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# Consumer attitude toward using eco-friendly plastic bags: A green marketing approach

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The purposes of this study are: 1) To assess the impact of green brand positioning, consumers' attitude toward green brands and green brand knowledge on green product purchase intention, 2) To examine the variation of contribution from green brand positioning, consumers' attitude toward green brands, and green brand knowledge toward green product purchase intention, 3) To identify the significant influence of green brand positioning, consumers' attitude toward green brands, and green brand knowledge on green product purchase intention. A questionnaire was utilized to gather the data. The purposive sampling technique was used, involving respondents who practice a green lifestyle and have had green product purchasing experience. The data were analyzed using the three-stage hypothesis analysis model: Simultaneous variable testing (F-testing), coefficient of determination (R<sup>2</sup>), and partially hypothesis testing (t-testing). Simultaneous variable testing results stated that simultaneously green brand, attitude, and green knowledge influencing green product purchase intention. The three independent variables, namely green brand positioning, attitude, and green knowledge, explain 69.20% of the green product purchase intention variation while unknown variables influence the rest. Green brand positioning and green brand knowledge variable have a significant influence on green product purchase intention. In contrast, consumers' attitudes toward green brands did not significantly influence green product purchase intention. Firms and businesses can use green brand positioning to better market their products, improve consumers' green brand knowledge and attitude toward green brands, and increase green brand purchase intentions.

## 1. Introduction

Nowadays, the environment's movement has affected the living being's condition around it, especially human being sustainability [1], [2], [3]. Many environmental issues or natural disasters such as climate change, forest fire, floods, landslides [4], [5], [6], and epidemics prove the lack of environmental value awareness [7], [8]. One of the significant issues comes from plastic bags because the following problem from plastic waste brought not only negative impact toward human sustainability but also other living being sustainability. The presence of plastic waste hazards required restrictions in the use of plastic bags because plastic bags are one of the significant plastic waste contributors that have big demand but hard to control after being used. The problems of using plastic bags are increasingly the concern of the community. The high number of plastic bag hazards has reached a crucial point that should be taken a proper response. However, from the company's perspective, environmental problems become one of the strategic issues in achieving global competitiveness [9]. Companies are rapidly exploring and researching new ways, developing new ideas, and planning new strategies to position their green brands in consumers' minds and stay competitive in the marketplace to achieve business sustainability.



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1

Some companies are also making genuine efforts to preserve the environmental issues. One of the companies which concern about the environment is Green retail store. We define green retail stores as retail stores that concern the environment and already utilize green policy in their business practice. Green retail stores and non-green retail stores are not alike. Green retail stores have expressed their support of green products to the public by adopting green technologies that conserve raw minerals in their plastic bag, Oxium-added on their plastic bags. While non-green retail stores still used plastic bags made of polythene for their consumer. Plastic bags made of polyethylene and plastic bags added of oxium are not alike. Plastic bags made of polythene can be decomposed around 500-1000 years old. Plastic bags added to oxium can accelerate the plastic degradation process within two years through oxidation, thermal, and photo degradation. The eco-friendly plastic bag is one of Green retail store policy as the shape of their commitments toward environmental issues. We see this as one of the solutions offered by green retail stores because their plastic bags help minimize the negative impact on the environment and improve people's awareness of the environment by promoting green value to their customers. Green retail stores in Bandar Lampung that have committed environments are Indomaret, Alfamart, Robinson, Chandra, Giant, and Transmart.

According to Levitt [10], "basically, every business's sole purpose is to create and preserve consumer." If a company keeps attracting a new consumer to replace the moving consumer, the company cannot grow and gain market share. Green retail stores have shown their concern toward the environment by utilizing green policy in their business practice and making their corporate identity. However, lack of research study about plastic bags makes it hard for green retail stores to measure their success whether their customer perceives the value of their green policy. Even though Green retail stores are concerned about the environment, they also concern with profit. If their policy did not influence customer buying interest, then it can be concluded that there is something wrong which green retail stores need to solve. Thus, it is necessary to do some research on this issue if we consider that the lack of research on the eco-friendly plastic bag, as a form of green marketing, has not found sufficient evidence to influence their customer's purchasing intention. Prior scholars that extensive studies had been conducted on green marketing in western countries, while minimal research on green branding and green buying behavior has been pursued in developing countries, including Indonesia [11], [12], [13], [14]. Joshi and Rahman recommended that further research be conducted in these countries to ascertain environmental knowledge on green product purchase intention [15]. Suki, in his study, has empirically validated the influence of green brand positioning, consumer's attitude toward the green brand, and green knowledge on green product purchase intention [16]. Another scholar, such as Yi Li, suggested further research to study the eco-impact of shopping bags with survey results from the consumers who are the actual users [17].

The purposes of this study are: to assess the impact of green brand positioning, consumers' attitude toward green brands, and green brand knowledge on green product purchase intention; to examine the variation of contribution from green brand positioning, consumers' attitude toward green brands, and green brand knowledge toward green product purchase intention; and to identify the significant influence of green brand positioning, consumers' attitude toward green brands, and green brand knowledge on green product purchase intention.

## 2. Methodology

### 2.1. Sampling and population

Non-probability sampling was applied by distributing a structured self-administered questionnaire to 385 respondents from the eco-friendly plastic bags of green retail store in Bandar Lampung City, Indonesia. The sampling method used the purposive sampling technique for three weeks in June 2020. The respondents practice a green lifestyle and have a green product purchasing experience, such as all consumers in Bandar Lampung who got eco-friendly plastic bags after purchase several products from Green retail store at least twice a week. In this paper, we set 4 validity questions to identify the actual user and improve the valid sample's success degree. After the responses were screened, a total of 385 were found usable and valid as samples for analysis, correlating with a valid response rate of 86 percent [18].

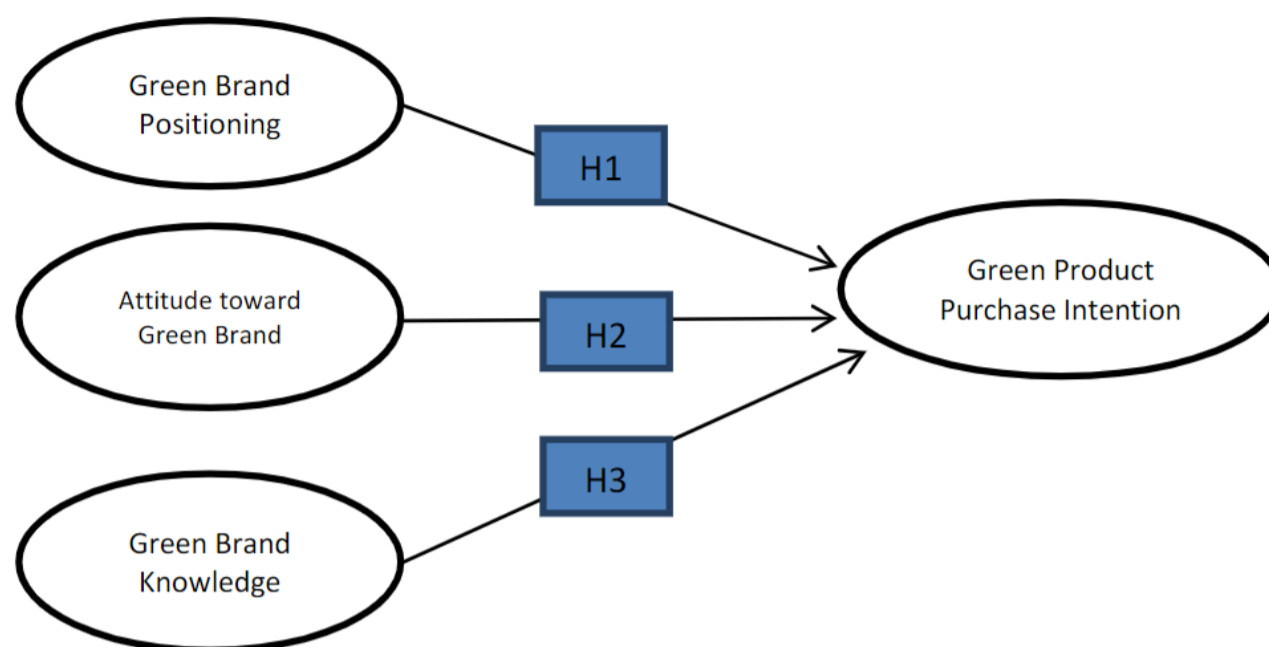
## 2.2. Question

The first section of the three-section questionnaire for this study encompassed general demographic questions such as gender, age, occupation, and monthly income. Second section posed questions regarding the respondents' level of understanding and experience with green product purchases such as whether they know if that product is eco-friendly or not, the frequency of green products purchased, and favorite green retail stores. The concluding part of the questionnaire included questions on the respondents' perception of green product purchase intention with 18 measurement instruments.

**Table 1.** List of questionnaire

Item	List of questionnaire
<b>X1</b>	<i>Green brand positioning</i>
<b>X1.1</b>	I feel that product quality is an important part when using environmentally friendly products
<b>X1.2</b>	I can easily recognize the "Go Green" label through the advertisement/narration on its plastic bag
<b>X1.3</b>	I feel that an environmentally friendly plastic bag meets my personal wants and needs
<b>X1.4</b>	I prefer to use environmentally friendly products
<b>X2</b>	<i>Attitude toward green brand</i>
<b>X2.1</b>	I feel that the reputation of eco-friendly products is generally reliable
<b>X2.2</b>	I feel that the performance of environmentally friendly products is generally reliable
<b>X2.3</b>	I feel the green retail store claim that their plastic bags are environmentally friendly is generally reliable
<b>X2.4</b>	I felt the green retail store concern toward environment through their plastic bags fulfilled my expectations
<b>X2.5</b>	I feel these green retail stores through their plastic bags have already kept their promise to protect the environment
<b>X2.6</b>	I feel these green retail stores through their plastic bags have already fulfilled their responsibility to protect the environment
<b>X3</b>	<i>Green knowledge</i>
<b>X3.1</b>	I feel the lack of green retail stores that is applying environmentally friendly plastic bags is one of big reasons why the popularity of environmentally friendly products is low
<b>X3.2</b>	I feel environmentally friendly products can be a profitable investment in the long run
<b>X3.3</b>	I feel that green retail stores through the adoption of its environmentally friendly plastic bags has already met my expectations
<b>X3.4</b>	I went shopping in the green retail stores because their plastic bags are environmentally friendly
<b>X3.5</b>	I like to go shopping in the green retail stores because their plastic bags are more concerned about the environment than others
<b>Y1</b>	<i>Green product purchase intention</i>
<b>Y1.1</b>	I intend to go shopping at the green retail stores due to their concern toward the environment
<b>Y1.2</b>	I hope in the future to go shopping at the green retail stores because of the environmental benefits they offer
<b>Y1.3</b>	Overall, I love shopping at the green retail stores because their plastic bags are environmentally friendly

Green brand positioning was measured using four items. The questionnaire items depicting consumers' attitude were included in six questions. Next, five items were designed to elicit respondents' green brand knowledge, whilst three items were designed to measure their green product purchase intention. The measurement of these items was adapted from the following sources: green brand positioning [19], attitude toward green brands, green brand knowledge [20], and green product purchase intention. These items were designed on a five-point Likert scale, with 1 indicating "strongly disagree" to 5 "strongly agree."



**Figure 1.** Proposed theoretical framework

### 2.3. Statistical technique

The data were analyzed using the three-stage hypothesis analysis model: Simultaneous variable testing (F-testing), coefficient of determination (R<sup>2</sup>), and partially hypothesis testing (t-testing). The IBM Statistics SPSS computer program version 22.0 was used to assist in the data analysis.

## 3. Results and discussion

### 3.1. Demographic characteristics of respondents

Descriptive analysis was performed to obtain information regarding the respondents' demographic profiles. From the gender perspective, out of 385 respondents, 34.8 percent were male and 65.2 percent were female (see Table 1). There was a big difference in age group whereby more than three-quarters of the respondents (92.2 percent) were between 17 and 22 years old. The majority of the respondents were well educated, with more than threequarters (84.7 percent) of the respondents holding occupation status as University student, whereas 17.3 percent hold as a medical student/labor and others. In terms of respondent income, 72.2 percent of the respondents earned less than 1,000,000 IDR per month, and 9.6 percent earned between 1,000,000 IDR and 1,500,000 IDR, while 18.2 percent earned 1,600,000 IDR and above.

Experience with green products purchases Table 2 itemizes the respondents' experience with green product purchases. Out of the six types of green retail stores that provide eco-friendly plastic bags are listed in the questionnaire. We allowed the respondent to choose more than 1 favorite green retail store in the questionnaire section which asking respondent's favorite green retail stores, close to half of the respondents (48.05 percent) chose Indomaret and Chandra as their favorite green retail stores, 43.63 percent of total respondent chose Alfamart as their favorite green retail store, while 16.1 percent chose Transmart; 12.99 percent chose Robinson; and 7.27 percent chose Giant as their favorite retail store. Further assessment of the descriptive statistics shows that more than half of the respondents (65.7 percent) went shopping in their favorite green retail stores at least twice a week while 34.3 percent of total respondent who went shopping more than 2 time a week in their favorite green retail stores.

**Table 2.** Demographic characteristics of respondents

Variable	Frequency	Percentage
<b>Gender</b>		
Male	134	34.8
Female	251	62.2
<b>Age (years old)</b>		
17 – 22	355	92.2
23 – 28	30	7.8
Above 28	0	0
<b>Occupation status</b>		
National worker	3	0.8
Private worker	8	2.1
Entrepreneur	4	1
Army/police	1	0.3
University student	326	84.7
Medic student/labor	42	10.9
Online driver	1	0.3
<b>Income</b>		
Lower than 1,000,000 IDR	278	72.2
1,100,000-1,500,000 IDR	37	9.6
1,600,000-2,000,000 IDR	15	3.9
2,100,000-2,500,000 IDR	25	6.5
2,600,000-3,000,000 IDR	8	2.1
Above 3,000,000 IDR	22	5.7

### 3.2. Three-stage hypothesis analysis model

3.2.1. Simultaneous variable testing (F-Testing). F testing is used to determine whether there is influence between independent variables and dependent variable by using F test (Fisher test) with value  $\alpha = 5\%$  using degree of freedom (df).

We Determining F-Table by using Microsoft Excel with the formula as follow:

$$=F.INV.RT(p,DF1,DF2)$$

Where:

p = used probability

DF1= Total independent variable

DF2= Total sample – total independent variable

Then =F.INV.RT(0.05,3,382)

Based on F-Table, the value is 2.628

**Table 3.** Simultaneous variable testing (F-Testing)

ANOVA <sup>a</sup>					
Model	Sum of Squares	Df	Mean Square	F	Sig
Regression	1591.700	3	530.567	285.757	.000 <sup>b</sup>
Residual	707.406		1.857		
Total	229.106				

a. Dependent Variable: Y

b. Predictors: (Constant), X3, X1, X2



Table 3 show the value of F count (285,757) > F Table (2,628) and the level of significance is 0,000. It is stated that simultaneously green brand, attitude, and green knowledge influence green product purchase intention

3.2.2. *Coefficient of determination (R<sup>2</sup>)*. The coefficient of determination (R<sup>2</sup>) essentially measures how far the ability of the model to explain variations in the dependent variable. The coefficient of determination is between zero and one. Small R value means the ability of the independent variables in explaining the variation of the dependent variable is very limited [23]. Here are the test results of determination coefficient R<sup>2</sup> as follows:

**Table 4.** Coefficient of determination (R<sup>2</sup>)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.832 <sup>a</sup>	0.692	0.690	1.36261

3.2.3. *Predictors: (Constant), X<sub>3</sub>, X<sub>1</sub>, X<sub>2</sub>*. Based on the results of the analysis are shown in Table 5 can be seen the value of the correlation coefficient is 0.832. This shows the influence of the independent variable is engagement green brand, attitude, and green knowledge on the dependent variable as much as 83.2 percent.

Based on the Table 4 also note the value of R<sup>2</sup> at 0.692. It shows that 69,20% of the green product purchase intention variable can be explained by the three independent variables which are green brand, attitude, and green knowledge. The remaining 30,80% is explained by other variable which not examined in this study. Partially hypothesis testing (t-test) Partially hypothesis testing is conducted to discover significant effect of each independent variable on dependent variable in a partial way using t-testing with Trust 95% or with  $\alpha = 5\%$  and using DF (Degree of Freedom) n-k-1 and significance on  $\alpha = 0,05$ .

$$Df_2 = n - k - 1 = 385 - 3 - 1 = 381$$

We compute by using Microsoft Excel with formula as follow:

$$= \text{TINV}(p, Df_2)$$

$$= \text{TINV}(0.05, 381)$$

Acquired t Table value = 1.966 Where the criteria are:

t count > t table then the hypothesis is accepted  
t count < t table then the hypothesis is denied.

**Table 5.** Partially hypothesis testing (t-test)

Hypothesis	t	t-table	Sig.	Description
<b>H1: Green Brand Positioning does have positive influence toward green product purchase intention</b>	5.279	1.966	.000	Accepted
<b>H2: Attitude doesn't have a positive influence toward green product purchase intention</b>	-0.523	1.966	.601	Denied
<b>H3: Green Brand Knowledge does have a positive influence toward green product purchase intention</b>	14.841	1.966	.000	Accepted

Table 5 has shown, t value on green brand is 5,279 with significance level of 0.000. So that means t count is greater than t table (5,279 > 1,966) and the significance count is smaller than A (0,000 < 0.005). It can be concluded that the hypothesis is accepted. Meaning: the green brand value (X<sub>1</sub>) have partially significance influenced toward green product purchase intention (Y). t value on attitude is -0,523 with significance level of 0,601. So that means t count is lower than t table (-0,053 < 1,966) and

the significance count is bigger than A ( $0,601 > 0.005$ ). It can be concluded that the hypothesis is denied. Meaning: the green brand value (X2) didn't have partially significance influence toward green product purchase intention (Y).

t value on green knowledge is 14,841 with significance level of 0.000. So that means t count is greater than t table ( $14,841 > 1,966$ ) and the significance count is smaller than A ( $0,000 < 0.005$ ). It can be concluded that the hypothesis is accepted. Meaning: the green knowledge value (X3) has partially significance influenced toward green product purchase intention (Y).

*3.2.4. Hypothesis analysis result* . The first hypothesis (H1) "Green brand positioning has a significance effect towards green product purchase intention" is accepted. It is supported by Table 5, which has shown t count of green brand variable has t value on green brand is 5,279 with significance level of 0.000. The result has showed that green brand variable positively and significantly influences towards green product purchase intention. This research result supports previous research conducted by Norazah [16]. Direction of regression coefficients showed that the higher the green brand value, the more intention a person generate to purchase will be. It is given that the consumer can quickly and conveniently find out the position of eco-friendly plastic bags as the preferred product that offer the benefit of green product. The green brand by consumer will affect the green product purchase intention on the user of eco-friendly plastic bags of green retail stores in Bandar Lampung City which means green retail stores in term of green brand variable has found sufficient evidence to be variable that give more competitive advantage rather than non-green retail stores.

The second hypothesis (H2) "Attitude has a significance effect towards green product purchase intention" is denied. It is supported by Table 5, which has shown t count of green brand variable has t value on green brand is -0.523 with significance level of 0.601. The result has shown that green brand variable negatively and didn't significantly influence towards green product purchase intention [16]. Direction of regression coefficients showed that the higher the attitude value, the more intention a person generate to purchase will be. However, It didn't occurred in this case where we can see that the respondents hesitated to decide whether the object of this research already given the result as they expected or not.

The attitude by consumer will not affect the green product purchase intention on the user of eco-friendly plastic bags of green retail stores in Bandar Lampung City which means green retail stores in term of attitude variable has found insufficient evidence to be variable that give more competitive advantage rather than non-green retail stores.

The third hypothesis (H3) "Green knowledge has a significance effect towards green product purchase intention" is accepted. It is supported by Table 5, which has shown t count of green brand variable has t value on green brand is 14.841 with significance level of 0.000. The result has shown that green knowledge variable positively and significantly influences towards green product purchase intention [16]. Direction of regression coefficients showed that the higher the green knowledge value, the more intention a person generate to purchase will be. It is given that the consumer can quickly and conveniently find out the position of eco-friendly plastic bags as the preferred product that offering the information of green product. The green knowledge by consumer will affect the green product purchase intention on the user of eco-friendly plastic bags of green retail stores in Bandar Lampung City which means green retail stores in term of green knowledge variable has found sufficient evidence to be variable that give more competitive advantage rather than non-green retail stores.

Green brand positioning (X1) and green knowledge (X3) from this research already prove that both of them have sufficient evidence to influence purchase intention toward the customer who have environmental concern. That customer can we call as green customer, this green customer has specific characteristic/description. Based on author's point of view, these variables can be one of competitive advantages for the company if they can adopt it and optimize it.

Attitude (X2) variable from this research didn't give sufficient evidence to prove the impact of this variable toward purchase intention. We can see that even for the particular customer who have concern toward environmental issue but the data shows that the majority of them didn't have significance influence/impact toward the purchase intention of this research object. Even though from the qualitative analysis we can see that the early statement majorly get the positive response, but when it

came to the specific statement that ask the research object which is their plastic bags then it fall down toward hesitate response. Based on author's point of view, the particular companies not yet optimally utilize this variable because when the statement states with general object then the response is positive. However when the statement states with specific object which is this research object the response tend to be hesitate. Thus, the author recommend the particular companies to make a strategy that use emotional appeal on their green business practice.

### 3.3. Result of Demographic Characteristic

Table 1 shows the highest number of respondents based on occupation are from Student/University Student. The respondents who meet the criteria as green consumers (People who have more concern for the environment) are majorly from Student/University students. From the author's point of view, the author sees this as an important finding. Suppose the particular companies can utilize and make this finding an essential measurement. In that case, it will helpful for them as a way to improve their further decision about green marketing in the future. This finding is supported by prior research, Sapna at all [16], that brought the topic of green consumer behavior and green purchasing behavior. One of the significant factors influencing green consumers is their education and knowledge about green products and uses. Thus, the author suggests that other researchers take the same topic to try focusing their sample toward Student or University Student. Also, the author suggests particular companies make a strategy based on this finding to gain a competitive advantage.

Table 1 shows the highest number of respondents based on age are from age between 17-22 years old. It means that the respondents who meet the criteria as green consumers (People who have more concern for the environment) are majorly aged between 17-22 years old. Suppose the particular companies can utilize and make this finding an essential measurement. In that case, it will helpful for them as a way to improve their further decision about green marketing in the future. This finding is supported by prior research, which is Fatah & Khan [25] that brought the topic of Exploring green purchasing behavior of young urban has stated: "Young generation have an environmental concern." Also, Fatah & Khan [25] has found that the conventional approach of rational appeals is not adequate to encourage young consumers to make green purchases but emotional appeals in marketing messages. Thus, the author suggests that particular companies use emotional appeals in their marketing research to gain a more competitive advantage.

## 4. Conclusion

Simultaneous variable testing results stated that simultaneously green brand, attitude, and green knowledge influence green product purchase intention. The three independent variables, namely green brand positioning, attitude, and green knowledge, explain 69.20% of the green product purchase intention variation while other variables influence the rest. Green brand positioning and green brand knowledge variable have a significant influence on green product purchase intention. In contrast, consumers' attitudes toward green brands did not significantly influence green product purchase intention.

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