The strategy of eco-friendly products with green consumer behavior: Development of green trust model

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Abstract. Green consumer behavior is a marketer's concern because of the value of environmental sustainability—a study of green consumer behavior as a part of facing the climate change issue. Based on the phenomenon of green consumer behavior, this study focuses on examining the green trust model as information support for environmental strategy in consumer behavior. The research conduct with a sample of 100 consumers which has experience in buying eco-friendly products. Path analysis was carried out with SmartPLS to study the model, as well as to test hypotheses. The research results found that green trust can increase through consumer perceived quality and support by eco-label as attribute on eco-friendly products. Consumer perceived quality plays a more critical role in increasing consumer trust as mediation variable. The findings of this study are helpful for industries that implement a green marketing strategy, which needs to pay attention to the attributes of green trust. The implementation of the green marketing strategy provides opportunities for marketing performance and support to face the climate change issue.

1. Introduction
Climate change is a world problem today, the impact generated by climate change is of concern because it is related to the sustainability of life [1]. Support from all advocates is needed to deal with the issue of climate change, including companies with operations that must be able to support environmental sustainability [2]. Companies are starting to change the way they view consumer wants by creating products that are friendly to the environment and changing marketing strategies that lead to environmental sustainability, known as the green marketing strategy [3]. The objectives of implementing the green marketing strategy include supporting efforts to face the issue of climate change and supporting sustainable marketing performance.

Understanding the green marketing strategy, it is necessary to understand the behavior of consumers who have awareness of the environment [4]. Currently, consumer awareness of environmental sustainability is increasing, as evidenced by the green consumerism movement [5]. This means that consumers are increasingly selective in choosing products offered by companies by comparing their impact on environmental sustainability. Eco-friendly products have different characteristics from conventional products, where there is a label known as eco-label [6]. Labels on eco-friendly products are considered by consumers in having products with environmental sustainability issues [7]. There are many labels that describe friendly to the environment such as "fresh", "freen pesticide", or "organic" [8]. From government agencies in Indonesia convey a label for environmentally friendly products known as "Organic Indonesia" [9]. In a previous study, it was stated that eco-label is an attribute on a product...
which explains that the product has advantages, namely a positive impact on the environment [10], [11]. Eco-label has an impact on the perceived quality of consumers, it is considered to be of higher quality than ordinary products [12]. Consumers who care about the environment pay more attention to products that already have an eco-label [13], so that there is confidence in the product. Trust in environmentally friendly products is known as green trust, which is needed by consumers to be able to increase consumer behavior intention to choose products. Based on the phenomenon of problems with green marketing strategy and consumer behavior, this study focuses on examining eco-label and consumer perceived quality in increasing consumer green trust. The purpose of this research is to find the right model in forming a consumer green trust.

2. Literature review

2.1. Eco-label
The theory of eco-label is actually the same as label in general, related to the information contained in the product packaging [9]. However, eco-label is related to the label on the product packaging which explains the environmentally friendly elements of the product [14]. There are many types of eco-labels either issued by Indonesian government agencies, or companies that produce products [9]. The type of eco-label determines the consumer's trust in the product, meaning that the more it has the image of the label the better for value eco-friendly products [11]. Eco-labeling is part of the green marketing strategy, where product attributes are used as an effort to increase product value [6]. However, companies need to pay attention to the authenticity of eco-labels, because consumers already understand the characteristics of eco-friendly products. Eco-labeling has several positive impacts on consumer behavior, including being able to increase product value, namely perceived quality [9]. On the other hand, it has also been said by previous research that consumer trust can be controlled by authentic product identities such as eco-labels [11]. There are several evaluations that can be assessed from a good eco-label, including assessing it from easy to recognize, easy to use, understand to know, and trust of label [15].

2.2. Consumer perceived quality
Consumer perceived quality is part of the value of consumers, where one side is related to perceived risk [16]. Perceived quality is related to the benefits that exist in the product, in eco-friendly products, of course there are the most important benefits, namely that it does not have a negative impact when consumed and is friendly to the environment [12]. Consumer perceived quality is actually a consumer's view of the quality of a product which is judged to have an advantage when consumed [17]–[19]. Eco-friendly products are not only products that are friendly to the environment but are considered to have the advantage of being healthy when consumed regularly in the long term. All products are always assessed from two sides, namely quality and risk, it is expected that from consumer expectations, of course, quality outperforms the risk that will be accepted [20]. Consumer perceived quality is a part of consumer behavior which in fact is influenced by the attributes contained in products such as eco-labels [12]. Consumers perceive that eco-labels provide value as quality products, and in the end give consumers confidence to choose. There are several indicators that can be assessed to measure the quality of the product, especially in eco-friendly products, namely originality, brand image, green label, variety of product, firmness of product, colorness, flavor, aroma, degree of damage, size of product, value, and freshness [9], [21], [22].

2.3. Consumer green trust
The company implements a green marketing strategy so that the products delivered to the market can be trusted [19], so it seems the importance of trust from consumers because it determines consumer choice of products. Eco-friendly products are known as consumer green trusts, which are said to be consumers’ dependence on products that meet their expectations and have a positive impact on the environment [23]. Expectations from consumers are related to the credibility of the product in
accordance with consumer expectations [12]. Green trust emphasizes the relationship between consumers and the environment, because there is an element of sustainability as an impact of trust [6]. Consumers self-assess all the products to be selected, of course by considering all the attributes on the product such as eco-label [14]. Because it is known that there is a positive impact from eco-label on consumer green trusts. In addition, support from consumers who know the quality of the product is needed, thus supporting consumer confidence in eco-friendly products. There are several assessments that can be seen from consumer green trusts including reliable, dependable, trustworthiness, meet expectation, no harm to environmental, and product safety [19], [24].

Based on a review of the literature review, it appears that there is research support that explains that consumer green trust can be influenced by consumer perceived quality and eco-label. On the one hand, it is also conveyed that there is a relationship between eco-label and consumer perceived quality. Judging from the support of this research, the following research hypothesis design is presented.

Hypothesis 1  Eco-label has a positive relationship with consumer perceived quality.
Hypothesis 2  Consumer perceived quality has a positive relationship with consumer green trust.
Hypothesis 3  Eco-label has a positive relationship with consumer green trust.

3. Methodology
The research method used is descriptive survey, where an analytical study is carried out based on the results of the survey directly on the consumer. The survey was conducted on 100 consumers who have previously experienced buying eco-friendly products. The consumers chosen are retail consumers in the city of Bandung, considering that eco-friendly products are easier to find in self-service retails. The data from consumers are taken through a quantitative questionnaire whose value has been determined through a Likert scale approach.

There are several variables studied, namely eco-label, consumer perceived quality and consumer green trust. Furthermore, data from all variables are processed by path analysis technique through SmartPLS, considering the questionnaire data is below 200. The final part of data processing is a research hypothesis test to confirm the research results submitted through a research model related to consumer green trust.

4. Result and discussions
The results of the study were started by analyzing the questionnaire data, in which there were 100 valid questionnaire data, so that it could be continued for analysis. The first analysis carried out the inner and outer model test, considering that this research uses SmartPLS. Followed by testing the research hypothesis to confirm the results of the study.

4.1. The test of research model

The research model was tested only once as shown in Figure 1, before the analysis was carried out by testing the inner and outer models. Inner model testing is done by evaluating the value of Loading Factors, Cronbach's Alpha, Composite Reliability and Average Variance Extracted (AVE) [25], [26]. The results obtained in Table 1 and Table 2, where for all Loading Factors values above 0.5, Cronbach's Alpha and Composite Reliability above 0.7, and the AVE value above 0.5. Furthermore, the test results
are reaffirmed through the outer model test, where the evaluation is carried out through the T-Statistics score of all research instruments in Table 3. The T-Statistics value is obtained for all research instruments whose values are above 2.2. Based on all the results of the inner and outer model tests, it is known that all tests are acceptable and the research instrument is said to be valid and reliable to be continued and analyzed.

The next test is to test the research hypothesis based on the previous research hypothesis design. The results of hypothesis testing are summarized in Table 4, where it is known that all research hypotheses are accepted considering that all T-Statistics values are above 1.69 as the standard for testing the hypothesis for the number of respondents as many as 100. With the acceptance of the research hypothesis it can be confirmed that the eco-label has a good positive relationship with consumer perceived quality as well as with consumer green trust directly. From one side, consumer perceived quality also has a positive relationship with consumer green trust. The results of this study have been illustrated in a consumer green trust model as shown in Figure 1.

Table 1. Loading factor values.

| Instruments | Eco-Label (X) | Consumer Perceived Quality (Y) | Consumer Green Trust (Z) |
|-------------|--------------|--------------------------------|--------------------------|
| X1          | 0.896        |                                |                          |
| X2          | 0.873        |                                |                          |
| X3          | 0.904        |                                |                          |
| X4          | 0.853        |                                |                          |
| Y1          |              | 0.782                          |                          |
| Y2          |              | 0.823                          |                          |
| Y3          |              | 0.739                          |                          |
| Y4          |              | 0.862                          |                          |
| Y5          |              | 0.718                          |                          |
| Y6          |              | 0.821                          |                          |
| Y7          |              | 0.785                          |                          |
| Y8          |              | 0.774                          |                          |
| Y9          |              | 0.730                          |                          |
| Y10         |              | 0.762                          |                          |
| Y11         |              | 0.671                          |                          |
| Y12         |              | 0.696                          |                          |
| Z1          |              |                                | 0.789                    |
| Z2          |              |                                | 0.741                    |
| Z3          |              |                                | 0.821                    |
| Z4          |              |                                | 0.836                    |
| Z5          |              |                                | 0.729                    |
| Z6          |              |                                | 0.610                    |

Table 2. Validity and reliability values.

| Variables                | Cronbach's Alpha | rho_A | Composite Reliability | Average Variance Extracted (AVE) |
|--------------------------|------------------|-------|------------------------|----------------------------------|
| Eco-Label                | 0.905            | 0.906 | 0.933                  | 0.778                            |
| Consumer Perceived Value | 0.935            | 0.939 | 0.944                  | 0.586                            |
| Consumer Green Trust     | 0.849            | 0.858 | 0.889                  | 0.575                            |
The product but there is another value, namely products that are friendly to the environment on green trust of consumers. According to the analysis of current research, it is a characteristic of eco-friendly products because of their belief in the product and the preservation of the environment. It seems clear that eco-friendly products supports the creation of perceived quality, and perceived quality just the quality of the product but there is another value, namely products that are friendly to the environment. In line with previous studies that have been described by Jinji [13] which explained the importance of eco-labels on environmentally friendly products as value quality. Consumers choose environmentally friendly products because of their belief in the product and the preservation of the environment. One of the characteristics of eco-friendly products is the existence of an eco-label, so that eco-label can support the level of green trust from consumers, in line with the research presented by Chen and Chang [27]. Eco-labeling on eco-friendly products supports the creation of perceived quality, and perceived quality has an impact on changes in green trust from consumers. This finding is in line with previous studies which explain the positive impact of perceived quality on green trust of consumers [28]. Based on the analysis of current research, it is actually in line with previous research and completes previous research.

### Table 3. T-values of outer loading.

| Instruments                      | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (O/STDEV) | P Values |
|----------------------------------|---------------------|-----------------|---------------------------|------------------------|----------|
| X1 <- Eco-Label (X)              | 0.896               | 0.896           | 0.024                     | 37.892                 | 0.000    |
| X2 <- Eco-Label (X)              | 0.873               | 0.870           | 0.027                     | 32.081                 | 0.000    |
| X3 <- Eco-Label (X)              | 0.904               | 0.901           | 0.023                     | 38.597                 | 0.000    |
| X4 <- Eco-Label (X)              | 0.853               | 0.852           | 0.030                     | 28.586                 | 0.000    |
| Y1 <- Consumer Perceived Value (Y) | 0.782               | 0.781           | 0.044                     | 17.635                 | 0.000    |
| Y2 <- Consumer Perceived Value (Y) | 0.823               | 0.822           | 0.043                     | 19.226                 | 0.000    |
| Y3 <- Consumer Perceived Value (Y) | 0.739               | 0.738           | 0.068                     | 10.896                 | 0.000    |
| Y4 <- Consumer Perceived Value (Y) | 0.862               | 0.863           | 0.032                     | 26.784                 | 0.000    |
| Y5 <- Consumer Perceived Value (Y) | 0.718               | 0.717           | 0.088                     | 8.126                  | 0.000    |
| Y6 <- Consumer Perceived Value (Y) | 0.821               | 0.817           | 0.052                     | 15.753                 | 0.000    |
| Y7 <- Consumer Perceived Value (Y) | 0.785               | 0.783           | 0.054                     | 14.588                 | 0.000    |
| Y8 <- Consumer Perceived Value (Y) | 0.774               | 0.773           | 0.049                     | 15.746                 | 0.000    |
| Y9 <- Consumer Perceived Value (Y) | 0.730               | 0.729           | 0.063                     | 11.513                 | 0.000    |
| Y10 <- Consumer Perceived Value (Y) | 0.762               | 0.760           | 0.061                     | 12.493                 | 0.000    |
| Y11 <- Consumer Perceived Value (Y) | 0.671               | 0.662           | 0.093                     | 7.205                  | 0.000    |
| Y12 <- Consumer Perceived Value (Y) | 0.696               | 0.691           | 0.073                     | 9.566                  | 0.000    |
| Z1 <- Consumer Green Trust (Z)   | 0.789               | 0.791           | 0.040                     | 19.551                 | 0.000    |
| Z2 <- Consumer Green Trust (Z)   | 0.741               | 0.743           | 0.052                     | 14.255                 | 0.000    |
| Z3 <- Consumer Green Trust (Z)   | 0.821               | 0.820           | 0.037                     | 22.037                 | 0.000    |
| Z4 <- Consumer Green Trust (Z)   | 0.836               | 0.836           | 0.039                     | 21.245                 | 0.000    |
| Z5 <- Consumer Green Trust (Z)   | 0.729               | 0.726           | 0.067                     | 10.910                 | 0.000    |
| Z6 <- Consumer Green Trust (Z)   | 0.610               | 0.611           | 0.083                     | 7.378                  | 0.000    |

### Table 4. P-Values of hypothesis.

| Hypothesis                      | Original Sample (O) | Sample Mean (M) | T Statistics (O/STDEV) | P Values |
|----------------------------------|---------------------|-----------------|------------------------|----------|
| Eco-Label -> Consumer Perceived Value | 0.423               | 0.434           | 5.478                  | 0.000    |
| Eco-Label -> Consumer Green Trust    | 0.349               | 0.346           | 4.223                  | 0.000    |
| Consumer Perceived Value -> Consumer Green Trust | 0.535               | 0.542           | 6.862                  | 0.000    |

#### 4.2. The relationship of eco-label with consumer perceived quality and green trust

The results have explained that the eco-label that is given as an attribute product on eco-friendly products has an impact on consumer perceived quality and consumer green trust. This means that the implementation of a green marketing strategy through eco-label has a good influence in changing consumer behavior. On the one hand, it is also known directly that consumer perceived quality is an important factor capable of changing consumer green trust.

Eco-label is a sign that marketers give to products, this sign explains the value of the product, not just the quality of the product but there is another value, namely products that are friendly to the environment. It seems clear that eco-labels have a positive impact on consumer perceived quality, in line with previous studies that have been described by Jinji [13] which explained the importance of eco-labels on environmentally friendly products as value quality. Consumers choose environmentally friendly products because of their belief in the product and the preservation of the environment. One of the characteristics of eco-friendly products is the existence of an eco-label, so that eco-label can support the level of green trust from consumers, in line with the research presented by Chen and Chang [27]. Eco-labeling on eco-friendly products supports the creation of perceived quality, and perceived quality has an impact on changes in green trust from consumers. This finding is in line with previous studies which explain the positive impact of perceived quality on green trust of consumers [28]. Based on the analysis of current research, it is actually in line with previous research and completes previous research.
These findings explain the impact of eco-labels on consumer behavior related to awareness of environmentally friendly products.

4.3. Mediation of consumer perceived quality

This study found a model in which consumer perceived quality is able to be a mediation variable between eco-label and consumer green trust. It can be seen from the value of the relationship between the eco-labels on the green trust, which is directly smaller than the eco-label value through consumer perceived quality (Figure 1). Based on these results, it can be said that the green trust model will actually be good if there is mediation from consumer perceived quality for the implementation of eco-label.

This study contains information that the importance of consumer green trust as consumer behavior in eco-friendly products. The information in this research can be used as useful information in implementing the green marketing strategy in the company. So that the implementation of green marketing will support the achievement of sustainable marketing. And through the implementation of the green marketing strategy has actually supported government programs in dealing with the issue of climate change in the world.

5. Conclusions

There is a problem faced by the world today known as climate change, which impacts on the sustainability of life. Companies need to support the movement to face the issue of climate change through the implementation of a green marketing strategy. The implementation of green marketing is carried out by understanding consumer behavior who cares about environmental sustainability. This research shows that the implementation of eco-label by the company is able to have a positive impact on the perceived quality and green trust of consumers. Besides that, a model was found that explains the formation of consumer green trusts. Research has limitations in that the characteristics of consumers are not examined, so that the study is not in depth on consumer behavioral intention. This is a suggestion for further research that explains consumer characteristics and behavioral intention, because it has a relationship with eco-label implementation.

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