The Influence of Environmental Attitudes and Environmental Concerns on Green Purchasing Behavior with Gender as a Moderator Variable

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Abstract: The purpose of this study is to analyze the effect of environmental attitudes and environmental concerns on green purchasing behavior with gender as a moderator variable. This study also aims to analyze the effect of environmental attitudes and environmental concerns on green purchasing behavior. This research takes respondents, namely students who are under 25 years old. The number of respondents in this study amounted to 175 respondents. The sampling technique is *purposive sampling*. The questionnaire was distributed through *online* media. The results of the regression analysis show that environmental attitudes and environmental concerns affect green purchasing behavior while gender does not moderate the influence of environmental attitudes and environmental concerns on green purchasing behavior.

Keywords: Environmental Attitude, Environmental Concern, Gender, Green Purchasing Behavior.

INTRODUCTION

The environment is important for the growth and survival of all living things but unfortunately it has become prey to mankind (Noor *et al*., 2012). In the world, resources are limited while human needs are unlimited (Malik *et al*., 2016). Humans try to fulfill their needs and wants with limited resources so the resources in the world must be utilized in the right way (Malik *et al*., 2016). Depletion of natural resources and disturbed ecological balance make consumers more sensitive about social issues so that their environmental awareness increases and ensures that the products chosen are beneficial or harmful to the earth (Ergena *et al.*, 2014).

Environmental sustainability issues have grown over the past three decades (Kotler and Armstrong, 2014). In many cities around the world, air and water pollution have reached dangerous levels (Kotler and Armstrong, 2014). Environmental alarming events are not limited to global warming, climate change and pollution (Dagher and Itani, 2012). With the increasing number of natural disasters around the world, consumers are paying close attention to such dangers and trying to act proactively towards all environmental issues (Dagher and Itani, 2012). Increased public awareness about the importance of preserving the environment has made many

manufacturers of various products begin to switch to using materials that do not damage the environment or environmentally friendly materials (Situmorang, 2012). Green purchasing behavior is one of the recommended behaviors to preserve the environment (Dagher and Itani, 2012).

Environmental attitudes and environmental concerns are important factors that influence green purchasing behavior so marketers must persuade consumers that environmental protection is not the responsibility of business (Dagher *et al.*, 2015). Green products can increase market share if marketing strategies focus on improving environmental attitudes and environmental concerns in men and women (Dagher et *al*., 2015).

Previous research results show that environmental attitudes and environmental concerns influence green purchasing behavior (Dagher *et al*., 2015; Lee, 2008, 2009). Dagher *et al*. (2015) found that gender moderates the effect of environmental attitudes and environmental concerns on green purchasing behavior. This provides evidence that gender differences affect environmental attitudes and environmental concerns on green purchasing behavior at high versus low levels of environmental attitudes and environmental concerns (Dagher *et al.*, 2015). At higher levels of environmental attitudes and environmental concerns, men and women tend to have similar levels of green purchasing behavior (Dagher *et al.*, 2015). However, at lower levels of environmental attitudes and environmental concern, women tend to have higher levels of green purchasing behavior than men (Dagher *et al.*, 2015).

LITERATURE REVIEW
Green Marketing and *Green Consumers*
Green Marketing is the promotion and use of reusable and environmentally friendly products (Schiffman and Kanuk, 2015: 312). The concept of marketing products that use materials that do not damage the environment is known as green marketing (Situmorang, 2012). Green marketing is not only about offering environmentally friendly products to consumers but also includes how the production and distribution process of the production (Situmorang, 2012). Therefore, green marketing is necessary for companies that produce goods using raw materials related to the environment (Situmorang, 2012).

Green consumers are an exciting prospect for many products and marketers in exploring their targets (Schiffman and Kanuk, 2015: 61). Green consumers are conceptualized as individuals who are oriented towards using their purchasing power to bring about social change by paying attention to the environmental consequences of their personal consumption (Moisander, 2001: 52 in Dagher *et al.*, 2015). Increased public awareness about the importance of preserving the environment has made many manufacturers of various products begin to switch to using materials that do not damage the environment or environmentally friendly materials (Situmorang, 2012). The materials in question are not only product raw materials but also other materials such as product packaging, labeling, wrapping cartons and so on (Situmorang, 2012).

According to Schiffman and Kanuk (2015: 61), a study mentions three types of green consumers among them:
1. Environmentalist: a person who likes to adopt a green lifestyle enamored with environmental health and sustainability.
2. Organic Eaters: care about their health and not so much about environmental sustainability
3. *Economizers*: Experiment with buying eco-friendly products with the aim of saving money.

Green Purchasing Behavior

Consumer awareness of the environment has translated dramatically into green purchasing behavior (Dagher and Itani, 2012). Simply put, green purchasing behavior is the act of adding environmental criteria to other criteria such as quality and price while making purchasing decisions (Vazifehdoust *et al*., 2013 in Dagher *et al*., 2015). According to Pooraskari *et al.* (2015), green purchasing behavior refers to purchasing goods that are beneficial and good for the environment, renewable and storable, and sensitive to ecological issues. Green purchasing behavior is defined by consuming products that are friendly and beneficial to the environment, using products that can be recycled or can be maintained and responding to ecological problems (Mostafa, 2007 in Dagher and Itani, 2012). Based on some of the above opinions, it can be concluded that green purchasing behavior is the purchase and consumption of products that can be recycled, maintained and are good for the environment, and are sensitive to environmental issues.

Environmental Attitude

Environmental attitude is a complex mental state involving beliefs and values towards environmental behavior (Dagher and Itani, 2012). Environmental attitude is generally understood as an individual's cognitive assessment of environmental protection (Lee, 2008, 2009). Based on some of the above opinions, it can be concluded that environmental attitudes are complex mental states involving beliefs and cognitive assessments of individuals towards environmental protection.

Environmental Concern

Environmental concern can be defined as an attitude towards environmental consequences (Pooraskari *et al*., 2015). Environmental concern is an important attribute that can represent individual affection, likes and dislikes, and concern for the environment (Dagher et *al*., 2015). Environmental concern refers to the level of emotional involvement and taps the individual's emotional response towards environmental protection (Lee, 2008, 2009). Based on some of the above opinions, it can be concluded that environmental concern is a concern and emotional reaction to environmental problems that represent an individual's emotional response towards environmental protection to overcome environmental problems.

INTRODUCTION

The population in this study are consumers with independent purchasing power. According to Sekaran and Bougie (2013: 241), a sample is a subset of the population. The sample used in this study were students of Atma Jaya University Yogyakarta. The method used in this research is quantitative method. According to Suliyanto (2006: 12), quantitative methods are research based on quantitative data where quantitative data is data in the form of numbers or numbers. The sample method used is the *non-probability sampling* method. According to Suliyanto (2006:124), *Nonprobability Sampling* is a sampling technique where each member of the population does not have the same opportunity to be sampled.

The technique used in the *non-probability sampling* method is *purposive sampling* technique. According to Suliyanto (2006: 125), *Purposive Sampling* is a method of determining samples based on certain criteria.

Hair *et al.* (1998: 98) says that the minimum sample size for using analytical techniques is 15 to 20 times the number of variables used. In this study there are four variables, so the minimum sample size required is 60 to 80 respondents. The number of respondents in this study were 175 respondents. The number of 175 respondents exceeds the minimum sample size set in this study so that it is considered sufficient by researchers to represent the population.

Instrument Testing

Validity and reliability tests are useful for determining the success of research. According to Suliyanto (2006: 146), validity is a measuring instrument indicated by its ability to measure what should be measured. According to Suliyanto (2006: 149), Reliability is the extent to which the results of a measurement can be trusted.

Validity Test as

The validity test was carried out with *SPSS 17.0 for Windows* software. The validity measurement technique in this study is known from the *corrected item-total correlation* value of each question item. Testing is done by comparing the r-count value with the r-table value. If the r-count for each question item is positive and greater than the r-table then the question item is valid, if the r-count is smaller than the r-table then the question item is invalid.

Reliability Test

Reliability test was conducted with *SPSS 17.0 for Windows* software to measure the alpha coefficient using the Cronbach Alpha statistical test. A construct is said to be reliable if the Cronbach Alpha value is> 0.70 (Hair *et al*. 1998: 118).

Data Analysis Tools

In this study the authors used data analysis tools, namely regression analysis, independent sample t-test*,* and *One-Way ANOVA* test*.*

Regression Analysis

Regression analysis is the study of how one variable, namely the dependent variable, is influenced by one or more than one other variable, namely the independent variable with the aim of estimating and or predicting the average value of the dependent variable based on the known value of the independent variable (Widarjono, 2010: 9). Regression analysis is grouped into two groups, namely simple linear regression which has only one independent variable and multiple linear regression which has more than one independent variable (Wijaya, 2010: 25). This study uses multiple linear regression analysis to examine the effect of environmental attitudes and environmental concerns on green purchasing behavior. This study also uses moderation regression analysis to examine the effect of environmental attitudes and environmental concerns on green purchasing behavior with gender as a moderator variable. Moderating variables are variables used to determine whether their presence affects the independent and dependent variables (Wijaya, 2010: 44). Moderating variables can strengthen or weaken the relationship between variables (Wijaya, 2010: 44). The Interaction Test is used to test regression with moderating variables.

The regression equation in this study is: $Y = a + b_1X_1 + b_2X_2 + e$

$Y = a + b_1X_1 + b_3X_3 + b_4X_1X_3 + e$ $Y = a + b_2X_2 + b_3X_3 + b_5X_2X_3 + e$

Description:

Y = dependent variable (green purchasing behavior) a = constant

b_1= regression coefficient of environmental attitude X_1= environmental attitude

b2= regression coefficient of environmental concern   X2= environmental concern

b3= gender coefficient X3= gender

b4= interaction between environmental attitude and gender

b5=   interaction between environmental concern and gender   e= error / standard error

Testing criteria in regression analysis include:
a. Simultaneous testing
    The F test is used to determine whether all independent variables contained in the model have a joint influence on the dependent variable. The F-count value can be seen in the ANOVA table output of the linear regression results.
    Testing criteria:
    Ho is accepted if p value > alpha or F-count ≤ F-table Ha is accepted if p value ≤ alpha or F-count > F-table
b. Partial testing:
    The t test is used to determine the effect of the independent variable individually on the dependent variable. The significance value can be found in the Coefficients table output from the linear regression results.
    Testing criteria:
    Ho is accepted if p value > alpha or t-count ≤ t-table Ha is accepted if p value ≤ alpha or t-count > t-table

Independent Sample t-test

Independent sample t-test of two free samples is used to compare two samples where the samples are free and have no relationship (Suliyanto, 2006: 118). The *independent sample t-test is* used to test gender differences in environmental attitudes, environmental concerns and green purchasing behavior.
    The independent sample t-test test criteria are as follows:
a. Accept Ho: if p (2-tail) > 0.05 which means there is no mean difference between the two samples.
b. Accept Ha: if p (2-tail) ≤ 0.05 which means there is a mean difference between the two samples.

One Way ANOVA

Analysis of variance of one independent variable (*ANOVA*) is a statistical test tool used to test whether two or more groups of two independent groups have different or the same average (Wijaya, 2010: 77). The *one way ANOVA* test is used to test the difference in pocket money on environmental attitude variables, environmental awareness and green purchasing behavior.
    The one-way ANOVA test criteria are as follows:
a. Accept Ho: if p ≥ 0.05 which means there is no difference in means between unrelated sample groups.
b. Accept Ha: if p < 0.05, which means there is a mean difference between unrelated sample groups.

RESULTS AND DISCUSSION

Validity Test

The number of respondents in the validity test was 30 people so that the resulting r-table value was 0.361. The validity test results are presented in table 1.

Table 1 Validity Test Results

Variables	Grain	r-count	r-table	Description
Green Buying Behavior	1	0,573	0,361	Valid
	2	0,720	0,361	Valid
	3	0,824	0,361	Valid
	4	0,710	0,361	Valid
Environmental Attitude	1	0,573	0,361	Valid
	2	0,595	0,361	Valid
	3	0,660	0,361	Valid
	4	0,601	0,361	Valid
	5	0,773	0,361	Valid
	6	0,775	0,361	Valid
	7	0,568	0,361	Valid
Environmental Awareness	1	0,396	0,361	Valid
	2	0,556	0,361	Valid
	3	0,708	0,361	Valid
	4	0,632	0,361	Valid

Source: Internal Data Processing (2018)

Table 3.2 shows that all r-count values are greater than the r-table value. This indicates that all question items are valid so that no items need to be dropped.

Reliability Test

The results of the reliability test are presented in table 2.

Table 2 Reliability Test Results

Variables	Cronbach's Alpha Coefficient	Description
Green Buying Behavior	0,855	Reliable
Environmental Attitude	0,861	Reliable
Environmental Awareness	0,763	Reliable

Source: Internal Data Processing (2018)

Table 3.3 shows that all Cronbach's Alpha values are above the Cronbach's Alpha Standard (0.70) so that all variables can be said to be reliable. The validity and reliability test results show that all questionnaire question items are in accordance with the research standards.

Gender

Table 3 Gender

Gender	Frequency (Person)	Percentage (%)
Male	77	44,0%
Female	98	56,0%

Total	175	100%

Source: Internal Data Processing (2018)

Table 3 shows that the total number of respondents who met the criteria was 175 people. 56.0% of the 175 respondents were female respondents, the remaining 44.0% were male respondents. The number of women as respondents is more than men.

Table 4

Differences in Environmental Attitudes, Environmental Concerns, and Green Purchasing Behavior Variables based on Gender differences

Variables	Gender	Mean	Equal Variances Assumed		Equal Variances Not Assumed		Description
			t-value	Sig	t-value	Sig	
Environmental Attitude	Male	4,0909	-0,436	0,664	-0,430	0,668	No difference
	Female	4,1312					
Environmental Awareness	Male	3,9448	0,583	0,560	0,580	0,563	No difference
	Female	3,8903					
Green Buying Behavior	Male	3.2727	-0,912	0,363	-0,918	0,360	No difference
	Female	3.3903					

Source: Internal Data Processing (2018)

In the table of analysis results above, it can be seen that there is no difference between men and women regarding environmental attitude variables (p = 0.668), environmental concern (p = 0.563), and green purchasing behavior (p = 0.360). This is because the respondents in this study were only university students. Students have a fairly good knowledge of environmental issues so that they are more concerned about the environment and address environmental issues by carrying out green purchasing behavior. The object in this study is not specific to certain green products or green purchasing behavior so that in general both students and female students do not have differences regarding environmental attitudes, environmental concerns, and green purchasing behavior.

Pocket Money

Table 5 Pocket money

Pocket Money	Frequency (Person)	Percentage (%)
< Rp. 1,000,000	38	21,7%
Rp. 1,000,000 - Rp. 2,000,000	104	59,4%
> Rp. 2,000,000	33	18,9%
Total	175	100%

Source: Internal Data Processing (2018)

Table 4.3 shows that the total number of respondents who meet the criteria is 175 people. From the table it can be seen that the pocket money group with the highest frequency is Rp. 1,000,000 - Rp. 2,000,000 as many as 104 people or 59.4% then pocket money totaling < Rp.

1,000,000 as many as 38 people or 21.7%, and pocket money totaling > Rp. 2,000,000 as many as 33 people or 18.9%. So, the average Atma Jaya Yogyakarta University student has an allowance of Rp. 1,000,000 - Rp. 2,000,000.

Table 6
Differences in Environmental Attitude Variables, Environmental Concerns, and Green Purchasing Behavior based on differences in Pocket Money

Variables	Pocket Money	N	Mean	Std. Deviation	F	Sig	Description
Environmental Attitude	< Rp. 1,000,000	38	4,0188	0,57640	1,049	0,352	No difference
	Rp. 1,000,000 - Rp. 2,000,000	104	4,1676	0,62427			
	> Rp. 2,000,000	33	4,0519	0,57789			
	Total	175	4,1135	0,60596			
Environmental Awareness	< Rp. 1,000,000	38	3,9474	0,64504	0,110	0,896	No difference
	Rp. 1,000,000 - Rp. 2,000,000	104	3,9135	0,62002			
	> Rp. 2,000,000	33	3,8788	0,56292			
	Total	175	3,9143	0,61220			
Green Buying Behavior	< Rp. 1,000,000	38	3,1908	0,93258	0,917	0,402	No difference
	Rp. 1,000,000 - Rp. 2.000.000	104	3,4038	0,79540			
	> Rp. 2,000,000	33	3,3030	0,90086			
	Total	175	3,3386	0,84631			

Source: Internal Data Processing (2018)

In the table of analysis results above, it can be seen that there are no differences regarding environmental attitude variables ($p = 0.352$), environmental concern ($p = 0.896$), and green purchasing behavior ($p = 0.402$) based on pocket money groups. This is because the respondents in this study were only university students. Students have a fairly good knowledge of environmental issues so that they are more concerned about the environment and address environmental issues by carrying out green purchasing behavior. Students from all pocket money groups still carry out green purchasing behavior and prioritize green products in their purchasing decisions by considering the price and budget they have.

Factors that influence Purchasing Behavior Green
Factors influencing green purchasing behavior were analyzed using regression analysis. Multiple linear regression analysis was used to test H1-1 and H2-1. Moderation regression analysis was used to test H1-2 and H2-2.

Table 7
The Effect of Environmental Attitudes on Green Purchasing Behavior with Gender as a Moderator Variable

MODEL	Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig-t	Description
		B	Std. Error	Beta			
1	(Constant)	4,182	2,393		1,747	0,082	
	Environmental Attitude	0,311	0,083	0,390	3,768	0,000	Significant
	Gender	5,379	3,380	0,791	1,591	0,113	Not Significant
	SL*GD	-0,173	0,116	-0,751	- 1,487	0,139	Not Significant
2	(Constant)	6.680	1,710		3,906	0,000	
	Environmental Attitude	0,224	0,058	0,280	3,840	0,000	Significant
	Gender	0,407	0,497	0,060	0,820	0,413	Not Significant
3	(Constant)	6,863	1,694		4,051	0,000	
	Environmental Attitude	0,225	0,058	0,282	3,873	0,000	Significant
1	Adjusted R-Square	0,079					
	F-Count	5,989					
	Probability	0,001					
2	Adjusted R-Square	0,073					
	F-Count	7,822					
	Probability	0,001					
3	Adjusted R-Square	0,074					
	F-Count	15,001					
	Probability	0,000					

Source: Internal Data Processing (2018) Dependent Variable: Green Purchasing Behavior

Based on table 7, it can be seen that green purchasing behavior is only influenced by environmental attitudes because the prob-t value of environmental attitudes is 0.000 which is less than 1% alpha. In models 1 and 2, it can be seen that the gender variable and the environmental attitude variable multiplied by gender are eliminated because the gender variable has a prob-t value of 0.413 which is more than alpha 5% while the environmental attitude variable multiplied by gender has a prob-t value of 0.139 which is more than alpha 5%.

Simultaneously, the environmental attitude variable significantly affects green purchasing behavior with a prob-F in the third model of 0.000 which is less than 1% alpha. The *adjusted R-square* value generated in the third model is 0.074 which means that 7.4% of the green purchasing behavior variable can be explained by environmental attitudes while the other 92.6% can be explained by other variables outside the equation.

Table 8
The Effect of Environmental Concern on Green Purchasing Behavior with Gender as a Moderator Variable

MODEL	Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig-t	Description
		B	Std. Error	Beta			
1	(Constant)	5,171	2,133		2,424	0,016	
	Environmental Awareness	0,502	0,134	0,363	3,759	0,000	Significant
	GENDER	-4,606	2,894	-0,677	-1,591	0,113	Not significant
	KL*GD	0,333	0,182	0,783	1,827	0,069	Not Significant
2	(Constant)	2,669	1,448		1,843	0,067	
	Environmental Awareness	0,657	0,092	0,475	7,140	0,000	Significant
	KL*GD	0,046	0,028	0,109	1,641	0,103	Not Significant
3	(Constant)	2,787	1,453		1,917	0,057	
	Environmental Awareness	0,675	0,092	0,488	7,358	0,000	Significant
1	Adjusted R-Square	0,248					
	F-Count	20,138					
	Probability	0,000					
2	Adjusted R-Square	0,241					
	F-Count	28,685					
	Probability	0,000					
3	Adjusted R-Square	0,234					
	F-Count	54,147					
	Probability	0,000					

Source: Internal Data Processing (2018) Dependent Variable: Green Purchasing Behavior

Based on table 4.6, it can be seen that green purchasing behavior is only influenced by environmental concern because the prob-t value of environmental concern is 0.000 which is less than 1% alpha. In models 1 and 2, it can be seen that the gender variable and the environmental concern variable multiplied by gender are eliminated because the gender variable has a prob-t value of 0.113 which is more than 5% alpha while the environmental concern variable multiplied by gender has a prob-t value of 0.103 which is more than 5% alpha. Simultaneously, the environmental care variable significantly affects green purchasing behavior with a prob-F in the third model of 0.000 which is less than 1% alpha. The *adjusted R-square* value generated in the third model is 0.234, which means that 23.4% of green purchasing behavior variables can be explained by environmental concerns while the other 76.6% can be explained by other variables outside the equation.

Based on the results of the moderation regression analysis that has been carried out, there are two variables that influence green purchasing behavior, namely environmental attitudes and environmental concerns. Gender does not moderate the influence of environmental attitudes and environmental concerns on green purchasing behavior. To test the effect of environmental attitudes and environmental concerns on green purchasing behavior, multiple linear regression analysis was conducted.

Table 9
The Effect of Environmental Attitudes and Environmental Concerns on Green Purchasing Behavior

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig-t	Description
	B	Std. Error	Beta			
(Constant)	0,839	1,805		0,465	0,643	
Environmental Attitude	0,101	0,056	0,127	1,799	0,074	Significant
Environmental Awareness	0,613	0,097	0,444	6,303	0,000	Significant
Adjusted R-Square	0,244					
F-Count	29,041					
Probability	0,000					

Dependent Variable: Green Purchasing Behavior Source: Internal Data Processing (2018)

Based on table 9, it can be seen that environmental attitudes affect green purchasing behavior with a prob-t value of 0.074 which is less than alpha 10% while environmental concerns affect green purchasing behavior with a prob-t value of 0.000 which is less than alpha 1%. Simultaneously, the environmental attitude and environmental concern variables significantly influence green purchasing behavior with a prob-F of 0.000 which is less than 1% alpha. The resulting *adjusted R-square* value is 0.244 which means that 24.4% of green purchasing behavior variables can be explained by environmental attitudes and environmental concerns while the other 75.6% can be explained by other variables outside the equation.

In the research of Dagher *et al*. (2015), green purchasing behavior is influenced by independent variables, namely environmental attitudes and environmental concerns and moderator variables, namely gender, which shows the interaction between environmental attitudes and gender and the interaction between environmental concerns and gender.

Environmental attitude variables and environmental concerns significantly influence green purchasing behavior while moderator variables, namely gender, do not moderate the influence of environmental attitudes and environmental concerns on green purchasing behavior. Based on the different tests that have been carried out, table 4.2 shows that there is no difference in the variables of environmental attitudes, environmental concerns, and green purchasing behavior between the two genders so that gender does not moderate the influence of environmental attitudes and environmental concerns on green purchasing behavior. This is because the respondents in this study were only students. Students have a fairly good knowledge of environmental issues so they are more concerned about the environment and address environmental issues by engaging in green purchasing behavior. The object in this study is not specific to certain green products or green purchasing behavior so that in general both students and college students have no differences regarding environmental attitudes, environmental concerns, and green purchasing behavior.

CONCLUSION

Gender variables do not moderate the influence of environmental attitudes on green purchasing behavior. Gender variables do not moderate the effect of environmental concern on green purchasing behavior. Environmental attitude variables and environmental concerns affect green purchasing behavior. Based on the results of a different test of respondent characteristics (gender and pocket money) there is no difference, so these results can be widely generalized.

Based on the results of the hypothesis testing that has been carried out, it can be seen that environmental attitudes and environmental concerns affect green purchasing behavior. Therefore, manufacturers can improve environmental attitudes and environmental concerns among consumers so as to increase green purchasing behavior in the future. The results of hypothesis testing in this study show that gender does not moderate the effect of environmental attitudes and environmental concerns on green purchasing behavior, so women are not the sole target in marketing green products or environmentally friendly products. Manufacturers can improve environmental attitudes and environmental concerns among men and women.

Advice

In future research, the author suggests expanding the distribution of questionnaires to better represent the population. Future research can add other predictor variables that have not been examined in this study such as social influence, self-identity, environmental responsibility, environmental knowledge, etc. Future research can examine specific green products such as organic rice, electronic equipment that saves electricity, etc. Future research can examine specific green purchasing behavior such as electricity savings, water savings, reuse of plastic bags, use of environmentally friendly shopping bags, use of *tumblr* to reduce the use of disposable plastic bottles, etc. Future research can add other moderator variables such as level of education. In addition, future research can also examine respondents of different ages, education levels, and occupations.

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