Effect of Green Product and Green Advertising to Satisfaction and Loyalty which mediated by Purchase Decision

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Abstract

The growing of being aware of the destruction of natural resources have increased human activities and need for the preservation of the environment. Destruction of natural resources because of producing products by many companies that pollute the environment with waste dumped in the river, using materials that can not be recycled. Growing environmental problems caused by industrialization, this condition increased the environmental concerns of customers, communities, and governments. The purpose of this study to determine the effect of Green Product and Green Advertising to Satisfaction and Loyalty which mediated by Purchase Decision. Questionnaires were distributed to 196 visitors Plaza Semanggi that used environmentally friendly products by using random sampling technique. Data were analyzed by using Structural Equation Modeling (SEM). SEM analysis in this study was carried out using a one-step approach and Lisrel 8.70 as the SEM software. The results showed that Green Product and Green Advertising have direct influence to Purchase Decision. In addition, the Purchase Decision has direct influence to Customer Satisfaction and Customer Satisfaction has a direct influence to customer loyalty. Green Product and Green Advertising have indirect influence to Customer Loyalty through Purchase Decision and Customer Satisfaction.

Keywords: Green Product, Green Advertising, Satisfaction, Loyalty and Purchase Decision
I. Introduction
With the growth of human capabilities in recent centuries, the environmental equilibrium was disrupted. Being aware of the destruction of natural resources as a result of human activities and the need for the preservation of the environment have increased environmental awareness of consumers' behavior (Kumar and Ghodeswar, 2015). Destruction of natural resources because of producing products by many companies that pollute the environment with waste dumped in the river, using materials that can not be recycled. Damage to the environment such as pollution of river water that impact on pollution of sea water, thus damaging marine biota like fish, coral reefs and others. Growing environmental problems caused by industrialization have increased the environmental concerns of customers, communities, and governments (Chiou et al., 2011).

Cronin et al., (2011) said that popularization and consolidation of environmental concerns created a paradigm shift led by the government, consumer, and business sectors. Other than, the issue of global warming has raised the environmental consciousness in the consumers as well as companies. Hence consumers prefer to purchase products including recyclable material and this demand of consumers becomes responsibility for the companies to be green. Also businesses and consumers today confront one of the biggest challenges – to protect and preserve the earth’s resources and the environment. Based on this conditions, firms create a sustainable relationship by using product greening as the entire cycle from use of raw material to post purchase usage (e.g., Cox 2008; Haytko and Matulich 2008; D'Souza and Taghian 2005; D'Souza et al. 2007). Also, the company should advertise the products offered are environmentally friendly. According to Essoussi and Linton, (2010), green consumerism is the base for making green purchase decisions. Susanto (2013) said generally after making a purchase of environmentally friendly products consumers will be satisfied. When consumers are satisfied they will be loyal to the products offered by the company (Asgharian, et.al., 2012).

Based on the above phenomenon, the author will conduct research of the topic: Is There Any Influence of the Green Product, Green Advertising to Customer Satisfaction and Customer Loyalty which mediated by Purchase Decision.

2. Literature Review
2.1 Green Product
Green product can be categorised as a product that will not pollute the earth or deplore natural resources and can be recycled or conserved. Some examples of these products are, recyclable or reusable packaging, energy-efficient light bulbs and detergent containing ingredients that are biodegradable, non-polluting and free of synthetic dyes or perfumes” (Mostafa, 2007). According to Diglel and Yazdanifard (2014), a green product as an item that is produced in a manner that the product packaging made from recycled materials. Manget, Roche & Munnich (2009) found that consumers greatly appreciate the benefits of green products will buy green products that can save energy costs. Quality of product have been reported as important attributes for consumers who purchase green products (Cerjak et al., 2010). Chen and Chai (2010) said green products use material safer to the environment, and require less packaging.
Consumers have channeled their growing concern for the environment through the
demand for eco-friendly products and this movement of “going-green” has expanded
worldwide due to (Norazah, 2013; Soyez, 2012; Thøgersen et al., 2015). Some companies are
also making genuine efforts to preserve the environment. In the automotive industry, Honda,
Toyota, GM, etc., have expressed their support of green brands to the public by adopting
green technologies that conserve raw minerals and reduce emissions of greenhouse gases,
particularly in the manufacturing of hybrid cars (part electric and part conventional), which
aim to preserve the environment (Marcus and Fremeth, 2009). Green consumerism is the base
for making green purchase decisions (Essoussi and Linton, 2010). Consumers considering
environmental concerns while making purchase decisions are sighted to be involved in green
purchases.

H1: There is green product influence on purchase decision.
Green consumerism is the base for making green purchase decisions (Essoussi and Linton,
2010).

2.1.2 Green Advertising
Visual representations of nature are prominent in many green advertisements. The ecological
attributes of a product or brand are often communicated through backgrounds representing
pristine, unspoiled landscapes to evoke the beauty of nature (Hartmann et al., 2013; Hartmann,
P., Apaolaza, V., and Aija, P. (2013). These nature images may activate feelings similar to those experienced in actual contact with nature termed “virtual nature experiences”
consists of: green advertisements are always trustworthy; consumer consider what it printed
on eco-labels to be accurate; the information on eco-labels is easy to understand; green
advertisements are attractive; the contents of green advertisements are relevance to my daily
life. Rahbar and Wahid (2011) state that the primary goal of green advertising is to try to alter
consumers’ traditional purchase behaviour by making them buy products that either do not
harm the environment or that have a positive impact on it environment. According to
Manaktola and Jauhari (2007) the company should have visible communications about green
practices. There is strong and positive co-relation exist between green advertising and
consumer purchase (Batool & Iqbal, 2016).

H2: There is green advertising influences purchase decision.
There is strong and positive co-relation exist between green advertising and consumer
purchase (Batool & Iqbal, 2016).

2.1.3 Purchase Decision
Researchers have found the green purchase behavior of consumers can be due to various
factors like inner feeling of obligation for environment, experience with the green products,
activities done by companies to support the environment and the consciousness about the life
style (D’Souza et al., 2006). The aspect of life style contributes in the green activities of
consumers. Past studies have identified that the concern about the social status, makes people
to be green. Hence, consumers not only purchase green products but also support the
environmentally green companies (Nath et al., 2012; Knight and Paradkar, 2008). The purchase decision can be traced from the consumer’s enthusiasm to support environmentally friendly companies (Laroche, Bergeron, and Barbaro-Forleo, 2001), performing the purchasing activities (Mishra and Sharma, 2010), putting into practice a sustainable consumption pattern (Young et al., 2010), and willingness to spend more money to acquire green products (Hasan and Ali, 2015; Laroche et al., 2001). Kong, et al., (2014) said there is 5 indicator of purchase decision such as: the product’s environmental functions provide very good value for customers; the product’s environmental performance meet my expectations; consumer purchase green product because the product has more environmental benefit than other products; consumer purchase green product because the product is environmentally friendly; consumer purchase green product because the product has more environmental concerns than other product.Susanto (2013) suggest there is purchase decision has significant influence to customer satisfaction. Gadenne et al., 2011) mentions that consumers get information about the beneficial effects of green products

H3: There is the influence of purchase decision to satisfaction.

Customer purchase decision has significant influence to customer satisfaction (Susanto, 2013).

2.1.4 Customer Satisfaction

Satisfaction occurs when customers are satisfied with product performance.Ahmed (2014) said that customer satisfaction is the level at which customers are happy with the use of products provided to them by the company. Also satisfaction is a summary of the consumer psychological state that results when emotional expectations are met that are related to the feelings about previous experiences (Kotler and Keller, 2016). Green satisfaction can be defined as ‘green satisfaction is a pleasurable level of consumption-related fulfillment to satisfy a customer’s environmental desires, sustainable expectations, and green needs’ (Chen, 2010). Yazdanifard and Mercy, 2011 said consumer will satisfied with the product because the purchase decision experience, the performance attribute of green products. According to Chen (2010) suggest that "greensatisfaction" as "a pleasurable level of consumption-related fulfillment to satisfy a customer's environmental desires, sustainable expectations, and green needs". It was the outcome of consumption that the performance met or exceeded the green needs of customers, the requirements of environmental regulations, and the sustainable expectation of society (Chang and Fong, 2010). Also, there is an expectation on the part of customers that all products offered should be environmentally safe without a need to sacrifice quality and/or having to pay higher prices for the privilege (D'Souza et al., 2006). The study showed that green customer satisfaction had potential impact on green customer loyalty (Asgharian, et.al., 2012).

H4: There is customer satisfaction influence customer loyalty on green product

The study showed that green customer satisfaction had potential impact on green customer loyalty (Asgharian, et.al., 2012).

2.1.5 Consumer Loyalty
Chen (2010) defines green loyalty as "the level of repurchase intentions prompted by a strong environmental attitude and sustainable commitment towards an object, such as a product, a service, a company, a brand, a group, or so on. Customer loyalty referred to the behavior of customers to maintain a relation with an institute through purchase of its products and services (Behara et al., 2002; Singh and Sirdeshmukh, 2000). Consumers are loyal when they willingness to repurchase (Chang and Fong, 2010; Chen, 2010), willingness to maintain a relationship with a firm (Chang and Fong, 2010) and customer's environmentally sustainable attitude and commitment towards a product brand and company, high switching barriers and lack of real alternatives (Chen, 2010). Tuu et al. (2011) defined customer loyalty as a cumulative construct including both the act of consuming (action loyalty) and expected consumption (future repurchasing). Another way customer loyalty can be measured is by repurchase intention. Li and Green, (2011); Li, (2011). Marakanon and Panjakajornsak (2013) suggested a four-dimensional construct of customer loyalty such as repurchase intention, complaint behavior, price insensitivity, and word-of-mouth.

3. Research Model

![Research Model Diagram]

Figure 3.1: Research Model

3.1 Research Hypothesis
1. There is the influence of the Green Product to Purchase Decision
2. There is the influence of Green Advertising to Purchase Decision
3. There is the influence of Purchase Decision to Customer Satisfaction
4. There is the influence of Customer Satisfaction to Customer Loyalty
5. The influence of Green Product on Customer Loyalty mediated by Purchase Decision and Customer Satisfaction
6. The influence of Green Advertising on Customer Loyalty mediated by Purchase Decision and Customer Satisfaction

3.2 Research Method
This research was distributed questionnaires to 250 visitors at Plaza Semanggithat used environmentally friendly products by using random sampling technique during September 2018. Questionnaires consist of 2 parts. The first part contains questions about the characteristics of respondents, and the second part contains questions about the main variables of research, namely Green Product, Green Advertising, Purchasing Decision, Customer Satisfaction, and Customer Loyalty. These questions are arranged based on the concepts and theories discussed in the literature review section and use the Likert Scale format with 6 choices of answers namely strongly disagree (1), disagree (2), disagree (3), simply agree (4), agree (5), and strongly agree (6), and can be seen in table 4.3. The collected data is then analyzed by descriptive statistical methods and Structural Equation Modeling (SEM). Descriptive statistics are used to describe the profile of respondents with frequency distribution tables and statistics Package for Social Scales (SPSS) as descriptive statistical techniques and software. SEM is used to analyze the relationship between constructs and their indicators (measurement model) and relationships between constructs (structural models). SEM analysis in this study was carried out using a one-step approach and Lisrel 8.70 as the SEM software. In a one-step approach, the estimation of the model between the measurement model and the structural model (structural model) is carried out together (Yamin and Kurniawan, 2009).

4. Results and Discussion
Profile of Respondents
This study distributed questionnaires to 250 respondents, but only 201 respondents were willing to fill them out, and from 201 questionnaires only 196 could be processed and analyzed to the next stage because some questionnaire answers were incomplete and some datums were detected as outliers. Table 4.1 presents the demographic profile of respondents who participated in this study. From the table it can be seen that the number of female respondents is more (55.6%) than the number of male respondents (44.4%). Most of the respondents are 35 years old (40.8%). In general, respondents are Undergraduate education (53.6%). In terms of employment, the largest percentage are respondents who worked as private employees (34.7%). Hence the largest percentage are respondents in terms of expenditure per month (29.6%).

Table 4.1
Profile of Respondents (n = 196)

<table>
<thead>
<tr>
<th>Gender</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Man</td>
<td>87 (44.4%)</td>
</tr>
<tr>
<td>Women</td>
<td><strong>109 (55.6%)</strong></td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>17-25 years old</td>
<td>77 (39.3%)</td>
</tr>
<tr>
<td>26-35 years old</td>
<td>39 (19.9%)</td>
</tr>
</tbody>
</table>
> 35 years old  80 (40.8%)

Education
High School  53 (27.0%)
Diploma  21 (10.7%)
Undergraduate  105 (53.6%)
Postgraduate  15 (7.7%)
Doctoral  2 (1.0%)

Work
Students/Undergraduate Students  51 (26.0%)
Private Employees  68 (34.7%)
Civil Servant  20 (10.2%)
Entrepreneur  25 (12.8%)
Others  32 (16.3%)

Expenditures/month
< Rp. 2.000.000,-  26 (13.3%)
Rp. 2.000.001,- - Rp. 2.500.000,-  32 (16.3%)
Rp. 2.500.001,- - Rp. 5.000.000,-  58 (29.6%)
Rp. 5.000.001,- - Rp. 7.500.000,-  33 (16.8%)
> Rp. 7.500.000,-  47 (24.0%)

Assessment of fit
According to Yamin and Kurniawan (2009), the model compatibility test is used to test whether the hypothesized model is a good model to represent the results of the study. To evaluate the compatibility of the model (goodness of fit), they continued, there are three steps that must be done, namely: (1) compatibility of the overall model (overall model fit), (2) compatibility of measurement model fit, and (3) compatibility of structural models (structural model fit).

Overall model fit
This model compatibility test aims to evaluate in general the degree of compatibility or goodness of fit between the data and the model (Haryono and Wardoyo, 2012). The results of the goodness of fit test show that the p-value of chi-square 0.000 < 0.05 (the model is not fit), shows that there is a significant difference between the data covariance matrix and the model covariance matrix. $\chi^2$/DF ratio 2.104 > 2 (the model is not fit); Standardized RMR value 0.74 > 0.05 (the model is not fit); GFI value 0.85 < 0.90 (the model is marginal fit); and value AGFI 0.81 < 0.90 (the model is marginal fit).

However some goodness of fit tests, such as NNFI, NFI, IFI, CFI values are greater than 0.90 (the model is fit) and RMSEA is equal to 0.08 (the model is fit). Improvement of the model is done by paying attention to the modification of the index output and done in stages, namely correlating errors from several indicators, including: Set the error covariance of CL and CS free, Set the error covariance of CS3 and CS1 free, Set the error covariance of CS3 and CS2 free. The following is the modification of the model:

Table 4.2
Goodness-Of-Fit Index
Based on table 4.2, although the p-value chi squared (0.0036 <0.05), the value of RMR (0.075> 0.05), and the value of AGFI (0.87 <0.90) indicates that the model is not fit, as a whole the results of the modification results in a better value of goodness of fit test, namely $\chi^2$/DF ratio 1.356 <2 (model fit), RMSEA value 0.04 <0.05 (model fit); GFI value 0.90 = 0.90 (model fit); and the values of CFI, NNFI, NFI, and IFI> 0.9 (model fit).

Measurement model
Haryono and Wardoyo (2012) said that the measurement model compatibility test is carried out on each construct (the relationship between a latent variable with several observed variables / indicators) separately through (1) evaluation of the validity of the measurement model, (2) evaluation of reliability from the measurement model. According to Yamin and Kurniawan (2009), an indicator has good validity towards its latent construct if the t-value standardized factor loading is greater than the critical value (> 1.96), and the standardized factor loading value is greater or equal to 0.5. Next, they said that a construct is said has good reliability if it has a Construct Reliability (CR) value greater than or equal to 0.7 and the Variance Extracted (VE) value is greater or equal to 0.5. Table 3 presents the standardized factor loading value, t-value, CR value, VE value of each construct and its indicators.

Table 3 shows that all indicators of the research construct have a standardized factor loading> 0.5 and t-value> 1.96 therefore that all have good validity. The table also shows that all research constructs have CR> 0.7 and VE> 0.5. Thus, all constructs have good reliability. Overall, it can be concluded that all research constructs and indicators have good reliability and validity.
GP3  In your opinion, environmentally friendly products save energy (low voltage AC). 0.95  24.93

**Green Advertising (CR = 0.959; VE = 0.886)**

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>GA1</td>
<td>In your opinion, advertising on environmentally friendly products can be trusted. 0.96</td>
</tr>
<tr>
<td>GA2</td>
<td>In your opinion, advertising for environmentally friendly products is interesting. 0.99</td>
</tr>
<tr>
<td>GA3</td>
<td>Contents of eco-friendly product advertising messages relevant to your daily life. 0.87</td>
</tr>
</tbody>
</table>

**Purchase Decision (CR = 0.912; VE = 0.675)**

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>PD1</td>
<td>You buy eco-friendly products because you feel obliged to protect the environment. 0.80</td>
</tr>
<tr>
<td>PD2</td>
<td>You buy eco-friendly products because of the experience of using these products. 0.76</td>
</tr>
<tr>
<td>PD3</td>
<td>You buy eco-friendly products because you support companies that produce these products. 0.92</td>
</tr>
<tr>
<td>PD4</td>
<td>You are willing to spend more money to buy environmentally friendly products. 0.82</td>
</tr>
<tr>
<td>PD5</td>
<td>You are willing to buy eco-friendly products because you get information about the benefits of these products. 0.80</td>
</tr>
</tbody>
</table>

**Customer Satisfaction (CR = 0.899; VE = 0.690)**

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>CS1</td>
<td>You are satisfied to buy environmentally friendly products in the hope of maintaining the environment. 0.81</td>
</tr>
<tr>
<td>CS2</td>
<td>You are satisfied to buy eco-friendly products because they fit your needs. 0.86</td>
</tr>
<tr>
<td>CS3</td>
<td>You are satisfied with the benefits of environmentally friendly products. 0.78</td>
</tr>
<tr>
<td>CS4</td>
<td>You are satisfied because environmentally friendly products are high quality at affordable prices. 0.85</td>
</tr>
</tbody>
</table>

**Customer Loyalty (CR = 0.805; VE = 0.512)**

<p>| | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>CL1</td>
<td>You will repurchase environmentally friendly products. 0.76</td>
</tr>
<tr>
<td>CL2</td>
<td>You will not switch to products that are not environmentally friendly. 0.66</td>
</tr>
<tr>
<td>CL3</td>
<td>You have a positive attitude towards eco-friendly brand products. 0.55</td>
</tr>
<tr>
<td>CL4</td>
<td>You will recommend environmentally friendly products to others. 0.67</td>
</tr>
</tbody>
</table>

---
a.  

CR = Composite Reliability; VE = Variance Extracted

b.  “ – ” means the path parameter was set to 1, therefore, no t-value was given

**Structural model**

Evaluation of structural models is related to testing relationships between hypothesized variables (Yamin and Kurniawan, 2009). In this study, there were nine hypotheses that were conducted using t-value with a significance level of 5%. Thus, H0 is rejected if t-value ≥ 1.96. The following is a standardized model of this study:
Figure 4.1: Structural Equation Model (Standardized)

Table 4.4 presents the results of hypothesis testing. From the table can be seen Green Product ($\gamma = 0.17$, t-values $= 2.28$) and Green Advertising ($\gamma = 0.56$, t-values $= 7.09$) have direct and positive influence to Purchase Decision. Purchase Decision has direct and positive influence to Customer Satisfaction ($\beta = 0.63$, t-values $= 7.36$), Customer Satisfaction has direct and positive influence to Customer Loyalty ($\beta = 1.57$, t-values $= 7.38$), Indirect and positive influence of Green Product (0.17, t-values $= 2.18$), and Green Advertising (0.56, t-values $= 2.68$) to Customer Loyalty mediated by Purchase Decision and Customer Satisfaction. Thus, H1, H2, H3, H4, H5, H6 were supported.

Table 4.4
Structural Model Estimates

<table>
<thead>
<tr>
<th>Hypothesized Relationship</th>
<th>Parameter</th>
<th>Estimate</th>
<th>t-Value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationships of GP and GA to PD</td>
<td>$\gamma$</td>
<td>0.17</td>
<td>2.28</td>
<td>Supported</td>
</tr>
<tr>
<td>$H_1$ GP $\rightarrow$ PD</td>
<td>$\gamma$</td>
<td>0.56</td>
<td>7.09</td>
<td>Supported</td>
</tr>
<tr>
<td>$H_2$ GA $\rightarrow$ PD</td>
<td>$\beta$</td>
<td>0.63</td>
<td>7.36</td>
<td>Supported</td>
</tr>
<tr>
<td>Relationships of PD to CS and CS to CL</td>
<td>$\beta$</td>
<td>1.57</td>
<td>7.38</td>
<td>Supported</td>
</tr>
<tr>
<td>$H_3$ PD $\rightarrow$ CS</td>
<td>$\beta$</td>
<td>0.63</td>
<td>7.36</td>
<td>Supported</td>
</tr>
<tr>
<td>$H_4$ CS $\rightarrow$ CL</td>
<td>$\beta$</td>
<td>1.57</td>
<td>7.38</td>
<td>Supported</td>
</tr>
<tr>
<td>Relationships of GP and GA to CL through PD and CS</td>
<td>-</td>
<td>0.17</td>
<td>2.18</td>
<td>Supported</td>
</tr>
<tr>
<td>$H_5$ GP $\rightarrow$ PD $\rightarrow$ CS $\rightarrow$ CL</td>
<td>-</td>
<td>0.56</td>
<td>7.68</td>
<td>Supported</td>
</tr>
</tbody>
</table>

a. Completely standardized estimates
b. GP = Green Product, GA = Green Advertising, PD = Purchase Desicion, CS = Customer Satisfaction, CL = Customer Loyalty

The result showed that Green Product and Green Advertising have direct influence to Purchase Decision, because consumers will buy products that they are concern
environmentally friendly product and influenced by the advertisements that explain the benefits of environmentally friendly products. Hence the results of this study are appropriate to Essoussi and Linton (2010) and Batool & Iqbal (2016). Next, Purchase Decision has direct influence to Customer Satisfaction and Customer Satisfaction has a direct influence to customer loyalty, because after making a purchase, consumers get benefits of energy saving such as using lamps and electronic products with low voltage capacity and also durable therefore the consumers are satisfied. When consumers are satisfied they will purchase the products and do mouth to mouth advertisements. The results of this study are appropriate to Susanto (2013) dan Asgharian, et.al., (2012). This study found that Green Product and Green Advertising have indirect influence to Customer Loyalty through Purchase Decision and Customer Satisfaction, and these findings have not been studied by previous researchers.

5. Conclusion
Green Product and Green Advertising have direct influence to Purchase Decision. In addition, the Purchase Decision has direct influence to Customer Satisfaction and Customer Satisfaction has a direct influence to customer loyalty. Green Product and Green Advertising have indirect influence to Customer Loyalty through Purchase Decision and Customer Satisfaction.

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