (2017). How Good Products Make You Feel: The Underlying Emotions Of Ethical Consumerism. *Journal of Sustainability Studies*, 73-81.

Harizan, S. H. & Haron, M. S. (2012). Green product purchase behaviour: Relevance for Muslims. *Chinese Business Review*, 11(4), 377-382.

Honkanen, P. & Young, J. (2015). What determines British consumers' motivation to buy sustainable seafood? *British Food Journal,* 117, 1289-1302. 10.1108/BFJ-06-2014-0199.

Hundley, E. R., Van, T. & Vanera (2001). The Importance of pilot test. *Social Research Updates.*

Iravani, M. R., Zadeh, M. S., Forozia, A., Shafaruddin, N. & Hmidreza, M. (2012) Study of factors affecting young consumers to choose green products. *J Basic Appl Sci Res.* 2(6). 5534–5544

Jan, I. U., Ji, S. & Yeo. C. (2019). Values and green product purchase behavior: The moderating effects of the role of government and media exposure. *Sustainability*, 11. http://doi.org/10.3390/su11236642.

Joshia, Y. & Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. *International Strategic Management Review*, 128–143.

Joshi, Y., Uniyal, D. P., & Sangroya, D. (2021). Investigating consumers' green purchase intention: Examining the role of economic value, emotional value and perceived marketplace influence. *Journal of Cleaner Production,* 328, 129638.

Kato, T. & Tsuda, K. (2017). Related verification of emotional value and company brand emitted from pure recall. *Procedia Computer Science*, 112, 1298–1307.

Kenton, W. (2021). Greenwashing. Investopedia. Retrieved from https://www.investopedia.com/terms/g/greenwashing.asp#:~:text=Greenwashing%20is%20the%20process%20of,company's%20products%20are%20environmentally%20friendly.

Khan, S. & Mohsin, M. (2017). The power of emotional value: Exploring the effects of values on green product consumer choice behavior. *Journal of Cleaner Production.* 150. 10.1016/j.jclepro.2017.02.187.

Khoiriyah, S., & Toro, M. J. S. (2018). Attitude toward green products, willingness to pay and intention to purchase. *International Journal of Business and Society,* 19(S4), 620-628.

Kotler, P. (2011). Reinventing marketing to manage the environmental imperative. *Journal of Marketing,* 75, 132-135.

Kumar, P. & Ghodeswar, B. M. (2015). Factors affecting consumers' green product purchase decisions. *Marketing Intelligence & Planning*, 33(3), 330-347.

Laroche, M., Bergeron, J. & Barbaro-Forleo, G. (2001) Targeting Consumers Who Are Willing to Pay More for Environmentally Friendly Products. *Journal of Consumer Marketing,* 18, 503-520. http://dx.doi.org/10.1108/EUM0000000006155

Larsson, S. & Khan, M. A. (2012). A Study of factors that influence green purchase. *Umea School of Business and Economics*. 1-56.

Lin, P.C. & Huang, Y.H. (2012). The influence factors on choice behavior regarding green products based on the theory of consumption values. *Journal of Cleaner Production*, 22, 11–18.

Martin, B. & Simintiras, A. C. (1995). The impact of green product lines on the environment: does what they know affect how they feel? *Marketing Intelligence & Planning*, 13(4), 16-23.

McEachern, M. & McClean, P. (2002). Organic purchasing motivations and attitudes: Are they ethical? I*nternational Journal of Consumer Studies.* 26. 85-92. 10.1046/j.1470-6431.2002.00199.x.

Milfont, T. L., & Duckitt, J. (2010). The environmental attitudes inventory: A valid and reliable measure to assess the structure of environmental attitudes. *Journal of environmental psychology,* 30(1), 80-94.

Mohajan, H. (2016). A comprehensive analysis of knowledge management cycles.

Mostafa, M. M. (2009). Shades of green: A psychographic segmentation of the green consumer in Kuwait using self-organizing maps. *Expert System with Applications*, 36(8), 11030–11038.

Myriam, E., Fahri, K. & Emine, S. (2016). Exploring pro-environmental behaviors of consumers: an analysis of contextual factors, attitude, and behaviors. *Journal of Business Research*, 3971–3980.

Nezakati, H & Hosseinpour, M. (2015). Green product purchasing among Malaysian consumers. *International Journal of Sustainable Development & World Policy,* 4(1), 1-6.

Nguyen, Y.T.H & Nguyen, H.V. (2020). An alternative view of the millennial green product purchase: The roles of online product review and self-image congruence. *Asia Pacific Journal of Marketing and Logistics*, 33(1), 231-249.

Ogiemwonyi, O., Harun, A. B., Othman, B. A., Ismael, A. D., & Ali, R. (2019). Key issues and challenges of green consumers in consuming green products an Insight from the emerging country: Malaysia. *International Journal of Psychosocial Rehabilitation*, 23(2), 514-528.

Oliver, J.D. & Lee, S.H. (2010). Hybrid car purchase intentions: a cross-cultural analysis. *Journal of Consumer Marketing,* 27(2), 96-103.

Rezai, G., Teng, P. K., Mohamed, Z. & Shamsudin, M. N. (2012), Consumers' awareness and consumption intention towards green foods. *Afr. J. Bus. Manag,* 6, 4496–4503.

Schlegelmilch, B. B., Bohlen, G. M., & Diamantopoulos, A. (1996). The link between green purchasing decisions and measures of environmental consciousness. *European Journal of Marketing.*

Shamdasani, P., Chon-Lin, G., & Richmond, D. (1993). Exploring green consumers in an oriental culture: Role of personal and marketing mix. *Advances in Consumer Research,* 20, 488-493.

Sheth, J. N., Newman, B. I. & Gross, B. L. 1991. Why we buy what we buy: a theory of consumption values. *Journal of Business Research.* 22. 159-170.

Sreen, N., Purbey, S., & Sadarangani, P. (2018). Impact of culture, behavior and gender on green purchase intention. *Journal of Retailing and Consumer Services,* 41, 177-189.

Stutzman, T. M. & Green, S. B. (1982). Factors affecting energy consumption: Two field tests of the Fishbein-Ajzen model. *The Journal of Social Psychology*, 117(2), 183-201.

Suki, N. M. (2015). Consumer environmental concern and green product purchase in Malaysia: Structural effects of consumption values. *Journal of Cleaner Production*, 204-214. http://dx.doi.org/10.1016/j.jclepro.2015.09.087.

Suki, N. M. (2016). Green product purchase intention: Impact of green brands, attitude, and knowledge. *British Food Journal*, 118(12), 2893-2910.

Wang, J., He, Z., Wang, J., Bao, J. & Goa, J. (2021). The Impact of positive emotional appeals on green purchase behavior. *Research Article.* https://doi.org/10.21203/rs.3.rs-918616/v1

Wang, H., Ma, B., & Bai, R. (2019). How does green product knowledge effectively promote green purchase intention? *Sustainability*, 11(4), 1193.

White, K., Habib, R., & Hardisty, D. J. (2019). How to SHIFT consumer behaviors to be more sustainable: A literature review and guiding framework. *Journal of Marketing*, 83(3), 22–49. https://doi.org/10.1177/0022242919825649

Witek, L. & Kuzniar, W. (2021). Green purchase behavior: The effectiveness of sociodemographic variables for explaining green purchases in an emerging market. *Sustainability*. https://doi.org/10.3390/su13010209.

Zahid, M. M., Ali, B., Ahmad, M.S., Thurasamy, R. & Amin, N. (2018). Factors Affecting Purchase Intention and Social Media Publicity of Green Products: The Mediating Role of Concern for Consequences. Corporate Social Responsibility and Environmental Management. *Corp. Soc. Responsib. Environ. Mgmt.* 225–236.

Zhang, X & Dong, F. (2020). Why Do Consumers Make Green Purchase Decisions? Insights from a Systematic Review. *International Journal of Environmental Research and Public Health.* doi:10.3390/ijerph17186607.

Zhuang, W., Luo, X., & Riaz, M. U. (2021). On the factors influencing green purchase intention: A meta-analysis approach. *Frontiers in Psychology*, 12, 1074.