Green awareness of female consumers towards sustainable products in Indonesia

Wayan Weda Asmara Dewi and Wifka Rahma Syauki

Department of Communication Science, Universitas Brawijaya, Malang, 65145, Indonesia

Abstract. The objective of this research is to map the green awareness of female consumers toward green products. The products are measured using three criteria: their usage to the environment, their suitability with consumer expectations, and their use of environmentally friendly materials. Green products span from food, beverages, fashion, and household utensils. The data of this quantitative research was harvested from a survey conducted on 100 female consumers to map them along with their decisions concerning green products. They are Indonesian women regardless of their geographical place of residence. Using the purposive sampling technique, the respondents are married women, either working or staying at home, who have bought green-categorized products. The results of the quantitative descriptive analysis on four main indicators for green awareness have led to findings that female consumers have a significant interest on environmental issues and that they significantly express their concern to the environment.

INTRODUCTION

Concern for protecting the environment also increases individual awareness of consuming environmentally friendly products (Parawitha and Rastini 2016). This makes many producers of goods and services use raw materials that do not further damage the environment. The ingredients in question are not only raw materials but also packaging with labels that show environmental concerns (eco-labels) (Alamsyah et al. 2020). The company's strategy has also changed to the concept of a marketing strategy based on environmental sustainability (Balawera 2013). According to Putripeni et al. (2014), environmental-based marketing communication, or green marketing, is a development of marketing that has the potential for multiple benefits for both producers and consumers. The dual potential referred to here is that on the company side, they contribute to solving environmental problems through their marketing activities, while on the consumer side, they also contribute not to damaging the environment. Environmentally friendly is one of the factors that influence consumer attention related to emotions (Alamsyah et al. 2020). Emotion refers to how consumers will be happier and more satisfied when buying an item or service. In another study, it was stated that the provision of attributes, labels, and symbols on products also influenced emotions, environmentally friendly products are commonly referred to as Eco-Labeling (Rahman 2019).

Green marketing communication has the aim of meeting the needs and desires of consumers and must be able to understand and understand consumer behavior (Prastiyono 2016). In the Marketing 4.0 book, explains a shift in consumers. From senior, male, and citizen categories to Youth, Women, and Netizens (Kotler et al.
They are referred to as the digital subculture, the most influential segment in the digital era. This study focuses on female consumers who in the household act as financial managers in the family. Besides that, selecting the brand to be purchased in the category of goods and services, women's voices can be more decisive than men's. The differences inherent in men and women are the subject of psychology and marketing studies. Experts state that many products are developed specifically for female consumers (Kotler et al. 2017). Female segmentation is categorized into housewives, housewives who work from home, and women who work in the public sector. This categorization builds the construction that women have an important role either only in the nuclear family or in society.

This is reinforced by a survey conducted by MarkPlus Insight in 2015 which stated that 74% of women manage family finances and even control their spouse's income. The results of this survey are also in line with the concept that women are household finance managers. Most households in Indonesia also place women in planning and managing family income and financial expenditures. Previous studies stated that environmental awareness has a positive and significant effect on buying interest in green products, consumer attitudes also have a positive and significant influence on buying interest in green products, and environmental awareness and attitudes also have a positive influence on purchasing environmentally friendly products Lukiarti (2019).

From this preliminary study, we can conclude that consumer awareness of the issues that are the mainstream being discussed is an important and decisive factor. The environment is an issue that is always growing, especially in the final product for consumers. Moreover, environmental campaigns that are being voiced more often also make people more educated and become a factor of consideration in consuming products. The measure of consumer buying interest can be seen based on exploratory interest, transactional interest, referential interest, and preference interest (Ferdinand 2014). The importance of consumer buying interest is necessary to increase consumer green awareness. Green awareness itself can be changed through green marketing strategies, one of which is advertising and brand image (Mourad and Ahmed 2012).

Green awareness relates to customer statements about the products they consume that have a positive impact on themselves and the environment. Green awareness can be viewed in terms of consumer environmental concerns, awareness of environmental concerns, product green awareness, price awareness, and brand image awareness (Suki 2013). Based on the background of increasing producers who are aware of environmentally friendly products followed by increasingly aware consumers of this phenomenon, the researcher wants to find out how green consumers are aware of environmentally friendly products.

**METHOD**

This study tries to explain the description of a particular object from one variable consisting of an independent variable, namely Green Awareness. The type of research used in this research is descriptive quantitative research. According to Sugiyono (2015), quantitative descriptive research is a method that serves to describe or provide an overview of the object under study through data or samples that have been collected as they are, without analyzing and making generally accepted conclusions. In this study, the determination of respondents or data sources using a purposive sampling technique. A purposive sample is a sample determined based on research needs that reflects the situation and natural setting of the object of study, as well as being a rich source of respondents about the phenomenon to be studied (Palys and Atchison 2008).

The subjects or respondents of this research are housewives, either working or not working. Respondents who will be the subject of research are not limited to certain geographic locations, but researchers target female consumers in Indonesia. Especially female consumers who buy environmentally friendly products. The total sample in this study is 100 respondents. In this study, researchers adopted four indicators of green awareness, according to Suki (2013): consumer's environmental concerns, green product awareness, price awareness, and brand image awareness. Researchers adopted the green awareness indicators as independent variables.
RESULT

Calculation results of the average value (mean) of the green awareness variable. The results of the calculation of the average value or mean variable green awareness of female consumers towards environmentally friendly products in Indonesia show good results. The following is the result of calculating the average or mean value of each indicator:

Calculation Results of the Average Value (Mean) of Consumers: Indicators Environmental Concern

The first indicator of the green awareness variable is the consumer's environmental concern. The consumer's environmental concern indicator is the consumer's attention to the environmental biophysical impact resulting from the consumer's activities. This is what is meant by a form of consumer concern for the environment (Suki 2013). The following chart in Figure 1 is the result of calculating the average or mean value of the consumer's environmental concern indicator:

![Figure 1](image)

Based on the results of the calculation of the average value or the mean indicator of the consumer's environmental concern, as shown in the picture above, the mean value is 4.26. The average value or mean on this indicator shows the highest result compared to the results of the average value or mean of other indicators. This shows that female consumers feel they have a very good concern for the environment or a good consumer's environmental concern. This is because female consumers are aware that environmental damage is caused by one of them by humans themselves. Unconsciously, the process of excessive exploitation of natural resources can have a negative impact on the environment. Therefore, female consumers in Indonesia have a form of concern for the environment by using environmentally friendly products as a form of interest and concern for environmental issues.

Calculation Results of the Average (Mean) Indicator of Green Product Awareness

The second indicator of the green awareness variable is green product awareness. Green product awareness is awareness of an environmentally friendly product that has non-toxic characteristics or does not contain hazardous materials (non-toxic), grows organically, can be recycled, is not tested on animals, does not cause pollution to the environment, has minimal packaging, contains natural and recycled materials as well as permitted chemicals (Ottman 1993). The result of calculating the average or mean value of the green product awareness indicator is shown in Figure 2.
Based on the results of the calculation of the average value or the mean indicator of green product awareness (Figure 2), shows the result of the mean value of 4.04. This shows that respondents assess environmentally friendly products in Indonesia well. Female consumers are aware that green products or environmentally friendly products in Indonesia are products that do not pollute the environment, contain natural ingredients, contain non-toxic ingredients, and do not test their products on animals.

**Calculation Results of the Average Value (Mean) of the Price Awareness Indicator**

The third indicator of the green awareness variable is price awareness. Price awareness is an attribute considered by consumers when making purchasing decisions for a product or service. Consumers rarely choose environmentally friendly products if they are more expensive (Suki 2013). The result of calculating the average or mean value of the price awareness indicator is shown in Figure 3.

Based on the results of the calculation of the average value or the mean price awareness indicator, as shown in the picture above, the mean value is 4.15. This shows that respondents give a good assessment of price awareness or price awareness of environmentally friendly products in Indonesia. Female consumers realize that the price of environmentally friendly products is more expensive than the price of non-
environmentally friendly products. However, female consumers are willing to pay more to buy these environmentally friendly products.

**Calculation Result of Average Value (Mean) Brand Image Awareness Indicator**

The fourth indicator of the green awareness variable is brand image awareness. Brand image awareness is a brand image related to consumer perceptions of the impression of a product that has an environmentally friendly label. A brand image known by the public can help companies introduce new brands and increase sales of existing brands (Markwick and Fill 1997). The result of calculating the average or mean value of the brand image awareness indicator is shown in Figure 4.

![Figure 4 Diagram chart average value (mean) brand image awareness indicator](image)

Based on the results of the calculation of the average value or the mean indicator of brand image awareness, as in the picture above, the mean value is 3.96. When compared with the results of the calculation of the average value or the mean of other indicators, the brand image awareness indicator shows the lowest average or mean value, even though the results of this calculation are still classified in a good category. Respondents assessed that environmentally friendly products have a strong green brand image. In addition, female consumers also feel comfortable and have more confidence in environmentally friendly products in Indonesia because environmentally friendly products have a good green brand image.

**DISCUSSION**

The number of various types of issues or phenomena of environmental problems has now become a global issue. The most important and frequent problems are environmental problems that can affect all living things. Issues or phenomena of environmental problems, in general, tend to lead to negative impacts on living things. In Indonesia, environmental problems have become a special concern for the community. Based on sources from the Ministry of Environment and Forestry (2020), national environmental issues are currently divided into several aspects: environmental problems related to waste, land, and water resources.

The form of consumer concern shows consumer interest in the environment and its impact on the environment. Previous research conducted on men and women about environmental concerns shows that women are more careful in comparing environmental safety. In the concept of consumer behavior itself, women also occupy three roles, namely information collectors, holistic shoppers, and household managers. Consumers show environmental concern according to product benefits, features, criteria, product characteristics, and claims. Barr and Gilg (2006) also mention people who are committed are more sensitive to environmental concerns and always participate to ensure environmental safety. This study focuses on the
green awareness of female consumers only. Therefore, this study aims to determine green awareness or green awareness among female consumers of environmentally friendly products in Indonesia.

This study took a sample of 100 respondents. This study only focuses on female consumers in Indonesia. Female consumers will be the subject of research which will then be investigated green awareness of environmentally friendly products in Indonesia. According to Kotler et al. 2017, in Marketing 4.0 book, many products are created or developed specifically for female consumers. Based on the concept of consumer behavior, women also occupy three roles, namely as information collectors, wherein making a purchasing decision, female consumers tend to think repeatedly or consider and seek information repeatedly, then female consumers act as holistic shoppers. where women have many considerations before buying a product, women also act as household managers, where women act as family finance managers, so women will determine family consumption patterns, which will be a priority and which will not (Barletta 2004). In addition, previous research explains that female consumers are more careful in comparing environmental safety. Based on previous research, explains that female consumers are more careful in comparing environmental safety. This previous research also mention people who are committed to being more sensitive to environmental concerns and always participate in ensuring environmental safety (Barr and Gilg 2006).

Furthermore, the results of the research on the characteristics of respondents based on age with the criteria that the respondent must be at least 17 years old showed that the majority of respondents aged 21 - 25 years were 51 people with a percentage of 51%, then respondents aged 26 - 30 years were 28. People with a percentage of 28%, then respondents aged 17 - 20 years, as many as 11 people with a percentage of 11%, respondents aged 31 - 35 years, as many as 6 people with a percentage of 6%, and respondents aged more than 35 years as many as 4 people with a percentage of 4%. These results indicate that female consumers who have green awareness of environmentally friendly products in Indonesia are dominated by young people aged around 21 - 30 years, followed by 26 - 30 years old. Based on Strauss-Howe's theory, this age belongs to the Z generation group and the millennial generation or Y generation, where at that age, people tend to be more creative, informative and getting used to the technological aspects.

According to Marcelino (2020), consumers in a young age group also have a level of environmental awareness of environmentally friendly products compared to other age levels. People at that age also tend to pay more attention to the green environment and have influenced their parents’ purchasing decisions (Coddington 1993) also has a level of environmental awareness of environmentally friendly products compared to other age levels. People at that age also tend to pay more attention to the green environment and have influenced their parents’ purchasing decisions (Coddington 1993) also has a level of environmental awareness of environmentally friendly products compared to other age levels. People at that age also tend to pay more attention to the green environment and have influenced their parents’ purchasing decisions (Coddington 1993).

The results of the research on the characteristics of respondents based on occupations show that the majority of respondents in this study work as students or students, as many as 39 respondents with a percentage of 39%. Then, respondents with other occupational or professional categories, these female consumers mostly work as housewives, with a total of 24 respondents and a percentage of 24%. Furthermore, the respondents who work as private employees are 18 respondents with a percentage of 18%, followed by profession as entrepreneurs as many as 12 respondents with a percentage of 12%. The next profession is as a teacher/lecturer, with as many as 4 respondents with a percentage of 4%. While the lowest frequency is found in the profession of civil servants, with as many as 3 respondents with a percentage of 3%.

Based on the results of the data above, it can be concluded that green awareness or green awareness of female consumers towards environmentally friendly products in Indonesia is dominated by female consumers with the profession of students or students and followed by other professions (housewives). The results of this data are in line with the characteristics of respondents based on age. Namely, the majority of respondents are aged 17 - 30 years, where at that age, the average age is students or housewives This is also in line with the previous studies which explains that students’ awareness of the environment belongs to the high category, so they tend to buy products that are safe for the environment (Gabriella and Sugiarto 2020). The results of the
Consumer's Environmental Concern On Female Consumers Against Eco-Friendly Products in Indonesia

Consumers around the world are almost impossible not to be affected by environmental damage, be it environmental damage caused by natural disasters or environmental damage caused by overexploitation of natural resources, and do not consider future impacts. Where it is related to the process of production, distribution, and consumption of the means of meeting human needs itself. The consumer experience directly can be a threat to themselves, which in turn causes their increased attention to the increasingly severe environmental damage (Scherhorn 1993). A consumer's environmental concern is the consumer's concern for the environmental biophysical impact of the consumer's activities. This is what is meant by a form of consumer concern for the environment (Suki 2013).

Based on the results of the calculation of the average or mean value that has been carried out, the indicator of consumer's environmental concern shows the average value or mean of 4.26. The results of the calculation on the consumer's environmental concern indicator show the results of the calculation of the highest average or mean value compared to other green awareness indicators. This means that respondents agree that female consumers care about the environment. It can be concluded that respondents rate very well and agree that female consumers are aware of environmental damage that is increasingly occurring, so it is deemed necessary to show attitudes and forms of concern for the environment.

Environmental care is considered an evaluation or an attitude towards facts, both originating from themselves and the behavior of others that have an impact on the environment (Fransson and Graling 1999). In this study, respondents feel interested in environmental issues and are aware of environmental problems. Besides that, respondents also switch to using environmentally friendly products to show their concern for the environment. This is supported by the statement item that female consumers use environmentally friendly products because of their interest in environmental issues, with the results of calculating the average or mean value of 4.24, and the statement item that female consumers use environmentally friendly products because they were concerned for environmental problems with the calculation results in the average value or mean is 4.29. This is in line with the the previous research which explains that environmental care can be identified from an expression of one's interest in the environment. Consumer care for the environment is also an attitude that arises from consumers themselves to pay attention to the environmental impacts that can occur from consumer consumption activities themselves (Hussain 2014).

Green Product Awareness of Women Consumers Against Friendly Products Environment in Indonesia

An environmentally friendly product is a product that is designed and/or contains materials that can be recycled and reduce environmental damage or reduce environmental pollution in all stages of the production process to distribution of the product. (Durif et al. 2010). Environmentally friendly products can be used as an indicator to measure a person's level of awareness of the environment. In this study, the green product awareness indicator shows the calculation results of the average or mean value of 4.04. That is, respondents in this study agree that environmentally friendly products are products that do not pollute the environment, contain natural ingredients, contain non-toxic materials, and do not test on animals.

Awareness of environmentally friendly products or green product awareness can be explained by several items. The statement items for environmentally friendly products are products that do not pollute the environment with the calculation results of the average or mean value of 4.14. Then, the statement items are environmentally friendly products containing natural ingredients with the calculation results of the average or mean value of 3.95. The environmentally friendly product statement item contains non-toxic (non-toxic)
ingredients with the calculation result of the average or means value of 3.95, and the environmentally friendly product statement item does not test on animals with the calculation result of the average or mean value of 4.12.

Based on the results above, it can be concluded that female consumers in this study have a good level of awareness of environmentally friendly products. Female consumers are aware that environmentally friendly products in Indonesia have fulfilled the characteristics described above. Environmentally friendly product is a product that has non-toxic characteristics, or does not contain hazardous materials (non-toxic), is organically grown, recyclable, not tested on animals, does not cause pollution to the environment, minimal packaging contains natural materials as well as recycled materials and permitted chemicals (Ottman 1993).

Price Awareness of Female Consumers on Friendly Products Environment in Indonesia

Price is an attribute that is considered by consumers when deciding to buy a product or service. Consumers rarely choose environmentally friendly products if they are more expensive. Price awareness or price awareness in this study was measured by several items, according to Suki (2013). The results of the calculation of the average or mean value that has been carried out, the price awareness indicator, shows the calculation result of 4.15. That is, respondents in this study agree and rate well that, according to female consumers, the price of environmentally friendly products is higher than other products, but these female consumers are willing if they have to spend more to buy environmentally friendly products.

This can be explained based on the results of research that has been done. Female consumers are aware that environmentally friendly products in Indonesia are more expensive than other non-environmentally friendly products. This statement item shows the results of the calculation of the average or means a value of 4.38. The results also explain that although the price of environmentally friendly products is higher, female consumers are willing to spend more to buy these environmentally friendly products. This is supported by the results of the study, which showed the results of the calculation of the average or mean value of 3.93, which was included in the good category.

The price for environmentally friendly products is still relatively low. In this study, female consumers’ price awareness of environmentally friendly products in Indonesia showed good results. This is in line with research conducted by (Suki 2013), which mentions that there are several groups of environmentally conscious consumers from developing countries who are willing to pay a premium price to buy environmentally friendly products. Laroche et al. (2001) also added that the desire of consumers to pay a certain amount of money for environmentally friendly products is due to their concern for environmental problems.

Brand Image Awareness of Women Consumers Against Environmentally Friendly Products in Indonesia

Brand image awareness is a brand image related to consumer perceptions of the impression of a product that has an environmentally friendly label. A brand image that is known by the public can help companies to introduce new brands and can increase sales of existing brands (Markwick and Fill 1997). The results of the calculation of the average or mean value that has been carried out, the brand image awareness indicator, show the calculation result of 3.96. In the price awareness indicator, the results of the calculation of the average or
mean value show the lowest results when compared to the average value or mean of the previous indicator. However, even though the calculation results on this indicator show the lowest results, the average value or the mean price awareness indicator is still in a good category. That is, the respondents in this study agree and are aware that the brand image or brand image of environmentally friendly products in Indonesia has a strong green image.

Awareness of brand image or brand image awareness of environmentally friendly products in Indonesia can be explained by several items. The statement item for environmentally friendly products has a strong green image showing the results of the calculation of the average or mean value of 4.03. Furthermore, the respondent's statement items are more comfortable using environmentally friendly products because they have a green image with the results of calculating the average or mean value of 3.94. Then, the respondent's statement item believes more in environmentally friendly products because it has a green image with the results of the calculation of the average or means a value of 3.92.

The female consumers in this study have a good level of awareness of the brand image of environmentally friendly products in Indonesia. This is related to female consumers' awareness of environmentally friendly products in Indonesia. The results of the calculation of the average or mean value in the previous indicator explain that female consumers agree that environmentally friendly products in Indonesia are products that contain natural ingredients and are non-toxic, and do not test on animals, this is what makes environmentally friendly products have a strong brand image. The results of this study are in line with research conducted by Suki (2013), which explains that brand image is the strongest indicator in determining a purchasing decision. Similarly, in this study, the brand image of environmentally friendly products in Indonesia can raise awareness of female consumers as a source of information to identify environmentally friendly products.

CONCLUSION

Based on the results of research that has been carried out to find out how the level of environmental awareness or green awareness of female consumers towards environmentally friendly products in Indonesia can be seen from four main indicators, namely, Consumer's Environmental Concern, Green Product Awareness, Price Awareness, and Brand Image Awareness. So, from the results of the data analysis that has been carried out, it can be concluded that: Female consumers who have environmental awareness or green awareness are dominated by 51 people aged 21 - 25 years with a percentage of 51%, and for the lowest frequency, there are 4 people over 35 years old with a percentage of 4%. Based on the characteristics of the type of work, female consumers' awareness of the environment or green awareness of environmentally friendly products in Indonesia is dominated by women with the type of work as students or students as many as 39 people with a percentage of 39%, and the lowest frequency is found in the type of work as civil servants, namely 3 people with percentage 3%. Based on the results of the calculation of the average or mean value of each indicator of the green awareness variable, the results of the acquisition of the highest average value or mean are found in the consumer's environmental concern indicator with a result of 4.26 and the indicator with the lowest mean score is found on the indicator of brand image awareness of 3.96.

The indicator of consumer's environmental concern on the green awareness variable is the indicator with the highest average value or mean being the main factor or reason in the green awareness of female consumers towards environmentally friendly products in Indonesia because of their interest in environmental issues and their concern for the environment. Based on the results of the descriptive analysis of the four main indicators of the green awareness variable showed good results. Female consumers are interested in environmental issues and show their concern for the environment by being willing to buy environmentally friendly products even though they are more expensive than non-environmentally friendly products because female consumers feel more confident and comfortable using products that have a strong green brand image.
ACKNOWLEDGEMENTS

The authors would like to express our sincere thanks to the Faculty of Social Science and Political Science, Department of Communication Science, Universitas Brawijaya, for their invaluable support in terms of facilities and scientific equipment.

REFERENCES


