INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES

Vol 15, Issue 4, (2025) E-ISSN: 2222-6990

Knowledge, Attitude, and Purchase Intention Toward Green Products among Consumers in Selangor, Malaysia

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To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v15-i4/24957 DOI:10.6007/IJARBSS/v15-i4/24957

Published Date: 19 April 2025

Abstract

Rapid population growth has led to the over-consumption of environmental resources, thus, resulting in several environmental problems. There are ways to reduce harm to the environment, which includes engaging in environmentally friendly consumption. Therefore, this study aims to i) determine the level of knowledge and attitude of consumers towards environmentally friendly products, and ii) determine the relationship between knowledge, attitude, and purchase intention of consumers in Selangor, Malaysia, towards green products. A five-point Likert scale questionnaire was used to collect data from 321 respondents using the convenience sampling technique. The descriptive statistics showed that consumers have a high level of knowledge and attitude toward green products. The results of Spearman correlation analysis showed a significant positive relationship between knowledge, attitude, and purchase intention towards green products among consumers in Selangor. The findings of this study can support the government's spending on green initiatives to ensure sustainable consumption and production patterns (Goal 12).

Keywords: Green Products, Knowledge, Attitude, Purchase Intention

Introduction

Rapid urbanization, industrialization, and population growth have contributed to several environmental issues, including increased solid waste and greenhouse gas emissions as by-products (Al Mamun, Fazal, Ahmad, Yaacob, & Mohamad, 2018). These environmental problems may impact economic development, environment, and social sustainability. For example, plastic constitutes the third-largest source of rubbish in the world, and its overall volume is growing in tandem with both the global population and per capita consumption growth (Chen et al., 2021). Most plastic waste has been dumped in landfills, posing a

significant threat to human health and the environment. In addition, this also causes many environmental problems, such as plastic pollution, which threatens wildlife's entanglement and ingesting plastic as their food. In addressing the environmental issues, consumer awareness about excessive resource consumption that harms the environment is raised and encourages them to choose products and services that are more environmentally friendly (Kusuma & Handayani, 2018).

Green products have been sustainably developed to reduce their environmental impact throughout their life cycle, even when they are no longer used (Das, 2023; Malaysiakini, 2022). Some green products come with environmentally friendly packaging, while some have the potential for waste reduction that can be recycled, reused, or decomposed in nature. A green product can be identified by its labelling, e.g., a green certification or the company's website. For example, a MyHIJAU Mark Label product may display as proof that they are environmentally friendly. "MyHIJAU Mark" refers to a program run by GreenTech Malaysia to recognise a product that uses green technology. A product with the MyHIJAU Mark will help customers make purchase decisions supporting a greener environment (Malaysian Green Technology Corporation, 2018).

The awareness of environmental issues is related to the individual's responsibility to future generations (Rhein & Schmid, 2020). Mindfulness of the environmental destruction and danger to future generations leads them to adopt pro-environmental behaviour and change their consumption habits (Abu Bakar, Mohamed Osman, & Hitam, 2020). As people become increasingly concerned about environmental issues, with pressure from governments, shareholders, and industry organizations, environmental responsibility among manufacturing businesses is stressed and amplified (Indriani, Rahayu, & Hadiwidjojo, 2019). This will, in turn, force consumers to be more environmentally conscious (Kusuma & Handayani, 2018).

Green consumers who opt for environmentally friendly items and consider the environmental impact of each consumption are called green consumers (Kusuma & Handayani, 2018). This consumption method will avoid products that could harm their health and the environment, including components sourced from endangered animals or products that generate hazardous waste. They also stated that environmentally conscious individuals prefer buying and utilizing eco-friendly products. The product purchase and usage are based on the elements such as environmental knowledge, attitudes toward the environment, and environmentally friendly products. Therefore, it is crucial to comprehend how customers view these environmentally friendly products in order to undertake appropriate action toward sustainable consumption.

Malaysia's population is rapidly growing, with a population of 32.8 million in 2021, resulting in massive amounts of solid waste generated daily, amounting to an estimated 38,427 metric tonnes per day (1.17/capita/day) in 2021 (Malaysian Investment Development Authority, 2021). However, 82.5% of it is disposed of in landfills. According to the Department of Statistics Malaysia (DOSM, 2022), Selangor was the most populous state in Malaysia, with the highest population of 7,014,700, and the scheduled wastes also recorded the highest waste generation from 1,019,932 metric tonnes in 2019,2,048,558 metric tonnes in 2020 to 2,086,127 metric tonnes in 2021.

Many consumers claim to follow the word "green" and the purpose of green products; however, they do not comprehend the meaning and concept of the subject (Ibrahim et al., 2021). Consumers only recognise a green product as environmentally friendly as it must be recycled. It indicates that the consumer is only concerned and aware of the product's consequences. In addition, most young consumers in Malaysia are still uninformed of green products (Kadir, Hassan, & Aziz, 2019). As consumers must use green products as a sustainable effort to protect the environment, understanding the relationship between consumer knowledge, attitude, and purchase intention towards green products is very important for future action.

This study helps in understanding consumer knowledge, their attitudes, and purchasing intentions towards green products, which can guide policymakers and business organisations to develop strategies to intensify green product acceptance in Malaysia. The findings from this study can aid government agencies such as the Ministry of Natural Resources and Environmental Sustainability, in intensifying focused awareness initiatives to promote sustainable consumption of resources for the betterment of the nation. The Ministry of Education, and Higher Learning Education can also be guided in the development of courses and programs at all educational levels in order to bridge the existing knowledge gaps among young consumers, and allow them to make better purchasing decisions from an early age. Furthermore, the encouragement towards embracing green products can revive the nations green economy, generate new business ventures and job opportunities in specific industries which contributes to the national environmental aspirations.

Previous studies have focused on green product purchase intention among Malaysian consumers (Kong, Harun, Sulong, & Lily, 2014; Mei, Ling, & Piew, 2012; Mohd Suki, 2016); however, most of the studies were conducted more than five years ago. Therefore, this study, with a similar objective, was conducted to reflect the current situation while considering the understanding of trends. Hence, the research aims to i) identify the level of consumer knowledge and attitude toward green products among consumers in Selangor, Malaysia, and ii) determine the relationship between consumer knowledge, attitude, and purchase intention toward green products among consumers in Selangor, Malaysia.

The Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1980) is a well-known theory for studying consumer behaviour. This theory underlies the basic elements of this research. TRA is a framework used to analyse human behaviour in many different contexts and is crucial to environmental psychology to predict behavioural intentions (Rusli, Ing, & Ting, 2022). This theory emphasises on two significant attributes: attitudes and subjective norms toward the behavioural intention. It has been used to study the effects on consumers' intentions and actions concerning environmentally friendly purchases. This idea states that intention is the most influential factor in determining behaviour. Lestari, Hanifa, and Hartawan (2020) mentioned that attitude is the most accurate indicator of intentions. In addition, environmental awareness, such as knowledge of the aspects of environmentally friendly products, such as the eco-label, can foster positive attitudes influencing the intent to purchase green products.

Research Methodology

This research aims to determine the relationship between knowledge, attitude, and intention to purchase green products among Selangor, Malaysia consumers. Selangor is a Peninsular Malaysia state covering about 7,951 km^2 in 2020 (DOSM, 2021). Accordingly, Selangor is the most populous state (7 million population in 2021) and produces the highest amount of scheduled waste (2,086,127 metric tonnes) in 2021. Thus, Selangor was chosen for this study.

Hypothesis

The hypotheses are as follows:

H_1: Knowledge – Attitude

H_a: Knowledge has a significant effect on the attitude towards green products.

H_2: Knowledge – Green products purchase intention

H_a: Knowledge has a significant effect on consumers' green products purchase intention.

H_3: Attitude – Green products purchase intention

H_a: Attitude has a significant effect on consumers' green products purchase intention.

The research design which is based on quantitative research will adopt a non-experimental research method in a survey form. Cross-sectional is used in this research to capture information about the demographics of the respondents and establish the relationship between the public's knowledge, attitude, and intention to purchase green products in Malaysia.

Research Instrument

The research instrument required to conduct this study is a questionnaire. The questionnaire is an instrument comprising a series of questions used to collect data from the targeted respondent (Bhandari & Heshmati, 2010). The questionnaire consists of five sections: Section A: Socio-demographics of the respondents, Section B: Knowledge about green products among the consumers in Selangor, Malaysia, Section C: Attitude toward green products among the consumers in Selangor, Malaysia, and Section D: Intention of purchasing green products among consumers in Selangor, Malaysia. Section A was measured by multiple-choice, while sections B, C, and D were assessed using a 5-point Likert scale.

Sample Size

The minimum sample size of this study was 385 respondents, which was calculated using Krejcie and Morgan (1970) formula. The population size used was 3,602,700, which is the labour force of Selangor, Malaysia, in 2020 as recorded by the DOSM (2021). The labour force refers to the population within the working age range of 15-64 years.

Pilot Study

A pilot study is a small preliminary test to evaluate the research instrument (questionnaire) before its full-scale implementation. A general rule of thumb is a minimum of 30 to 100 pilot participants to test the survey (Ruel, E., Wagner III, & Gillespie, 2016). In this study, 38 samples were taken before the full-scale questionnaire survey in this pilot test.

The value of reliability analysis can be assessed in terms of its strength (Hair, Celsi, Money, Samouel, & Page, 2016), using a rule of thumb. Cronbach's Alpha value for Section B (Knowledge) is 0.737 among the 10 items, which shows a good strength of association (0.7 to

α < 0.8) based on Cronbach's alpha coefficient range. The Cronbach's Alpha value obtained for Section C is 0.872 among the 10 items, which indicates a very good strength of association (0.8 to α < 0.9). In terms of Section D, Cronbach's Alpha value is 0.895 among the five items, also showing very good strength of association.

Data Collection

The primary data was collected using the questionnaire in Google form. In this study, the sampling technique used is non-probability sampling. In non-probability sampling, the convenience sampling method was adopted to select research samples based on respondents who are convenient and accessible. However, the criteria for respondents to participate in the survey must be Malaysians who are living in Selangor and at least 18 years old. The type of questionnaire used was an online questionnaire, in which the Google form link was given to respondents via social media such as Facebook, WhatsApp, and Instagram.

In addition, data collection was also completed offline, and the questionnaire was distributed directly to respondents. The link to the questionnaire was converted into a QR code, and some flyers were printed. This is convenient for people to scan the QR code on paper with their phones and can answer the questionnaire on their own time. Data collection for this study was conducted at KTM station as well as shopping malls which have a high flow of people to obtain respondents. However, in this study, a total of 321 respondents were collected. During the data collection, some respondents refused to answer the questionnaire for fear of fraud. This resulted in an acceptance rate of only about 60 per cent for answering the questionnaire.

Data Analysis

Descriptive and inferential analysis was used to analyse the survey's results. The descriptive analysis was adopted to summarize and describe the respondents' demographic data and obtain information on the level of agreement for the variables in this study. Data are expressed as frequency, percentage, and mean in the descriptive analysis. For the five-point Likert scale the below formula was employed:

$$\frac{(\text{Highest value - lowest})}{\text{No. of levels}} = \frac{(5-1)}{3} = 1.333$$

so, the first level: low (1), will start from (1+1.333) 1- 2.339, Medium (2): 2.34-3.669, and High (3): 3.67-5.00.

In terms of inferential analysis, the Spearman correlation coefficient was used for analysing data obtained based on ordinal scales (Lani, 2010). In other words, the correlation coefficient of "+" sign denotes a positive correlation, its "-" sign denotes a negative correlation, while a zero-correlation coefficient indicates no linear relationship between the two variables. This study concentrates on the relationship between knowledge, attitude of the consumers, and green products purchase intention.

Table 1 shows Cohen's rule to interpret the correlation coefficient. According to Cohen (1988), the correlation coefficient is classified according to the strength of the relationship, which is categorised into three groups: weak (0.1 < r < 0.29), moderate (0.30 < r < 0.49), and strong (0.5 < r < 1.0).

Table 1
Interpretation of the correlation strength (Cohen, 1988)

r Value	Strength of relationship
0.10 – 0.29	Weak
0.30 – 0.49	Moderate
0.50 – 1.00	Strong

Where +1.00 < r < -1.00

Analysis and Discussion

Socio-demographic of the Respondents

Table 2 shows the socio-demographics of the 321 respondents. In terms of gender, there were 204 (63.6%) females and 117 (36.4%) males. All the respondents were adults (18 or above) in which most of the respondents were within the age group of 18-24 (59.8%) and 25-34 (22.7%). It was followed by the age group 35-44 (9.7%) and 45-54 (4%), while respondents within the age group 55-64 and 65 and above were 1.9%, respectively. As for marital status, 249 (77.6%) of the respondents were single, followed by married, divorced, and widowed, which is 66 (20.6%), 3 (0.9%), and 3 (0.9%) divorced and widowed.

There were nine districts listed in the questionnaire, of which Petaling reported the highest number of respondents which is 93 (29%), followed by Hulu Langat (74, or 23%), Klang (39, or 12.1%), Kuala Selangor 33 (33, or 10.3%), Sepang (31, or 9.7%), Gombak (26, or 8.1%), Hulu Selangor (16, or 5%), Kuala Langat (7, or 2.2%) and Sabak Bernam (2, or 0.6%). Meanwhile, as for occupations, most of the respondents (51.1%) who answered the questionnaire were students, followed by private employees (28.7%), self-employees (7.5%), government servants (6.5%), homemakers (2.5%), unemployed (2.2%), and retirees (1.5%). Regarding education level, most of the respondents (205, or 63.9%) have bachelor's degrees. Lastly, most respondents (50.5%) earn less than RM1,501 per month, 17.4% earned between RM2,501 – RM4,000, 17.1% earned between RM1,501 – RM2,500, while 15% earned RM4,001 and above.

Table 2
Socio-Demographics of The Respondents

Variables	Attribute/Value	Number (n)	Percentage (%)
Gender	Female	204	63.6
	Male	117	36.4
Age	18 - 24	192	59.8
	25 - 34	73	22.7
	35 - 44	31	9.7
	45 - 54	13	4.0
	55 - 64	6	1.9
	65 and above	6	1.9
Marital status	Single	249	77.6
	Married	66	20.6
	Divorced	3	0.9
	Widowed	3	0.9

District	Sabak Bernam	2	0.6
	Kuala Selangor	33	10.3
	Hulu Selangor	16	5.0
	Gombak	26	8.1
	Petaling	93	29.0
	Klang	39	12.1
	Hulu Langat	74	23.0
	Kuala Langat	7	2.2
	Sepang	31	9.7
Occupation	Government employed	21	6.5
	Private employed	92	28.7
	Self-employed	24	7.5
	Unemployed	7	2.2
	Retired	5	1.5
	Homemaker	8	2.5
	Student	164	51.1
Education level	Primary school	3	0.9
	Secondary school	14	4.4
	STPM / Diploma / Matriculation / A-Levels	69	21.5
	Degree	205	63.9
	Master	27	8.4
	PHD	3	0.9
Gross monthly income	Less than RM1,501	162	50.5
	RM1,501 – RM2,500	55	17.1
	RM2,501 – RM4,000	56	17.4
	RM4,001 and above	48	15.0

Source: Author's Calculation

Knowledge Toward Green Products Among Consumers in Selangor, Malaysia

Knowledge about green products among consumers in Selangor, Malaysia. There were ten statements on knowledge about green products among consumers in Selangor, Malaysia. Table 3 shows the percentage of agreement, mean, and level of agreement on the statements. The respondents showed the highest agreement on statement B6 with a mean level of 4.38, followed by B9 (4.29); B7 (4.28); B10 (4.07); B5 (4.02); B3 (3.83), and B2 (3.76). Statements B8 (3.61), B1 (3.58), and B4 (3.25) received an agreement level of 2. The overall mean of knowledge about green products was 3.91. It has shown high mean scores in past studies (Ibrahim et al., 2021; Rusli et al., 2022). However, some studies have found that consumers' knowledge of green product has a medium mean (Mohd Suki, 2016; Sun & Wang, 2020).

Most respondents agree with statement B6, "Green products will help preserve the environment by reducing pollution". According to Rinkesh (2022), green products pose minimal harm to people and the environment during their production, use, or disposal. It helps preserve the environment by effectively minimizing the pollution they might cause, such as air pollution, water pollution, etc. In item B4, which represents the lowest mean of the ten statements, 31.5% of the respondents indicated neutral, 28% and 15% agreed and strongly agreed with the statement. However, 18.1% disagreed and 7.5% strongly disagreed

with the statement. This can be explained as people are unable to offer advice because they lack knowledge about green products (Khuzaimah et al., 2020).

Table 3
Mean and level of knowledge about green products among the consumers in Selangor, Malaysia

Item	Degree of Agreement (%)					Mean	Levels
	1	2	3	4	5		
B1	1.60	10.30	35.50	34.30	18.40	3.58	2
B2	3.10	7.20	24.60	40.80	24.30	3.76	3
B3	2.80	5.30	21.50	46.40	24.00	3.83	3
B4	7.50	18.10	31.50	28.00	15.00	3.25	2
B5	2.20	2.50	15.90	50.20	29.30	4.02	3
B6	1.60	0.60	8.40	37.40	52.00	4.38	3
B7	1.90	1.20	10.60	39.30	47.00	4.28	3
B8	5.00	8.70	31.20	30.80	24.30	3.61	2
B9	0.90	0.60	11.50	42.70	44.20	4.29	3
B10	1.90	4.70	16.20	38.06	38.60	4.07	3
Overall Mean						3.91	

Source: Author's Calculation

B1: I know that the product I buy is environmentally safe. B2: I understand the information on eco-labels of green products. B3: I learn about green products through mass media. B4: I can give other recommendations about different brands of green products. B5: Green products usually contain materials that have been recycled. B6: Green products will help preserve the environment by reducing pollution. B7: Consumption of green products can help reduce the amount of waste in landfills. B8: Green products last longer than conventional products. B9: Product with energy star green certification label provides energy-saving benefits. B10: Green products are cost-saving in the long run.

Attitudes Toward Green Products Among Consumers in Selangor, Malaysia
Table 4 shows the percentage of agreement, mean, and level of agreement on the ten statements about attitudes toward green products among consumers in Selangor, Malaysia. The result showed that the mean scores of the agreement for all statements ranged from 3.66 to 4.46. The highest mean score was item C3 (4.46), followed by C1 (4.40), C10 (4.31), C6 (4.29), C8 (4.26), C9 (4.09), C2 and C7 (4.06), C5 (3.96), and C4 (3.66). The overall mean of attitude towards green products among consumers was 4.16. According to previous studies, consumer attitudes toward green products are also high (Roh, Seok, & Kim, 2022; Sun & Wang, 2020).

The respondents showed a high level of agreement (4.46) with statement C3 "It is wise to buy green products to protect the environment." Besides, it can save natural resources to protect the environment, for instance, by selecting products that employ waste or recycled materials as raw material sources. Most respondents held a positive attitude towards green products, thinking that purchasing green products is a good idea. In the study by Sun, Wang, Gao and Li, (2018) and Sun and Wang (2020), a high-level mean of consumer attitude towards green products was identified.

Most consumers also indicated that they support buying green products and are willing to modify their lifestyle if they are reasonably priced. The statement C4, "It is worth paying higher prices for green products", had a medium level of agreement in this section. However, the study by Al-Kumaim et al. (2021) and Shahsavar, Kubeš and Baran (2020) consumers are willing to fork over more money for sustainable goods and participate in sustainability efforts.

Table 4
Mean and level of attitude toward green products among the consumers in Selangor, Malaysia

Item	Degree of Agreement (%)					Mean	Levels
	1	2	3	4	5		
C1	0.30	1.60	6.90	40.20	51.10	4.40	3
C2	1.60	1.90	24.90	32.70	38.90	4.06	3
C3	0.30	0.90	5.90	38.00	54.80	4.46	3
C4	2.50	10.00	31.50	30.80	25.20	3.66	2
C5	0.90	2.50	27.70	37.70	31.20	3.96	3
C6	0.30	2.80	11.50	38.30	47.00	4.29	3
C7	0.60	3.40	19.90	41.40	34.60	4.06	3
C8	0.30	2.80	12.50	39.90	44.50	4.26	3
C9	1.60	1.60	20.20	39.90	36.80	4.09	3
C10	0.30	1.20	14.30	35.80	48.30	4.31	3
Overall						4.16	

Source: Author's Calculation

C1: It is a good idea to buy green products. C2: I prefer environmentally friendly products compared to conventional ones. C3: It is wise to buy green products to protect the environment. C4: It is worth paying higher prices for green products. C5: I will choose green products as they have good quality. C6: I am willing to change my lifestyle by purchasing green products if they are reasonably priced. C7: I feel that green products are generally trustworthy. C8: I will buy green products if it is easily accessible. C9: I am willing to buy products that are made from recycled materials. C10: I support buying green products.

Purchase Intention of Green Products Among Consumers in Selangor, Malaysia

The mean level of agreement was used to analyse the intention of purchasing green products among consumers in Selangor, Malaysia, as shown in Table 5. The overall mean was 4.01. The highest mean level of agreement was obtained by item D1 which was 4.25. It shows that most of the consumers are willing to purchase green products in the future. In the study by Mokan, Lee and Bhoyar (2018) and Khuzaimah et al. (2020), they also found that consumers have a high agreement on intent to purchase green products in the future. This is followed by items D4 (4.05), D3 (4.04), and D2 (4.02). However, in Mokan et al. (2018), there is a moderate mean agreement on item D3. It shows that consumers are reluctant to purchase the green product. Nevertheless, consumers are becoming more environmentally conscious, as seen by the rise in demand for eco-friendly items in the market. The lowest mean agreement was for item D5, at 3.68, but still at a high level of agreement. Overall, the results indicated that most statements of knowledge and attitude have a high-level agreement in which the overall statement is significantly correlated with consumers' intention to buy green products.

Table 5
Mean and level of the intention of purchasing green products among consumers in Selangor, Malaysia

Item	Degree of Agreement (%)					Mean	Levels
	1	2	3	4	5		
D1	1.20	-	14.00	42.10	42.70	4.25	3
D2	0.30	3.40	23.40	39.90	33.00	4.02	3
D3	-	3.10	21.80	42.70	32.40	4.04	3
D4	0.30	2.50	22.10	42.40	32.70	4.05	3
D5	3.70	7.50	33.30	28.30	27.10	3.68	3
Overall						4.01	

Source: Author's Calculation

D1: I am willing to purchase green products in the future. D2: I intend to switch to a green variety of a product. D3: The probability that I will buy green products is high. D4: I will practice greener product purchasing. D5: I am willing to pay more for green products than conventional products.

Relationship between Knowledge, Attitude, and Purchase Intention of Green Products Among Consumers in Selangor, Malaysia

The relationship between knowledge and attitude was found to be significantly positive. The Spearmen correlation coefficient was r = 0.649, which has a high relation strength. The result showed that the significant value p = 0.000 which was less than 0.05. Thus, H_1H_a is accepted. In their study, Kusuma and Handayani (2018) found that environmental knowledge significantly influences environmental attitude. However, Jaiswal and Kant (2018) found that environmental knowledge does not influence attitudes toward green products. Other studies showed that product knowledge has a positive impact on consumers' attitudes (Chuweni, Mohamed Saraf, Fauzi, & Wadzir, 2023; Manopo, Tumbuan, & Gunawan, 2021; Sun & Wang, 2020).

The Spearmen correlation coefficient between knowledge and green products purchase intention was r = 0.610, which has a strong relationship. The result was found to be significantly positive, showing that the significant value p = 0.000 was less than 0.05. Hence, H_2H_a is accepted. The outcome is cohesive with previous research results, demonstrating that product and environmental knowledge positively influence green product purchase intentions (Kusuma & Handayani, 2018; Manopo et al., 2021; Sun & Wang, 2020). However, according to Jaiswal and Kant (2018), environmental knowledge has an insignificant impact on purchase intention for green products due to a possible lack of green consumerism and environmental issues awareness.

There was a significant positive correlation between attitude and purchase intention of green products. The Spearmen correlation coefficient was r = 0.812, which has a high relation strength. The findings indicated that the significant value p = 0.00 was less than 0.05. Therefore, H_3H_a is accepted. The results also seem to support past research outcomes (Jaiswal & Kant, 2018; Kusuma & Handayani, 2018; Manopo et al., 2021; Sun & Wang, 2020; Sun et al., 2018). They found that attitude and purchase intention towards green products are positively correlated.

Table 6
Spearman's correlation between knowledge, attitude, and purchase intention of green products

			Knowledge	Attitude	Purchase Intention
Spearman's rho	Knowledge	Correlation Coefficient	1.000		
		Sig.	0.000		
		N	321		
	Attitude	Correlation Coefficient	.649**	1.000	
		Sig.	0.000	0.000	
		N	321	321	
	Purchase Intention	Correlation Coefficient	.610**	.812**	1.000
		Sig.	0.000	0.000	0.000
		N	321	321	321

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

Table 7 summarizes the analysis, which shows statistically significant and positive correlations between the three variables.

Table 7
Hypotheses testing summary

Hypothesis	Correlation coefficient	Sig.	Results
$H1H_a$: Knowledge has a significant effect on the attitude towards green products.	0.649	0.000	Accepted
$H2H_a$: Knowledge has a significant effect on consumer's green products purchase intention.	0.610	0.000	Accepted
$H3H_a$: Attitude has a significant effect on consumer's green products purchase intention.	0.812	0.000	Accepted

Conclusion

This research focuses on the knowledge, attitude, and purchase intention toward green products among consumers in Selangor, Malaysia. The study found a high consumer knowledge and attitude toward green products. The result also showed a significant positive relationship between knowledge, attitude, and green purchase intention among consumers in Selangor, Malaysia. As such, the findings can support the government's spending on green initiatives such as equipping people with knowledge about green products. This will assist to understand the importance of green products, which can encourage consumers to practice green behaviour to alleviate the negative environmental impact.

In terms of implications of the study, it provides insight for the governments on the consumer perception of green products. Therefore, this provides ways or strategies to

reinforce public knowledge, revise the pricing policy and advertise the green product more effectively. It can also provide a starting point for other researchers to conduct in-depth research on specific product categories and actual purchasing behaviour in the future. It also provides a reference for the government to promote green initiatives in Malaysia.

References

Abu Bakar, A., Mohamed Osman, M., & Hitam, M. (2020). Attitudes and pro-environmental behaviours: Determining factor of personality and lifestyle. *Planning Malaysia*, *18*(11), 1–10. https://doi.org/10.21837/pm.v18i11.704

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.

Al-Kumaim, N. H., Shabbir, M. S., Alfarisi, S., Hassan, S. H., Alhazmi, A. K., Hishan, S. S., … Abu Al-Rejal, H. M. (2021). Fostering a clean and sustainable environment through green product purchasing behavior: Insights from Malaysian consumers' perspective. *Sustainability*, *13*(22), 12585. https://doi.org/10.3390/su132212585

Al Mamun, A., Fazal, S. A., Ahmad, G., Yaacob, M. R., & Mohamad, M. (2018). Willingness to pay for environmentally friendly products among low-income households along coastal peninsular Malaysia. *Sustainability*, *10*(5), 1316. https://doi.org/10.3390/su10051316

Bhandari, A. K., & Heshmati, A. (2010). Willingness to pay for biodiversity conservation. *Journal of Travel & Tourism Marketing*, *27*(6), 612–623. https://doi.org/10.1080/10548408.2010.507156

Chen, H. L., Nath, T. K., Chong, S., Foo, V., Gibbins, C., & Lechner, A. M. (2021). The plastic waste problem in Malaysia: Management, recycling and disposal of local and global plastic waste. *SN Applied Sciences*, *3*, 1–15. https://doi.org/10.1007/s42452-021-04234-y

Chuweni, N. N., Mohamed Saraf, M. H., Fauzi, N. S., & Md Wadzir, M. F. (2023). What motivates the Malaysian homebuyers to go green? *3rd International Conference on the Built Environment and Engineering (IConBEE) 2022: Fostering a Transpicuous Construction Industry*, 040007. https://doi.org/10.1063/5.0168150

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). New York: Lawrence Erlbaum Associates. https://doi.org/10.4324/9780203771587

Das, P. (2023, April 25). What is a green product? – Examples, advantages, & challenges. Retrieved from Feedough website: https://www.feedough.com/green-product/

Department of Statistics Malaysia. (2021). Department of Statistics Malaysia Official Portal. Retrieved from https://www.dosm.gov.my/v1/index.php?r=column/cone&menu_id=eGUyTm9RcEVZSllm YW45dmpnZHh4dz09

Department of Statistics Malaysia. (2022). Environment statistics 2022. Retrieved from https://cloud.stats.gov.my/index.php/s/QUr5clmPyzIOx3e#pdfviewer

Hair, J. F., Celsi, M., Money, A., Samouel, P., & Page, M. (2016). *The essentials of business research methods* (3rd ed.). New York, NY: Routledge.

Ibrahim, I. I., Mohd Razali, M. F., Ahmad, Z., Mansor, Z., Shekh Zain, R., & Shah Riman, N. E. (2021). Discovering the Malaysian consumers' intention towards green purchase. *International Journal of Academic Research in Economics and Managment and Sciences*, *10*(3), 63–74. https://doi.org/10.6007/IJAREMS/v10-i3/10428

Indriani, I. A. D., Rahayu, M., & Hadiwidjojo, D. (2019). The influence of environmental knowledge on green purchase intention the role of attitude as mediating variable.

International Journal of Multicultural and Multireligious Understanding, *6*(2), 627–635. https://doi.org/10.18415/ijmmu.v6i2.706

Jaiswal, D., & Kant, R. (2018). Green purchasing behaviour: A conceptual framework and empirical investigation of Indian consumers. *Journal of Retailing and Consumer Services*, *41*, 60–69. https://doi.org/10.1016/j.jretconser.2017.11.008

Khuzaimah, A. B., Taslim, F. A., Zabri, I. F., Jia, K. J., Ganamoorthi, K. R., Ling, L. E., … Kanan, V. N. (2020). Consumer behaviour in green purchasing: A case study in Petaling Jaya, Malaysia. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, *5*(5), 44–59. https://doi.org/10.47405/mjssh.v5i5.403

Kong, W., Harun, A., Sulong, R. S., & Lily, J. (2014). The influence of consumers perception of green products on green purchase intention. *International Journal of Asian Social Science*, *4*(8), 924–939.

Krejcie, R. V, & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*(3), 607–610. https://doi.org/10.1177/001316447003000308

Kusuma, P. N. P. D., & Handayani, R. B. (2018). The effect of environmental knowledge, green advertising and environmental attitude toward green purchase intention. *Russian Journal of Agricultural and Socio-Economic Sciences*, *78*(6), 95–105. https://doi.org/10.18551/rjoas.2018-06.10

Lani, J. (2010, December 29). Conduct and interpret a Spearman rank correlation. Retrieved from Statistic Solution website: https://www.statisticssolutions.com/free-resources/directory-of-statistical-analyses/spearman-rank-correlation/

Lestari, E. R., Hanifa, K. P. U., & Hartawan, S. (2020). Antecedents of attitude toward green products and its impact on purchase intention. *IOP Conference Series: Earth and Environmental Science*, *515*(1), 12073. IOP Publishing. https://doi.org/10.1088/1755-1315/515/1/012073

Malaysiakini. (2022, January 31). Green product: An emerging technology! Retrieved from https://www.malaysiakini.com/announcement/609108

Malaysian Green Technology Corporation. (2018). Guidelines for the registration of MyHIJAU Mark product. Retrieved from https://www.myhijau.my/wp-content/uploads/2018/06/Guidelines-for-the-Registration-of-MyHIJAU-Mark-Product-Rev.0-Jun-2018.pdf

Malaysian Investment Development Authority. (2021, December). Waste to energy for a sustainable future. Retrieved from MIDA e-Newsletter website: https://www.mida.gov.my/waste-to-energy-for-a-sustainable-future/

Manopo, A., Tumbuan, W. J. F. A., & Gunawan, E. M. (2021). The influence of product knowledge on green purchase intention, the role of attitude as mediating variable. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, *9*(4), 851–864. https://doi.org/10.35794/emba.v9i4.36623

Mei, O. J., Ling, K. C., & Piew, T. H. (2012). The antecedents of green purchase intention among Malaysian consumers. *Asian Social Science*, *8*(13), 248. https://doi.org/10.5539/ass.v8n13p248

Mohd Abdul Kadir, J., Mohmad Hassan, N. N. N., & Abd Aziz, N. N. (2019). Investigating students' attitude and intention to use biodegradable drinking straw in emerging country. *International Conference on Accounting and Management (ICAM2019)*. Bangi Resort Hotel. Bandar Baru Bangi, Selangor, 5–6 November 2019.

Mohd Suki, N. (2016). Green product purchase intention: Impact of green brands, attitude, and knowledge. *British Food Journal*, *118*(12), 2893–2910. https://doi.org/10.1108/BFJ-06-2016-0295

Mokan, K. V, Lee, T. C., & Bhoyar, M. R. (2018). The intention of green products purchasing among Malaysian consumers: A case study of Batu Pahat, Johor. *Indian Journal of Public Health Research & Development*, *9*(10), 996–1001. https://doi.org/10.5958/0976-5506.2018.01300.1

Rhein, S., & Schmid, M. (2020). Consumers' awareness of plastic packaging: More than just environmental concerns. *Resources, Conservation and Recycling*, *162*, 105063. https://doi.org/10.1016/j.resconrec.2020.105063

Rinkesh. (2022). 25 ultimate green eco-friendly products. Retrieved from Conserve Energy Future website: https://www.conserve-energy-future.com/25-green-eco-friendly-products.php

Roh, T., Seok, J., & Kim, Y. (2022). Unveiling ways to reach organic purchase: Green perceived value, perceived knowledge, attitude, subjective norm, and trust. *Journal of Retailing and Consumer Services*, *67*, 102988. https://doi.org/10.1016/j.jretconser.2022.102988

Ruel, E., Wagner III, W. E., & Gillespie, B. J. (2016). Pretesting and pilot test. In Ruel, E., Wagner III, W. E., & Gillespie, B. J. (eds.). *The practice of survey research: Theory and applications* (pp. 101–119). Sage Publications, Inc. https://doi.org/10.4135/9781483391700.n6

Rusli, K. A., Ing, A. Y. I., & Ting, L. M. (2022). Critical factors for Malaysian young consumers' buying decision on green products. *International Journal of Academic Research in Business and Social Sciences*, *12*(1), 1060–1075. https://doi.org/10.6007/IJARBSS/v12-i1/10429

Shahsavar, T., Kubeš, V., & Baran, D. (2020). Willingness to pay for eco-friendly furniture based on demographic factors. *Journal of Cleaner Production*, *250*, 119466. https://doi.org/10.1016/j.jclepro.2019.119466

Sun, Y., & Wang, S. (2020). Understanding consumers' intentions to purchase green products in the social media marketing context. *Asia Pacific Journal of Marketing and Logistics*, *32*(4), 860–878. https://doi.org/10.1108/APJML-03-2019-0178

Sun, Y., Wang, S., Gao, L., & Li, J. (2018). Unearthing the effects of personality traits on consumer's attitude and intention to buy green products. *Natural Hazards*, *93*, 299–314. https://doi.org/10.1007/s11069-018-3301-4