Understanding the factors of green advertising to adopt the environmental strategy

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Abstract. Climate change is changing weather patterns and catastrophic consequences throughout the world. To reduce the climate change issue, companies should be responsible for making sure their products do not harm to human beings and the planet. Companies are going green by introducing the environmental friendly product and promoting it through green advertising. However, companies should be able to understand consumer behavior to adapt to the environmental strategy. A study on factors of green advertising to adopt environmental strategy behavior was carried out among retail consumers. Indonesian retailers with environmental friendly products were selected, and 200 consumers have responded to the questionnaire. Results shows that factors of green advertising for environmental strategy behavior adaptation consist of green impact, green message, green theme, green emotion, green experience, green interaction, and green claims. The three most dominant factors to increase green advertising value are green experience, green theme, and green message. This study provides the essential information for industries to engage in environmentally friendly products and to uphold environmental sustainability efforts.

1. Introduction
Climate change is an international problem faced by all of countries around the world because of its impact on human survival [1]. It change weather patterns which have an impact to natural disasters; it is indicated by changes in seasons that do not fit the time [2], [3]. To overcome climate change, cooperation of all countries, including companies, is needed to ensure e products creation does not endanger the humans and nature. Climate change has always become a matter of concern among companies in order to combat environmental damage[4]. Under green marketing strategy, packaging has been identified as one of important activities to educate the public about the importance of caring for the environment. In principle, green marketing strategy integrate environmental friendly issue on marketing mix, which consist of product, price, place and promotion [6], [7]. One advantage of green marketing strategy for companies is the impact towards green brand image [8], whereby most customers can easily accept it. Customers’ awareness for environment is currently increasing; it can be seen from the green consumerism movement whereby the attention are only for environmental friendly products [9]. The concept of green marketing strategy cis in line with customers’ desires who care for the environment.

The concept of green marketing can be included with the implementation of green advertising, in which the goal of green advertising is to educate customers through product advertising, accompanied by the environmental sustainability issue [10]. The content value of green advertising is customers’ point of view that the product delivered is a product which is friendly to environment [11]–[13]. However,
not all products produced by companies are purely environmentally friendly; it is either partially or only taking the issue of the importance of being environmentally friendly. Green advertising is an important consideration which contributed to changes in behavioural intention among customers [10], [12]. Based on the issue of climate change and the implementation of green marketing strategy, this study focuses on examining factors affecting green advertising. The purpose of this study is to develop a model for green advertising which is believed to provide the best education between the products delivered and the environmental sustainability.

2. Literature review

2.1. Green advertising
The concept of green advertising is not much different from the concept of advertising in general. Both are related to advertising delivered through online and offline media [13]. However, green advertising tackled the issue of environmental sustainability, so that customers’ awareness of green advertising is increased [15]. Green advertising is used by companies to promote products within environmental theme. The initial concept of green advertising is stated as advertising to promote products, services, ideas or organizations with the concept of being able to reduce the environmental damage [14]. There are two things discussed in the implementation of green advertising: first is education carried out by companies related to the value of a product or service [10], second is education on the importance of preserving the environment [12]. Both information contained in green advertising is expected to be able to provide more value to products offered, and it provides an opportunity for company to benefit green brand image [11]. The implementation of green advertising concept has started in the 1990s [10], in which it aims to provide a positive image both for product and company.

Previous researches emphasized the importance of green advertising as green marketing strategy on the impact to green brand image [11], green awareness of consumer [12] and the achievement of sustainable marketing [15]. However, it is necessary to understand factors to develop green advertising which is valued by customers. This factor is examined according to the dimensions which usually measure green advertising.

2.2. Measurement of green advertising
Green advertising can be measured by assessing the level of information; it is said to be an informational claim that explains the level of product usefulness and affective claims related to the experience felt by customers [16]. It means that green advertising needs to demonstrate customers experience on the uses and experiences. Previous study, stated that there were three main indicators in assessing green advertising, such as biophysical, lifestyle and environmental responsibility [17]. The message contained in green advertising stated that it is necessary to understand several criteria, ecological, sustainability, and eco-friendly [18]. Based on the information presented, it is known that green advertising puts forward several themes, such as pleasant, convincing, believable, favourable, and good [10]. Customers feelings arise by assessing to green advertising, which reflected to moral, social, and ecological terms [19]. Customers also received different experiences after seeing green advertising such as knowledge, comfortable, and information [20]. Some green advertising uses more interactive media which consist of appeal, issue proximity, and environmental consciousness [21]. Recent studies conveyed that customers recognition receive from green advertising is important which include degradable, recycled, recyclable, and ozone friendly [22].

In conclusion there are several measurements of green advertising which are used in different cases. Each measurement is used based on suitability to promote products for environmental sustainability.

3. Methodology
This study used a survey method from 200 customers who had received green advertising both online and offline. The respondents in question are students in the city of Bandung, where they have received education related to green advertising. Data from customers were obtained quantitatively through a
questionnaire which answers had been determined using Likert scale approach. A score of 1 for the criterion of “strongly disagree” and a score of 7 for the criterion “strongly agree” was used. The data from questionnaire were tabulated and analyzed using factor analysis to determine the value of loading factors. The research analysis was carried out in two stages, validity and reliability tests. followed by factor analysis.

This study focused on one namely green advertising, in which the measures used were based on all dimensions related to value of green advertising, such as impact (three indicators), message (five indicators), theme (three indicators), emotion (three indicators), experience (three indicators), interaction (three indicators), and claims (four indicators). A total of twenty-four questions were obtained to explain green advertising.

4. Result and discussions

The study is conducted by distributing questionnaires to 200 customers who have received information on green advertising. Most of the respondents are male (73%), with their place of residence in Bandung (86%). Respondents have received more education from green advertising through Social Media (65%) and Billboard (43%). Data is processed and submitted considering the research’s need is to find the determinants of green advertising.

4.1. Validity and reliability test

| Instruments                | Pearson Correlation | Cronbach’s Alpha |
|----------------------------|---------------------|------------------|
| Green Impact               |                     |                  |
| Biophysical Environment    | 0.859               | 0.840            |
| Green Lifestyle            | 0.887               |                  |
| Environmental Responsibility| 0.869              |                  |
| Green Message              |                     |                  |
| Pleasant                  | 0.762               |                  |
| Convincing                | 0.812               |                  |
| Believable                | 0.798               | 0.818            |
| Favourable                | 0.772               |                  |
| Good                      | 0.738               |                  |
| Green Theme                |                     |                  |
| Ecological                | 0.839               |                  |
| Environmental Sustainability| 0.852              | 0.793            |
| Nature-Friendly           | 0.883               |                  |
| Green Emotion             |                     |                  |
| Moral                     | 0.812               |                  |
| Social                    | 0.838               | 0.753            |
| Climate Change            | 0.807               |                  |
| Green Experience          |                     |                  |
| Knowledge                 | 0.856               |                  |
| Comfortable               | 0.814               | 0.771            |
| Information               | 0.826               |                  |
| Green Interaction         |                     |                  |
| Appeal                    | 0.847               |                  |
| Issue Proximity           | 0.830               | 0.776            |
| Environmental Conciousness| 0.829               |                  |
| Green Claim               |                     |                  |
| Degradable                | 0.820               | 0.875            |
| Recycled                  | 0.887               |                  |
| Recyclable                | 0.850               |                  |
| Ozon Friendly             | 0.859               |                  |

The first stage of this study is to test the validity and reliability of research instruments. This research has seven dimensions, namely impact, message, theme, emotion, experience, interaction, and claims.
Considering all dimensions are related to green advertising, an initial “green” for all dimensions was added. Table 1 illustrated the Pearson's Correlations value to evaluate the validity of research instrument with the assumption to be valid when the value is above 0.300. While Cronbach’s Alpha is a value for evaluating the reliability of research instrument; assuming that it is reliable when Cronbach’s Alpha value is above 0.700. The evaluation’s results show that Pearson Correlation and Cronbach’s Alpha are accepted; considering that the value is above for the specified criteria. Based on the results of these tests, it can be said that all research instruments can be proceed for further retrieval.

The second stage is factor analysis by weighting based on the extraction values; the process results are shown in Table 2. Extraction is another value from loading factors; based on Table 2, it is suggested that the largest value in three dimensions are green experience (0.799), green theme (0.758), and green message (0.743).

| Dimensions       | Initial | Extraction |
|------------------|---------|------------|
| Green Impact     | 1.000   | 0.576      |
| Green Message    | 1.000   | 0.743      |
| Green Theme      | 1.000   | 0.758      |
| Green Emotion    | 1.000   | 0.654      |
| Green Experience | 1.000   | 0.779      |
| Green Interaction| 1.000   | 0.652      |
| Green Claim      | 1.000   | 0.676      |

4.2. Analysis Factors of Green Advertising
The results showed that green advertising can be formed by several dimensions, including green impact, green message, green theme, green emotion, green experience, green interaction, and green claims. Three dimensions which have the most impact are green experience, green theme, and green message. Considering integrating all dimensions to be better explain to green advertising, it requires a lot of thought by considering the seven dimensions. Finding of this study can certainly be used by companies to implement green marketing strategy through green advertising. The implementation of green advertising is an effort by companies to face the climate change, hence customers will be more concerned on environmental sustainability.

5. Conclusions
Climate change contributed to environmental sustainability including human life; therefore, supports is needed from companies to produce environmental friendly products and services. Company’s efforts to intensify the performance of green marketing strategy is through green advertising. Findings of this conveyed that green advertising can be assessed by green impact, green message, green theme, green emotion, green experience, green interaction, and green claims. By realising the dimensions of green advertising, it is hoped that company will be able to implement better green marketing strategy. This study attempt to encourage programs to cope with climate change, however there are limitations where a study of behavioral intention is not carried out on the impact of green advertising. It is suggested for the next study to explain the impact of green advertising in various behavioral intentions that is conveyed by customers for their concern to environment.

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