Determining factors of the green products’ buying intention: A case of Indonesia

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Abstract. Determining factors of Indonesian green products’ buying intention was an objective in this study. This research obtained primary data through a questionnaire-based survey with the target respondents were people who visited a supermarket in a city in Indonesia. A hundred responses were usable from 110 questionnaires distributed during data collection. Results showed that the regression model was well-validated, with an Adjusted R² of 0.602. Two significant predictor variables of the Indonesian green products’ buying intention were identified, i.e. the manufacturer’s environment-related commitment, and the manufacturer’s green product information.

1. Introduction
The consumers’ expectations of green products are increasing because of some reason related to environmental and health issues. Green products defined as a product made using environmentally safe ingredients by a company that applied green practices and the products have eco-certified by a recognized organization [1]. In [2], green products defined as pollution-free products and can be conserved to ensure the sustainability of the environment. Excellent awareness of green products has led industries to pay attention to their operations to fulfill customers’ needs in green products. The raw material, the process, and waste generated from the daily activities would be the concerns of industries with green practices.

A few years ago, there was a green initiative introducing green production among batik industries in several cities in Indonesia. This four-year program initiated by the Indonesian and German trade of commerce, which started in 2010. The program has provided technical assistance in adopting sustainable production for batik industries such as using natural dyes to minimize the water pollutant and promote the green batik products to customers [3].

As customer awareness to buy green products has increased in recent decades, this research attempted to identify the factors determining the Indonesian green products’ buying intention. Some aspects, for instance, the high price, availability, and lack of information may decrease their intention to buy green products.

2. Literature Review
Several studies on green products have done, such as [4-6]. Most of the green product studies have an objective to find out elements affecting the green buying intention. As in [5], green products’ purchase intention defined as customers' compliance to buy green products. A brief discussion of these studies presented below.
In [4], it has examined the influence factors on Australian green purchasing intentions. Findings showed that brand/labels, packing, and product's material did not affect respondents in their purchase intention. Further, this study highlighted the intolerant of respondents to green products if they were reduced in quality and expensive. Another survey on green purchase intention based on the TRA has conducted in Malaysia [5]. This study involved 275 working people as survey respondents. Their research objective has investigated values and attitudes towards purchase intentions. Research conducted in India has studied factors affecting buyers to buy green products using SEM [6]. The study showed buyers’ responsibility and positive image of the company related to the environment were among factors affecting their buying decision. Next, [7] has examined the purchase intention focusing on young Thai consumers. This study’s findings showed that consciousness and knowledge regarding the environment were among factors affecting their purchase decision.

Based on prior studies and relevance to this research objective, a discussion of the determining factors of green products’ buying intention that used in this research are briefly discussed as follows.

2.1. Trust in green products
According to [8], trust defined as belief or expectation of those products’ performance in meeting green aspects. There were several studies have identified trust as an influencing factor in green purchase intention [9-11].

2.2. Environmental protection
According to Gadenne et al., environmental protection is critical for consumers to act that not harm the environment [12]. Thus, [6] described how consumers support the environment by looking for safe and pollutant-free products. Environmental protection also manifests as consumers’ emotionally involved to protect the environment by adopting environmentally friendly-based decisions [13].

2.3. Environmental knowledge of customer
It believed that environmental knowledge contributed to people’s buying intention as it found to be a predictor variable in most studies on green buying intention. In [14-15] found the knowledge as a significant predictor of green buying intention, while in [16-18] reported an insignificant relationship between those variables.

2.4. The manufacturer’s environment-related commitment
Consumers’ expectations of green products ultimately come because they are concerned about ecological impacts, so they choose products-less damaging to the environment and made under green manufacturing practices [19]. While Laroche et al. stated that consumers would reject products made from industries with less environment-related commitment and seriously, they refuse the sectors that are not following the regulations [20].

2.5. The manufacturer’s green product information
According to [6], a factor influencing customers’ buying decisions was the promotion of an environmentally friendly company. The customers will be motivated to buy the products if they can provide them with the appropriate information, such as green/eco-labeling and other green details [21].

3. Methods

3.1. Data Collection
This research obtained primary data through a questionnaire-based survey. The target respondents were people who visited a supermarket in a city in Indonesia. The number of respondents involved in this survey was 110 people. On average, the respondents spent ten minutes to complete the questionnaire.
3.2. Questionnaire Design

The first part of the questionnaire contains the demography of respondents i.e. age, academic qualification, salary, and the frequent use of green products. The second part was measured factors determining the green buying intention of respondents specifically for the green detergent product. The determining factors were trust in green products, environmental protection, environmental knowledge of customers, the manufacturer’s environment-related commitment, and the manufacturer’s green product information. A reliability test has conducted for all factors of Part B. The values of Cronbach’s Alpha were above 0.6.

4. Results

A hundred responses were usable from 110 questionnaires distributed during four days of data collection. The descriptive and regression results are presented below.

4.1. Demographics and general information

The majority of respondents involved in this research were people age 31-40 years old. Of the 100 respondents, 59 (59%) were working people, while 34% were unemployed/students. The descriptive analysis of demographics and general information of respondents presented in Table 1.

| Table 1. Demographics of surveyed respondents |
|-----------------------------------------------|
| Demographics and General Information          | Number | Percent |
| Age                                           |        |        |
| < 20 years old                                | 5      | 5       |
| 21-30 years old                               | 16     | 16      |
| 31-40 years old                               | 41     | 41      |
| 41-50 years old                               | 27     | 27      |
| 51-60 years old                               | 8      | 8       |
| > 60 years old                                | 3      | 3       |
| Educational Qualification                     |        |        |
| High School                                   | 45     | 45      |
| Diploma                                       | 8      | 8       |
| Bachelor Degree                               | 28     | 28      |
| Masters Degree                                | 9      | 9       |
| Doctoral Degree                               | 2      | 2       |
| Others                                        | 8      | 8       |
| Job                                           |        |        |
| Professional Staff                           | 29     | 29      |
| Entrepreneur/Businessman                      | 18     | 18      |
| Office/Administration Staff                   | 12     | 12      |
| Unemployed/Student                            | 41     | 41      |
| Monthly Salary                                |        |        |
| < IDR 2 million                               | 53     | 53      |
| IDR 2 - 4.999 million                         | 41     | 41      |
| IDR 5 – 9.999 million                         | 6      | 6       |
| Frequent Use of Green Products                |        |        |
| Always                                       | 54     | 54      |
| Often                                        | 43     | 43      |
| Rarely                                       | 3      | 3       |
4.2. Multiple regression results
The green buying intention of respondents determined from several predictor variables. Some underlying assumptions have tested before the analysis, i.e. no multicollinearity exists between variables (VIF values were under 10), and no autocorrelation (Durbin Watson value was 2.046). As presented in Table 2, the regression model was well-validated with an adjusted $R^2$ of 0.602. It means that the predictor variables can explain a 60.2% variance of the dependent variable. Using significance level 5%, there were identified two significant predictor variables, i.e. the manufacturer’s environment-related commitment, and the manufacturer’s green product information ($p<0.05$).

Table 2. Regression results

| Predictor variables                        | Unstandardized Coefficients | Standardized Coefficients | t    | p    |
|-------------------------------------------|-----------------------------|---------------------------|------|------|
| Trust in green products                   | 0.120                       | 0.049                     | 0.923| 0.358|
| Environmental protection                  | 0.147                       | 0.149                     | 1.454| 0.149|
| Environmental knowledge                   | -0.186                      | -0.184                    | -1.637| 0.105|
| Manufacturer’s environment-related        | 0.702                       | 0.711                     | 7.748| 0.000|
| commitment                                |                             |                           |      |      |
| Manufacturer’s green product information  | 0.153                       | 0.163                     | 2.150| 0.034|

$R^2=0.622$, Adjusted $R^2=0.602$, $F_{(5, 94)} =30.976$

5. Discussion and Conclusion
This study aimed to determine factors related to green products’ buying intention. A questionnaire-based survey employed in this study was to obtain data from supermarket visitors randomly selected in a city in Indonesia.

The findings revealed that the manufacturer’s environment-related commitment significantly determined the green products’ buying intention, as also found in [6]. The manufacturer’s green product information was significantly affecting the green products’ buying intention, similar to [21]. However, other factors have no significant influence on the dependent variable. Environmental knowledge did not relate to the dependent variable, as this finding similar to other studies in [16-17], [18].

Further study will compare the factors affecting people’s buying intentions in small and big cities in Indonesia. A large number of samples will be used to obtain data to better describing green buyer intention in big and small cities in Indonesia. The findings may be used as a basis for manufacturing industries to improve their green practices and it includes the marketing strategy of their products.

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