



The Influence of Environmental Knowledge on Green Purchase Intention the Role of Attitude as Mediating Variable

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Abstract

This study aims to investigate relational relationship between Environmental Knowledge, Green Brand Image, Attitude towards green products, and Green Purchase Intention in increasing interest in buying environmentally friendly body care and cosmetic products. The analysis technique used is Quantitative Analysis. The research samples were students in State Universities in Manado, Indonesia who have the intention to buy The Body Shop products. The analysis tool used is Smart PLS. The findings of this study signify that Environmental Knowledge have no significant direct effect on consumers' Green Purchase Intention. More important, Attitude is found to have a full mediation effect on the relationship of Environmental Knowledge and green Purchase Intention.

Keywords: Environmental Knowledge; Green Brand Image; Green Purchase Intention

Introduction

The increasing of extracted natural resources as supporters of world growth has led to serious environmental sustainability problems. The world population has grown by one billion in the last twelve years, reaching 7.3 billion people, and growing at a rate of 1.18% per year, which is 83 million people each year (UN, 2015). The use of natural resources is the largest source of income and employment in many countries. In addition to the fundamental role in the industry, natural resources are also part of the ecosystem as a driving factor for the provision of services such as regulation, flood control, natural facilities and cultural services. The high consumption of natural resources can cause great damage to ecosystems, such as global climate change, landscape changes, and complementary biodiversity (Donohoe, 2003).

Global environmental problems is the responsibility of all parties. Asian countries, especially manufacturing companies face increasing environmental responsibility as a result of pressure from governments, shareholders, industry groups and phenomena that lead to environmental issues. The increasing of society influence on companies, operational costs that increase along with changes in environmental regulations, and consumer attitudes that force companies in Asia to be environmentally conscious (Nair, 1993). High attention to environmental issues has been observed in large countries. Government policies, consumer preferences, and corporate strategies are adjusted to be more environmentally friendly (Simon, 1992).

Business development in Indonesia is growing rapidly. Indonesia has entered the era of globalization which has also become a supporting factor in the development of the business industry. The business world is inseparable from producers or sellers and consumers as buyers. Manufacturers need consumers to buy the products they sell, while consumers need producers to be able to fulfill their needs. Globalization is causing the development of the business industry and increasing competition. Business people must be keen to see trends in society to maintain their existence, for example by maintaining product quality.

Nowadays, people's paradigm is changing, that affects their attitudes towards life. As part of this changing attitudes, there is an increased in preference for organic products. Based on the results of the Global Survey of Corporate Social Responsibility conducted by the Nielsen company in 2014, it shows that 6 out of 10 consumers in Indonesia (64%) are willing to spend more on products or services that have a positive impact on social and environmental (data from www.nielsen.com). This fact is not enough because it turns out that consumers' awareness in Indonesia of the long-term impact of purchasing environmentally friendly products is still not satisfactory. The alteration in consumerism does not directly affect the environment. Based on the analysis of the Environmental Performance Index (EPI) per 2018 which examines the health of the environment and ecosystems, Indonesia is ranked 133 out of 180 countries in the world (data from epi.envirocenter.yale.edu). This data reflects the poor handling of the environment in Indonesia, including the quality of water, air, and the handling of environmental damage caused by natural and human factors which is industrialization.

Industrialization does not just happen. The world is undergoing a rapid transformation, people start using machines from the beginning to the end of the production process. The negative impact is very evident in urban areas with decreasing water and air quality. Global warming and the environmental impacts we are experiencing today are partly due to rapid industrialization around the world that increases the amount of carbon, and other greenhouse gases in the atmosphere. The growth of factories and businesses has contributed to severe environmental damage, especially in recent decades. Manufacturing companies are required not only to produce organic products but must pay attention to the impact of the production process on the environment.

Understanding the consumer's perspective on environmentally friendly products is very important. Research on this subject has often been done in developed countries. Consumer concerns about the environment are seen to increase as consumption behavior becomes more directed at environmentally friendly goods and services, and consumers change their buying behavior to be more go-green (Kilbourne and Pickett, 2008). The shift in consumer attitudes occurs because organic materials have met the expectations of modern consumers. Consumers' understanding of environmentally friendly products starts to influence the purchase decision making process (Laroche et al., 2001; Norazah, 2013a; 2013b; Rex and Baumann, 2007). In addition to products, packaging that is also environmentally friendly or reusable, ozone-free, organic, and pesticide-free helps consumers in choosing products that can improve their overall health.

Awareness of environmental issues has begun to grow in Indonesia, making this issue interesting to be discussed. This is indicated by several movements for the environment such as Earth Day, World Earth Hour, Bike to Work, and Car Free Day which are increasingly widespread in various cities in Indonesia. In addition, Indonesia's economic growth rate is quite stable which also increases consumer purchasing power. Awareness of environmental issues is supported by consumer purchasing power, making Indonesia a potential market for environmentally friendly products.

The lifestyle of people who change to be healthier does not necessarily change the pattern of consumerism, and of course there are factors behind this so it is interesting to study further. The cosmetics industry is a very common industry for women. The use of cosmetic products and body care has always been an important part of the lives of consumers. In 2013, global cosmetics sales grew by around 3.8% compared to the previous year and it is expected that sales of organic cosmetics globally will reach the amount of 14 billion US \$ in 2015 (Beauty Industry Analysis 2015 - Cost & Trends). Indonesia and other Asian countries are potential markets for environmentally friendly products, but very little is known about green consumer behavior in this region (Lee, 2009). The International Green Marketer states that the lack of market information in destination countries is often an obstacle to the successful

expansion of green products internationally (Gurau and Ranchhod, 2005). Without adequate market information in Asian countries, the International Green Marketer will have difficulty in market segmentation that is effective in its marketing strategy.

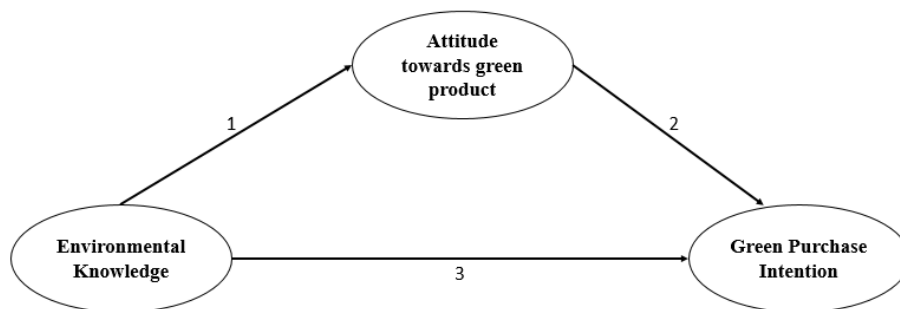
Research Framework and Hypotheses Development

Research Framework

Marketing generally aims to make customers loyal to the products offered by the company, so it is very important for marketers to recognize what are the factors influence consumers' purchase intentions on the products offered. One of the attributes that can influence purchase intention is consumers' environmental knowledge. How much knowledge the consumer has on environmental issues and its solutions, which will encourage consumers to be more careful in choosing products, what the impact of the use of these products for themselves and to the surrounding especially the environment. The product to be purchased in this case is a green product, not only seeing the content of harmful substances in a product but also the production process that must be environmentally friendly.

Representing developing countries, research from Malaysia by Aman et al. (2012) shows that Environmental Knowledge and Environmental Concern have an effect on Green Purchase Intention. Research from Aman, et al. (2012) inspired the author to conduct a similar study in Indonesia regarding the influence of Environmental Knowledge on Green Purchase Intention by using attitude as a mediating variable. When consumers' environmental knowledge is high, their purchase intention will expectedly be higher by attitude towards green product as mediating variable. Based on the explanation described, the conceptual framework is made as follows:

Figure 1. Conceptual Framework



Research Hypotheses

Attitude is an expression of one's feelings which reflects the likes or dislikes of an object or group of certain objects. A person's attitude is the result of psychological processes that cannot be observed directly but must be inferred from what is said and done. Chen & Chai (2010) define attitudes as manifestations of someone's likes or dislikes and attitudes to responding to various environmental problems are a reflection of how much someone wants to be involved in environmental preservation. Environmental Knowledge has proven to have a significant influence on Attitude, this is evident in several studies (Smith & Paladino, 2010; Wulandari et al., 2015; Saichao, 2016). Based on the results of previous studies, the author would like to further confirm the relationship between Environmental Knowledge and Attitude in the hypothesis as follows:

H1: Environmental Knowledge has a significant effect on Attitude towards green product.

Consumer attitudes refer to a person's positive or negative views of people, events, objects, or behaviors, which reflect preferences for these people, events, objects, or behaviors, resulting in positive or negative intentions towards buying behavior (Blackwell et al., 2006). So, the researcher wants to

emphasize that Attitude towards green product positively influences Green Purchase Intention and proposes the following hypothesis:

H2: Attitude towards green product has a positive effect on consumers' Green Purchase Intention.

There are several studies conducted to measure the effect of Environmental Knowledge on Green Purchase Intention. Some studies have a positive relationship between Environmental Knowledge and Green Purchase Intention (Joshi & Rahman, 2015; Aman et al., 2012). Both studies found a direct positive influence between Environmental Knowledge on Green Purchase Intention and when mediated by Attitude, although researchers did not specify the type of green product. However, there are differences in the results of research conducted by Paco et al., (2009) and Tadajewski & Tsukamoto (2006), which states that Environmental Knowledge is a predictor with the lowest value of its influence on Green Purchase Intention. The existence of gaps in the studies mentioned above encourages writers to conduct similar research elsewhere, for which the hypothesis is formulated as follows:

H3: Environmental Knowledge has a positive effect on consumers' Green Purchase Intention.

Knowledge and awareness to protect the environment has become a major influence on consumer attitudes towards green products. A study in Egypt (Mostafa, 2007) concluded that consumer knowledge about environmental problems is an important factor that influences consumer attitudes to be more environmentally friendly. Previous research has found that attitudes play an important role in influencing consumer purchase intentions (Chen & Chang 2016). Furthermore, the gap found in the previous study regarding the influence of Environmental Knowledge on Green Purchase Intention encouraged the writer to include Attitude towards green product as a mediating variable, which then formulated the hypothesis as follows:

H4: Attitude towards green product mediates the relationship of Environmental Knowledge to consumers' Green Purchase Intention.

Methodology

Sample and Data

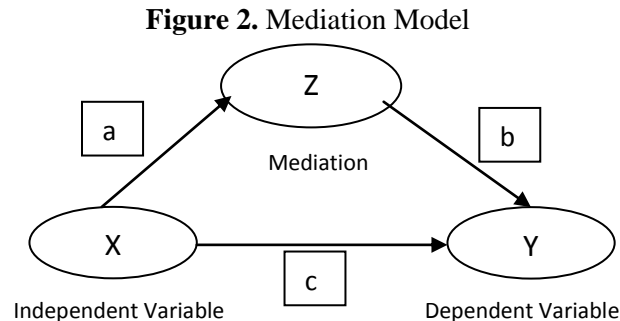
The population in this study were students at State Universities in Manado - North Sulawesi, Sam Ratulangi University and Manado State Polytechnic. The method used in sampling is purposive sampling, namely, the technique of determining the sample with certain considerations (Sugiyono, 2014). The sample of this study is a number of students who are consumers of non-organic cosmetics and body care products who intend to buy The Body Shop products. Determining the number of samples, researchers refer to the opinion of Roscoe (1975 which states that for studies whose population numbers are not known then the number of samples more than 30 and less than 500 is the right number, as well as for research multivariate (including multiple regression analysis) should use a sample size 25 times greater than the number of variables in the study. The sample in this study amounted to 100 respondents, thus the number of samples was assumed to be able to provide accurate data, so that the results of research could be closer to reality.

The data in this study are cross section data. Primary data in this study were obtained and collected directly from the answers to questionnaires distributed to consumers to analyze the factors that influence consumer purchase intentions. The questionnaire was distributed to Sam Ratulangi University and Manado State Polytechnic students started in March 7th-15th, 2019 (7 days) during the lecture hours, which are Monday – Friday at 07.30 - 22.00 local time. The researcher came to the student and asked if the person meets the respondent's criteria, then accompanies the respondent in filling out the questionnaire. Respondents was also be asked to recommend relatives or closest friends who can contribute to this research as respondents. The researcher also interviewed several respondents to reveal deeper facts in order to create a conclusion behind the results of quantitative analysis.

Measurement

The inferential statistical analysis approach in this study is Partial Least Square (PLS) which will be calculated using Smart PLS 3.0 software. PLS is an equation model of Structural Equation Model (SEM) which undergoes a shift from covariant-based to variant-based (Ghozali, 2011). In this study the response to a number of items related to variables, will be illustrated using the five-level interval Likert Scale from Sugiyono, 2014: Strongly Agree (5), Agree (4), Neutral (3), Disagree (2), and Strongly Disagree (1).

The test criteria in direct influence of the variable, if the t-statistic is greater than the t-table (1.96) or the probability value is less than 0.05 (5% significance level). The testing of the mediation model in PLS is explained in the following figure:



Resource: Hair et al., (2010)

The evaluation of the mediation test in this study was based on 3 (three) criteria belonging to Hair et al., (2010), as follow:

- 1) If a, b, and c are significant but the direct coefficient value is $c < b$, then Z is considered as partial mediation.
- 2) If a and b are significant, but c is not significant, then Z is considered as perfect mediation.
- 3) If a is significant, b is significant, and c is also significant but the coefficient value is $c = b$, then Z is declared not mediation.

Results and Discussion

Descriptive Statistics

Descriptive analysis is a description of respondents' perceptions of the variables in the overall study related to the relationship between variables, indicators / items in the study. Descriptive analysis in this study illustrates the answers of 100 The Body Shop consumers by distributing questionnaires directly. Based on data obtained from all questionnaires that have been distributed to respondents, can be seen in Table 1 below:

Table 1. Average Variance Extracted (AVE), Cronbach's Alpha, dan Composite Reliability test

Variables	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Environmental Knowledge (X)	0.919	0.943	0.805
Attitude towards green product (Z)	0.867	0.919	0.626
Green Purchase Intention (Y)	0.912	0.930	0.791

A construct is said to be reliable if the value of cronbach's alpha and composite reliability is greater than 0.7 (Ghozali, 2015). Based on Table 2, the cronbach's alpha and composite reliability values for each variable are greater than 0.7. Then, the AVE of all variables is more than 0.5. This shows that all items are declared reliable in measuring their latent variables and those variables have met the reliability requirements.

Table 3. Direct Effect and Indirect Effect results

Relation Between Variables	Effects	Path Coefisien	Standard Deviation	tstatistic	Result
Environmental Knowledge → Attitude towards Green Product	Direct effect	0.308	0.056	5.486	Significant
Attitude towards Green Product → Green Purchase Intention	Direct effect	0.612	0.047	12.921	Significant
Environmental Knowledge → Green Purchase Intention	Direct effect	0.087	0.049	1.763	Not Significant
Environmental Knowledge → Attitude towards green product → Green Purchase Intention	Indirect effect	0.189	0.037	5.037	Significant

The table above shows that there are two direct relationships and one indirect relationship between variables that have a significant effect. Therefore, supporting **H1**, **H2**, and **H4**. Whereas, there is one direct relationship between variables that does not significantly influence, the relationship of Environmental Knowledge to Green Purchase Intention ($1,763 < 1.96$). Therefore **H3** is rejected.

Figure 3. The role of *Attitude towards green product* as mediating variable

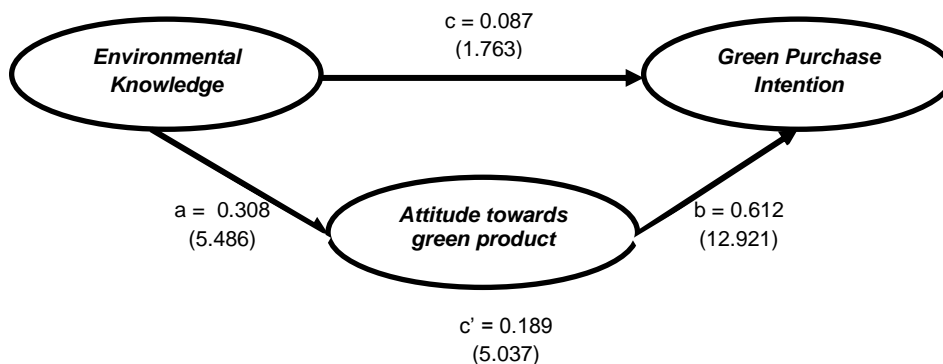


Figure 3 above shows that the role of Attitude towards green product of Environmental Knowledge to Green Purchase Intention is full mediation. The reason refers to Baron and Kenny (1986) if the path coefficient value of indirect influence (c') is greater than the direct effect coefficient (c) then it can be said to have a mediating effect. Furthermore, according to Hair et al. (2010) if a and b are significant, but c is not significant, then Attitude towards green products is expressed as perfect mediation.

Based on the result, Environmental Knowledge has proven to have a significant influence on Attitude, this result is in line with several previous studies (Smith & Paladino, 2010; Wulandari et al., 2015; Saichao, 2016). Mostafa (2007) found that knowledge about environmental problems is an important factor that influences the attitudes of the consumers in Egypt to be more environmentally friendly. Attitude towards green products can encourage Green Purchase Intention. This shows that the Company has succeeded in forming positive consumer attitudes towards the purchase intention of The Body Shop products. This finding have similar result with the study in Egypt (Mostafa, 2007).

Environmental Knowledge of the consumers was not able to provide a positive influence on Green Purchase Intention because green marketing from The Body Shop company was still lacking in explaining in more depth about its efforts to address environmental issues that occurred. So far, The Body Shop has only focused on expressing pro-environmental campaigns, but it is still lacking in integrating between the efforts made by the company and the problems that occur in the environment. This finding is in line with the research of Tadajewski & Tsukamoto (2006) that Environmental Knowledge does not have a significant effect on consumers' Green Purchase Intention in Germany and UK on shopping for daily product needs. Consumers still need to be educated that environmental problems can be minimized by changing consumption patterns from conventional products to green products, one of which is The Body Shop. Attitude towards green product successfully provides a role in the relationship of Environmental Knowledge and Green Purchase Intention. That is, a positive attitude is needed to bridge the increase in consumer purchase intention towards The Body Shop products.

Conclusion

This study aims to examine the effect of Environmental Knowledge on Green Purchase Intention through Attitude towards green product. The implications of this study are divided into two parts, practical and theoretical implications. Theoretical implications related to the development of research results for future researchers are related to Environmental Knowledge, Attitude towards green products, and Green Purchase Intention. Practical implications, giving managerial contributions to companies related to marketing strategies and branding strategies to be able to attract consumer buying interest in The Body Shop.

The limitations of this study are short observation periods and are limited to Environmental Knowledge, Attitude, and Green Purchase Intention. Future research is expected to be able to study and expand the scope of his research by considering other factors that can affect Green Purchase Intention. Furthermore, the scope of this study is very limited and is only carried out on students of State Universities in Manado - Indonesia, therefore, the results of this study cannot be generalized to other consumers in a wider area. This research was only conducted on The Body Shop products, not comparing any other existing green products. The research data is taken at a certain time (cross section), it is expected that in the future it can use time series data to produce better research.

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