GREEN PERCEPTION, GREEN VALUE AND GREEN AWARENESS ON GREEN PURCHASE OF TOYOTA AGYA IN SURABAYA

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Abstract

Nowadays one of the key factors of developing tourism is to increase new business practices without disrupting the conservation of environment. This paper focuses on the consumer perception and preferences towards green marketing practices and product. This research is examined to identify and analyze the effect of green perception, green value, and green awareness on green purchase of Toyota Agya in Surabaya.

Type of this research is a quantitative research, and causal research. The data was analyzed by Multiple Linear Regression with SPSS 21.0 for windows. Sample characteristics which consumer who ever bought Toyota Agya in Surabaya for the past one year. The primary data is obtained from the questionnaires which was distributed to 135 respondents.

The result indicated that green perception, green value, and green awareness have a significant influence on green purchase of Toyota Agya in Surabaya.

Keywords: green perception, green value, green awareness, green purchase

Intisari

Perkembangan turisme akhir-akhir ini memperhatikan praktik-praktik dan peluang bisnis tanpa mengorbankan kelestarian lingkungan. Penelitian ini fokus pada persepsi dan preferensi konsumen akan praktik pemasaran dan produk ramah lingkungan. Penelitian ini dilakukan untuk mengetahui pengaruh persepsi ramah lingkungan, nilai ramah lingkungan dan kesadaran ramah lingkungan terhadap pembelian produk ramah lingkungan merek otomotif yaitu Toyota Agya di Surabaya.

Penelitian ini merupakan penelitian kuantitatif dengan jenis penelitian kausal. Dalam penelitian ini, data dianalisis Regresi Linier Berganda dan diolah dengan software SPSS. Penelitian ini menggunakan karakteristik sampel yakni konsumen yang pernah membeli Toyota Agya di Surabaya dalam kurun waktu
satu tahun terakhir. Data adalah data primer yang diperoleh dari kuesioner yang dibagikan kepada 135 responden.

Hasil penelitian ini menunjukkan bahwa aspek-aspek persepsi ramah lingkungan, nilai ramah lingkungan dan kesadaran ramah lingkungan memiliki pengaruh yang signifikan terhadap pembelian produk ramah lingkungan Toyota Agya.

Kata kunci: persepsi ramah lingkungan, nilai ramah lingkungan dan kesadaran ramah lingkungan, pembelian produk ramah lingkungan

**INTRODUCTION**

Over the last three decades there has been increasing global concern over the Environmental Pollution. Pollution occurs because the natural environment does not know how to decompose the unnaturally generated elements on the other hand; there is a lack of knowledge on the part of humans on how to decompose these pollutants. (Irina Gray, 2008) Although pollution had been known to exist for a very long time, it had seen the growth of the global proportions in the beginning of Industrial revolution during 19th century. The industrial revolution brought technological process such as discovery of oil and it is worldly used throughout different industries. Technological process become one of the main causes of serious deterioration of natural resources.

It is interesting that natural resources had been stored virtually untouched in the Earth for millions of years. Vast amounts of these resources had been exploited within a period of just a couple of hundred of years at unimaginable rates, with all the waste from this exploitation going straight in to the environment (air, water, land) and seriously damaging its natural processes. (Irina Gray, 2008) At the same time, development of the natural resources led to the better understanding of negative effects produced by pollution on the environment. Environmental pollution is a problem both in developed and developing countries. Factors such as population growth and urbanization demands the use of the natural resources to the maximum (Irina Gray, 2008)

Some 100 physicals and 450 biological processes have been documented by the Scientist as an effect of the climate changes. (1) Rainfall patterns will continue to change around the world (2) The temperature regions as well as South
East Asia will receive more precipitation. (3) Global warming will accelerate hydrological cycle. Warmer air causes more water to evaporate. (4) Greater stress on freshwater supplies around the world especially regions that receive considerably less rain like Africa and South East Asia. (5) Sea level rise as the quality of the water will be affected. (6) Wildlife and ecosystems will face additional stress (7) New environmental conditions could affect food security (8) Changes will harm human health (9) Settlements and infrastructures will need to adapt (10) Extreme weather events will boost cost and will have a direct impact to the world economy (Klaus Topfer, 2001)

Global warming also threatening island worldwide. Indonesia is the world’s largest archipelago; it is already a significant emitter to greenhouse gases due to deforestation, estimated at 2 million hectares per year and accounts for 85 per cent of the country’s annual greenhouse gas emissions. It is also a serious coal producer and user in the region. The government of Indonesia knows how important action against climate change due to the Global Warming is. No one can escape from climate change in Indonesia. But the effects will be felt by the poorest people, who are living in the most marginal areas that can easily hit by flood or landside. (World Wildlife Fund 2007, retrieved December 3).

As the Global warming that cause climate changes is increasing every time, people’s tend to shift their products to the eco-friendly products that produce no harm to the planets. This paper need to investigate more of the customer perception and preferences choose the Low Cost Green Car brands in Indonesia. A survey conducted by Ipsos Business Consulting stated that the demand for Low Cost Green Car has significant increase. However a Studied conducted by Braimah and Tweneboah-Koduah (2011) found low level of awareness-towards green marketing issues which affected that purchase decision of the consumers.

Toyota is the first company before Honda that mass produced hybrid vehicle. It was Toyota Prius that launched in Japan back in the 1999. Toyota's hybrid vehicles use only the electric motors, powered by the battery, while the gas/petrol engine remains shut off. Although Toyota has mass produced hybrid vehicles, Indonesian market is not giving positive response to it. It is sold in a
high price and it has high maintenance cost which is not suitable to Indonesian market.

Toyota achieves the Best Global Green Brands in 2012, overcome Honda on the third place. Toyota creates the environmental friendly strategy on all of their stages, from operational, products, an advertising campaign as well as the community. Toyota creating vehicles that are safe, practical and fun to drive while at the same time ensuring customer cars and trucks are at the forefront of environmental engineering. Toyota also limits the amount of energy and water that they used to their operations process.

LITERATURE REVIEW AND RESEARCH HYPOTHESES

Green Marketing

Michael Polonsky (1994) defined “green marketing as the marketing that consists of all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs, with minimal detrimental impact on the natural environment.” Mintel (1995) found a significant gap between consumers concern and actual green purchasing. It is found that still there are considerable barriers towards the diffusion of more ecologically oriented consumption styles.

Antonio et al. (2009) suggested that due to environmental consciousness that has evolved over time, studies on green consumerism will be the main focus point in future leading to identifying the consumer attitudes, behaviors and intentions. Braimah and Tweneboah-Koduah (2011) studied Ghanaian consumers and have found low level of awareness towards green marketing issues which affected that purchase decision of the consumers.

Environmental friendly has been perceived as an opportunity by the organizations to achieve their objectives (Keller, 1987; Shearer, 1990 in Mayank & Amit, 2013). It was believed that organizations have moral obligation to serve the society in more environmental friendly way (Davis 1992; Freeman; Liedtka, 1991; Keller, 1987; Shearer, 1990 in Mayank & Amit, 2013).

Green Purchase
Consumers and manufacturers have directed their attention toward environment friendly products that are presumed to be “green” or environment friendly like low power consuming (energy-efficient) electrical appliances, organic foods, lead free paints, recyclable paper, and phosphate free detergents (Mayank & Amit, 2013). While choosing environmental friendly products, customer tend to choose a product based on their perception about the products. It wouldn’t be a surprised if each customer will select different products because customer experience and perception towards the products.

Green purchase can be measured (Mayank & Amit, 2013) : (1) I consider the ill effects of manufacturing and consumption on the natural environment; (2) I prefer green products over conventional products; (3) I feel that green products are priced higher as compared to conventional product; (4) I feel that price of green product affects my purchase behavior.

**Green Value**

Green value refers to the preferences of customer to choose a products. It has been always believed that the actions of individuals can be predicted by attitudes. Consumer’s attitude is associated with the knowledge and personal experience they possess (Davidson, 1985 in Mayank and Amit, 2013). Green consumer value can be measured (Mayank & Amit, 2013) : (1) It is important that the products I use do not harm the environment; (2) I am concerned about wasting the resources of our planet; (3) I would describe myself as environmentally responsible.; (4) I consider the potential environmental impact of my actions when making many of my decisions; (5) I am willing to be inconvenienced in order to take actions that are more environmentally friendly; (6) My purchase habits are affected by my concern for our environment.

**Green Awareness**

Awareness has hopeful association between consumer’s intention of getting hold of the product and its familiarity (Rashid,2009). Means, that customer know the functions as well as the purpose also details of each products that they are aware of . Environmental awareness explains the utilization pattern of the
people. Green awareness can be measured (Mayank & Amit, 2013): (1) I can buy green products from time to time but I am not involved in any environmental activities; (2) I do not buy green products. I believe that business and government should be fixing environmental problems; (3) I am the least involved in environmentalism. I believe that there is not much that an individual can do in solving environmental problems. It should be the government and business which should promote the environment.

Green Perception

Green perception is the act of understanding, or interpreting green marketing concept. Each of customer will have a different view of it and Additional benefit as it explained above will bring positive point of view towards green marketing practices. Green perception can be measured (Mayank & Amit, 2013): (1) I buy only green products. I spend time and effort in environmental activities such as recycling. I believe that an individual can do much to promote the environment; (2) I am able to buy green products but I don’t have the time and energy for environmental activities. I do not want to change my lifestyles to promote the environment; (3) I can buy green products from time to time but I am not involved in any environmental Activities; (4) I do not buy green products. I believe that business and government should be fixing environmental problems; (5) I am the least involved in environmentalism. I believe that there is not much that an individual can do in solving environmental problems. It should be the government and business which should promote the environment.

Research Hypotheses

According to Mayank & Amit (2013), when green values of each individuals are changed, so it will affect the purchasing behavior of green products. there is moderate positive correlation between preference of green products and green values of the customers. This implies that there is impact of other factors also on green purchase behavior.

H1: Green value is positively related to the purchase of green products
Consumers aware of the environment issues problem, customer will changes their purchase behavior towards green products. This implies that there is impact of green awareness also on purchase decision towards green products (Mayank & Amit, 2013).

H2 : *Green awareness is positively related to the purchase of green products*  

Marketing campaigns on green products can help companies in increasing product brand awareness and building positive corporate image in the minds of the customers (Adkins 2004; Varadarajan and Menon 1988). This implies that there is impact of green perception also on purchase decision towards green products (Mayank & Amit, 2013).

H3 : *Green perception is positively related to the purchase of green products*

**RESEARCH METHODOLOGY**  

This research uses a causal research which includes in the type of conclusive research by using the quantitative approach. According to Hair et al. (1995), “causal relationship is dependence relationship between two or more variable in which the researcher clearly specify that one or more variable cause or create an outcome represented by at least one other variable must meet the requirement for causation”. This research has a purpose to prove specific hypotheses of green value, green awareness, and green perception affect towards the Purchase of green products with brand of Toyota Agya in Surabaya.

This research use several primary data, which is obtained directly from the source which is questionnaire. The questionnaire will be answered by the respondents in Surabaya. The scale in this research is use the likert interval scale which has the same range and homogenous with different value in each number. Questionnaire that given to the respondent is closed ended questions, that is the answer of the questionnaire is restricted using alternative answer of numerical scale. The type of the scale is use the five-point scale.

The target characteristic of the population is the Toyota Agya owner in Surabaya. The population of this research is male or female whose age is ranged from 17 years old and domiciled in Surabaya. The researcher choose 17 because it is shows that respondents minimal educational background is high school and it is
expected they can fill the questionnaire well. There are also some criteria which include that the respondents own Toyota Agya in Surabaya for the past 1 year. With all of these criteria, the researcher could expect that respondents will understand the question provided the questionnaires and can give the most objectives answer about the question itself.

The analysis of this research is Multiple Linier Regression, that is a statistical technique that simultaneously develops a mathematical relationship between two or more independent variables and interval-scaled dependent variable. It involves a single dependent variable and two or more independent variables. The questions raised in the context of this regression can also be answered via multiple regression by considering additional independent variables (Malhotra, 2010:577).

RESULT AND DISCUSSION

After the result of data processing is claimed as both valid and reliable, researcher describes the research data which found 100% respondents are as the criteria as explain before. The researcher also analyze further about the mean value and standard deviation of each statements. Afterwards, measurement model of the study is done which obtained from the processing of the data using SPSS software. In first running, the result explains the classical assumption of multiple linear regression.

![Normal P-P Plot of Regression Standardized Residual](image)

**Figure 1. Normal probability plot graphic**

Source: data processed by SPSS 20.0 for Windows
Table 1
The Result of Multicollinearity test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Perception (X₁)</td>
<td>0.769</td>
<td>1.300</td>
</tr>
<tr>
<td>Green Value (X₂)</td>
<td>0.731</td>
<td>1.368</td>
</tr>
<tr>
<td>Green Awareness (X₃)</td>
<td>0.819</td>
<td>1.220</td>
</tr>
</tbody>
</table>

Source: data processed by SPSS 20.0 for Windows

Table 2
The Result of Multiple Linear Regression

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression Coefficient</th>
<th>t value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Perception (X₁)</td>
<td>0.308</td>
<td>4.452</td>
<td>0.000</td>
</tr>
<tr>
<td>Green Value (X₂)</td>
<td>0.265</td>
<td>3.741</td>
<td>0.000</td>
</tr>
<tr>
<td>Green Awareness (X₃)</td>
<td>0.363</td>
<td>5.422</td>
<td>0.000</td>
</tr>
</tbody>
</table>

R. Square = 0.519

Source: data processed by SPSS 20.0 for Windows

The strength of association in multiple regressions is measured by the square of the multiple correlation coefficient, R², which also called the coefficient of multiple determination. If the coefficient determinant (R²) is 0.519 so the green perception,
green value and green awareness variable is relate to the change of the green purchase variable about 51.9% and the rest about 48.1% caused by other variables like green trust and green satisfaction that has not been entangled in this research.

The partial regression coefficient, \( b_1 \), denotes the change in the predict value, \( \gamma \), per unit change in \( X_1 \) when other independent variables, \( X_2 \) to \( X_k \), are held constant. \( t \) test aim to prove the hypothesis that the variable of green perception, green value, and green awareness partially related to the green purchase of Toyota Agya significantly. If the significance value below 0.05, thus the variable is related partially.

### Table 3
The Result of \( t \) Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>t value</th>
<th>Significance</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Perception (( X_1 ))</td>
<td>4.452</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Green Value (( X_2 ))</td>
<td>3.741</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Green Awareness (( X_3 ))</td>
<td>5.422</td>
<td>0.000</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Source: data processed by SPSS 20.0 for Windows

The \( F \) test is used to test the null hypothesis that coefficient of multiple determination in the population, \( R^2 \) is zero. \( F \) test examines to prove that the regression model is congruence to the data that used. Variable is related significantly if the \( F \) test value is below 0.05.

### Table 4
The result of \( F \) test

<table>
<thead>
<tr>
<th>Sources</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>13,756</td>
<td>4,585</td>
<td>47.059</td>
<td>0.000</td>
</tr>
<tr>
<td>Residual</td>
<td>12,764</td>
<td>0.097</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>26,520</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: data processed by SPSS 20.0 for Windows

Based on the result on the hypotheses testing, it can be concluded that there is positive influence between green perception variable; green value; green awareness on green purchase of Toyota Agya in Surabaya. Three hypotheses are
proven, this condition is line with previous study conduct by Mayank & Amit (2013).

Hypothesis 1, it can be concluded that the green perception is positively related to green purchase. This proves that hypothesis 1 is generally acceptable, and is consistent with the previous researches that conduct by Mayank & Amit (2013). This also proves research study that stated, there is impact of green perception also on purchase decision towards green products (Mayank & Amit, 2013). Consumers changed their buying behavior and purchase products they considered green (Ottman 1993). This is because related marketing campaigns on green products can help companies in increasing product brand awareness and building positive corporate image in the minds of the customers (Adkins 2004; Varadarajan and Menon 1988). When there is perception of green products in each of customers, respondent are likely to choose the green products than non green products. Green perception variable has t count of 4,452 and significance value of 0,000 which is below 0,05, therefore green perception variable positively related to the green purchase. If the green perception is increase, thus green purchase of Toyota Agya consumer will significantly increase.

Hypothesis 2, it can be concluded that the green value is positively related to green purchase. This proves that hypothesis 2 is generally acceptable, and is consistent with the previous researches that conduct by Mayank & Amit (2013). This also proves research study that stated that Green value is occur when consumer get the importance or usefulness of the green practices. (Rokeach, 1973). In addition when green values of each individuals are changed, so it will affect the purchasing behavior of green products. It shows that t count of 3,741 and significance value of 0,000 which is below 0,05, therefore green value variable positively related to the green purchase. If the green value is increase, thus green purchase of Toyota Agya consumer will significantly increase.

Hypothesis 3, it can be concluded that the green awareness is positively related to green purchase. This proves that hypothesis 3 is generally acceptable, and is consistent with the previous researches that conduct by Mayank & Amit (2013). This also proves research study that stated there is impact of green awareness also on purchase decision towards green products (Mayank & Amit,
In addition, Chris (2008) showed that consumers were beginning to have a more sustainable life, become more environmentally friendly and be concerned about their health. If they are aware of the environmental issues problem, customer will change their purchase behavior towards green products. It shows that t value of 5.422 and significance value of 0.000 which is below 0.05, therefore green awareness variable positively related to the green purchase. If the green awareness is increase, thus green purchase of Toyota Agya consumer will significantly increase.

**CONCLUSION AND RECOMMENDATION**

Based on the result on the hypotheses test, it can be obtained a conclusion that from 3 main hypothesis were developed, 3 of them are proven. The following explanation tends to be specific as follow.

1. Green value is positively related to the purchase of Toyota Agya in Surabaya.
2. Green awareness is positively related to the purchase of Toyota Agya in Surabaya.
3. Green perception is positively related to the purchase of Toyota Agya in Surabaya.

The finding of this result also provides suggestions to Toyota. The finding of this result also provides suggestions to Toyota.

a. First, Toyota needs to work harder to promote about the green products for example put green label on every products they launch in order to increase customer awareness and perception. Toyota need to tell the customer about the advantages using the green products, thus customer awareness can change towards a green products. As the customer aware of it, customer perception might change and tend to choose green products than conventional products.

b. Second, Toyota should provide a green education booth in every Toyota car exhibition to educate consumer about environmental issue problems. That aims to increase the level of green value on each customer, thus the customer
will feel responsible to evolve in any environmental activities and switch the products that they have to be more environmental friendly.

c. Third, Toyota need to always care about the green product that being offered to all consumers or any people for example by applying Quality Control that focusing on green technologies and parts used to build Low Cost Green Car (LCGC). Since every people will do evaluation of the product that bring trust to buy green car, it is become important point for Toyota to always consider about the advantages of the green product.

In the end, this study has a limitation. This limitation can open up opportunities for further research in the future.

a. First, this study can be done in other city. Other study can enlarge the object of this research, therefore it can be apply on the other green products.

b. Second, the study can be replicated at a larger scale of products to get more insights into the behavior of consumers and understand more about green phenomenon.
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