

# Indonesian Consumer Preferences on Green Products

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## Abstract

Consumer awareness to consume environmentally friendly products is increasing. Manufacturers have also been using the concept of green product not merely for the sake of moral ethics, but also for the commercial purposes. Thus, how environmental knowledge and product attributes of the green product are able to enhance the positive attitude of consumers, fostering purchase intention, and ultimately encourage consumers to consume green products are needed to be explained. The data of this survey research were analyzed using structural equation modeling. The results show that the environmental knowledge and product attributes significantly affect attitude, intention, and behavior of consumers to consume the green product. In addition, once the consumers have comprehended the environmental knowledge and the product attributes well, they would put a green product as a priority, being loyal, and voluntary publish their preferences to their social ties. This research has proved that Indonesian consumer have shifted from being the economic man to be the cognitive behaviorism consumer.

Keywords: consumer preference, green product, attitude, intention, behavior

## Introduction

Business trend to adopt the concept of environmentally friendly products has been increasing. Nowadays, it has been easier to find a product that claims to be green products, environmentally product, and/or sustainable business. Some to mention are The Body Shop, IKEA, Aqua, Phillips Lighting, even the Toyota Prius. The Body Shop claims its products as a pioneer of natural beauty products, ethical, and environmentally friendly (The Body Shop, 2016), with a cruelty free and do biodiversity campaign. The IKEA promotes a renewable energy campaign as in issue to show its environmental preference by a tagline "becoming independent" (IKEA, 2016). Its leading project is solar panel construction for fulfilling energy need by 2020. Similarly, Aqua has been committed to running its business responsibly through its integrated CSR (Sulistyo, 2009).

In order to motivate purchasing intention of the consumers, companies are currently making significant campaigns on behalf of environment with natural and social awareness attitudes as their main commodities (Toit, 2012; Vatn, 2000). Varied commercial messages introduced pose "a challenge" for the consumers to show their awareness of natural and social aspects by buying the companies' products. WWF, an independent organization running in conservation, promotes a social campaign using the tagline #BuyGoodProduct. This campaign persuades the public to be more responsible by consuming daily products, which concern natural environment and social aspects. Three simple measures can be taken in performing the campaign # BuyGoodProduct, i.e. (1) getting familiar by finding out the background of each product to be purchased, (2) requiring the businesses to produce environment-friendly products, and (3) persuading others to participate (WWF, 2016).

These three simple measures are relevant to behaviors commonly demonstrated by the consumers before buying or consuming the products. From consumer behavioral viewpoint, the consumers will do an analysis related to search, selection, purchase, use, and evaluation of the products to be or being used (Schiffman and Kanuk, 2007 in Bray, 2008; Medeiros & Ribeiro, 2016), where from the evaluation results the consumers will do disposal, recycling, and/or remarketing (Medeiros & Ribeiro, 2016).

Some previous studies have indicated that environment-friendly products/services have brought in significance for the business communities. For example, Toyota Prius is currently known as a gas-electric hybrid car. The model becomes the best sellers worldwide after making a significant investment to alter the production technology by introducing its new image as the environment-friendly car. A product recall that used to take place from 2005 to 2010 in the US market even does not affect the sales of Toyota Prius (Gul, Jan, Baloch, Jan, & Jan, 2010). It proves that green product promotes significance in the form of insurance-like protection. A good business practice leads to a positive reputation viewed by its consumers. The balance between nature, social, and profit creates a concept of the triple bottom line as part of the sustainability practice. According to Castka, Balzarova, and Bamber (2004), Will (2008), Borga et al. (2009), Rao, Singh, La O'Castillo, Intal, and Sajid (2009), and Tang (2009) sustainability improves competitiveness; an ability of the company to compete with a real strength compared to its competitors.

A green product is capable of improving the competitiveness and purchase intention, not only in developed countries (Morel & Kwakye, 2012) but also in developing economies (Biswas & Roy, 2015). However, in the developing countries price rises by the improvement of the green product qualification, resulting in an impending factor for the purchase intention (Biswas & Roy, 2015). On the other hand, in the developed countries, the consumers are willing to spend extra money to purchase the green product (Medeiros, Ribeiro, & Cortimiglia, 2016; Morel & Kwakye, 2012).

The purchase intention of the green product is also affected by product utility and social factors (Biswas & Roy, 2015; Jena & Sarmah, 2015; Wu, Wu, Lee, & Lee, 2015), conditional values (Biswas & Roy, 2015; Medeiros et al., 2016), as well as environmental knowledge (Biswas & Roy, 2015; Wu et al., 2015). Functional value is measured by consumer perception toward product performance related to durability, permanence, dependability, reliability, price and quality (Biswas & Roy, 2015). Social value measures perceived utility of the product related to social pressure, such as social approval and peer group positive impression (Biswas & Roy, 2015; Jena & Sarmah, 2015; Wu et al., 2015). Conditional value is a specific situation, which has a potential to either boost or to hamper the consumer intention to purchase the green product, such as sales promotion (Biswas & Roy, 2015; Medeiros et al., 2016). Whereas, environmental knowledge is an issue concerning the green products related to natural and social environment (Biswas & Roy, 2015; Wu et al., 2015).

Therefore, this study, using the locus of Indonesia, attempted to find out the effects of product utility and environmental knowledge on attitude, intention, and behavior of the consumers towards the green product. The social value had not been the focus of discussion. Rather, this study focused on consumers, in general, not specifically directed to the users of the green products.

## **Literature Review**

There has been an evolution in viewing human as a consumer. Zinkhan (1992 in Bray, 2008) contends that a consumer is an economic man who consumes goods or services by merely considering utility aspect or anticipated results derived from the goods or services. This belief has already been explained in the Utility Theory (Bentham, 1781), which claims that human considers pain and pleasure in determining his or her choice or behavior with certain circumstances that can be quantified. However, this theory has not been capable of explaining the ongoing phenomenon because in consuming the goods/services the consumers have broader consideration and viewpoint.

The economic plan that maximizes utility with a minimum effort has evolved into the psychodynamic man, as one introduced by Freud (1923 in J.M.S Pearce et al., 1996), where human behavior is more motivated by biological needs, such as self-identity and ego. Furthermore, it is believed that human behavior tends to be affected external factors, such as group of references, an approach namely behaviorist approach. This approach is believed unable to explain the purchase behavior related to environment-friendly products because cognitive behaviorism itself has a strong effect on the behavior. Besides, the role of cognition becomes more significant in which human has begun to give more attention to the ethical purchase behavior, as explained in the Theory of Reasoned Action (Ajzen, I., and Fishbein, 1975) and Theory of Planned Behavior (Ajzen & Fishbein, 1980).

Fishbein and Ajzen (1975; 1980) explain that purchase behavior is affected by consumers' beliefs in and attitude towards the products/services. In this theory, in addition to attitude, subjective norms, a view of other humans, become crucial aspects of the purchase behavior. Fishbein dan Ajzen (1975; 1980) add control variable that either boost or hamper the purchase behavior. This control variable includes skill and resource possessed by the consumer. According to (Solomon, Bamossy, Askegaard, & Hogg, 2007), control variables depend on the ability of the researcher to identify and to measure the existing variables. Even, in the latter approach, the humanistic models, emotional factor is important for the consumer determination to purchase the product. Using this approach, the consumer purchase behavior is affected by, among others, altruistic motive or social spirit, which follows the advance of the information and communication technology (Bray, 2009).

A social and natural phenomena, or good, prompt, and accurate dissemination by the media to the common people. Therefore, when Rook and Fisher (1995) define impulse buying as a quick reaction, a force to buy products/services spontaneously, reflexed, and accidentally, it is because of affecting factors, such as promotion, discount, and store atmosphere. In this case, unplanned purchase may occur for environment-friendly products. After having got information stimuli, for instance, about the shortage of flora or fauna, disaster, poverty, epidemic disease, the consumers have potential to buy products with environment-friendly concepts. The stimuli factor according to Biswas & Roy (2015), Wu et al.(2015), and Jena and Sarmah(2015) is formulated as environmental factors, in which the consumers choose green products as they are affected by escalating environmental damage issues.

## **Findings**

This study involved 146 respondents who represented Indonesian community with a vary of demographic characteristics. They were mostly residents of Java and aged 20-40. The ratios between male and female and marital status were equal. Somewhat 87.0% of the respondents

were Muslims, 74.0% with monthly income higher than 2.5 million, even 10 million (above the minimum wage in Indonesia)

Table 1 Characteristic of respondents

Variable	Range	Percentage	Variable	Range	Percentage
Domicile	Semarang	28.1	Religion	Non-Muslim	13.0
	Province	14.4		Muslim	87.0
Age	Java Island	46.6	Marriage status	Married	54.8
	Outer Java	11.0		Not married	45.2
	≤20 yo	19.2	Education	≤ Senior high school	26.0
	>20 to 30 yo	37.0		Undergrad	61.0
	>30 to 40 yo	21.2		Postgrad	13.0
>40 to 50 yo	11.6	Spending	≤Rp2,500k	26.0	
>50 yo	11.0		>Rp2,500k to Rp5,000k	37.0	
			>Rp5,000k to Rp10,000k	26.7	
Sex	Male	45.9	>Rp10,000k	10.3	
	Female	54.1			

### Consumer preferences

From the aspect of knowledge or the knowledge value, the average consumers in this study knew well about environment-friendly products, in particular, those recyclable, naturally harmless, and healthy. In addition, consumers had sufficient knowledge that environment-friendly products are reusable, renewable, have less waste, efficient, and produced by renewable energy. However, only a few consumers comprehended the environment-friendly products should have had been produced by workforces with adequate salary provided by their employers.

According to the attribute, the functional value, the consumers bought environment-friendly products because they were motivated by the product attributes – useful, good quality, good design, endurance, and well-known. However, they reported that the environment-friendly products were expensive and lacking promotion. Accordingly, these products were relatively slow moving in the market. Besides, prestige became quite significant factors for the consumers to buy the environment-friendly products.

According to the Indonesian consumers, the environment-friendly products are necessary to decrease pollution, overcome energy crisis, safety and prevent hazards. In addition, these products are useful for avoiding fauna and flora extinction as well as severe diseases. The environment-friendly products must be developed for further consumption. The factors are the attitude of consumer towards green product, as the environmental value.

Indonesian consumers had a good intention to buy the environment-friendly products, either for use, for more information about the products, recommending others, or making preferences. This intention had a potential to affect consumer behavior. It was proven by the high behavior mean score, in which they choose the environment-friendly products, recommended them to others, to be loyal, and published them to others.

The knowledge, attitude, product attribute, intention, and behavior of the Indonesian consumers towards the environment-friendly products are illustrated by the following table.

Table 2 Mean and Standard Deviation of Indicators

Indicator	Mean	Std. Deviation	Indicator	Mean	Std. Deviation
Krenew	4.82	1.131	PACheap	3.62	1.391
Kharmless	5.02	1.060	PAPrestige	4.25	1.372
Kefficient	4.58	1.185	PADesign	4.28	1.131
Kwage	3.75	1.384	PABenef	5.10	1.049
KrenEnerg	4.43	1.323	PAPromo	3.93	1.137
KminWaste	4.75	1.172	PADurable	4.27	1.266
Kreuse	4.84	1.184	PAFamiliar	4.27	1.142
Krecycle	5.10	1.100	PAEasy	4.16	1.209
Khealthy	5.01	1.080	PAQuality	4.53	1.216
AttSafe	5.21	0.991	IntUse	5.06	1.065
AttExtincFlo	5.19	1.097	IntSuggest	4.94	1.052
AttExtincFau	5.20	1.061	IntPref	4.92	1.064
AttEnergCrisis	5.29	0.975	IntInfo	4.94	1.091
AttPollution	5.38	0.991	BehChoose	4.86	0.990
AttDisast	5.21	1.043	BehRecomd	4.79	1.071
AttDisease	5.03	1.165	BehPref	4.71	1.044
AttConsume	4.74	1.344	BehLoyal	4.62	1.058
AttDevelop	5.36	1.049	BehPublic	4.30	1.206

The table shows that most of the indicators had standard deviation of +1.000. It proves variability of responses because of the difference in respondents' background. Education and income had potential to affect the respondents' preference towards the environment-friendly products. In developed countries, where the people had high education and income, consumer awareness towards the environment-friendly products was high. Indonesia currently still experienced economic and infrastructure gap between urban and rural areas. The Java Island had better infrastructures than that of outside the island. This situation affected the respondents' preference towards the environment-friendly products. From the scales of 1 (the lowest) to 7 (the highest), the indicators of the standard deviation were normal, ranging from 0.943 to 1.391.

Currently, some producers have been claiming as those operating by a great awareness of environmental friendliness. Such products as Toyota Hybrid, the Bodyshop, Lock&Lock, Phillips, Nippon Paint, and Coca-Cola are among those with such claim. However, the claim is proven ineffectively understood by the target markets. Around 28.6% of the consumers did not know that the products were environment-friendly, and 25.1% of the consumers even claimed them not being environment-friendly products. These results were consistent with the consumers' opinion that companies had not been seriously seeking ways to market the environment-friendly products. Most of the consumers did not recognize the brands with environment-friendly labels.

Table 3 Brand recognition

Product name	Right %	Wrong %	No Idea %
Toyota Hybrid	52.1	12.3	35.6
Bodyshop	45.9	20.5	33.6
Tissue Tessa	28.8	43.8	27.4
Lock & Lock	41.8	19.2	39.0
Herbal	75.3	9.6	15.1
Phillips Lamps	43.2	28.8	28.0
Solar Calculator	78.1	7.5	14.4
Solar panel	72.7	6.8	20.5
Cat Nippon Paint	16.4	39.0	44.6
Coca Cola	8.2	63.7	28.1
Average	46.3	25.1	28.6

The products mostly claimed to be environment-friendly were the Bodyshop, Phillips lamps, and Tissue Tessa. The consumers assumed that the environment-friendly products were those with natural and chemical-free characteristics, such as herbal medicine, solar power calculator, and solar panel, which were the generic brand.

### The factors influencing consumers' behavior

The model obtained by this study was proven valid and reliable, as proven by the Average Variance Extracted (AVE) >0.5. In other words, all indicators (>0.6), were capable of explaining each latent variable. In addition to valid, the model was reliable with the composite reliability value of >0.7. Therefore, all constructs in the model estimated fulfilled the discriminant validity requirement.

Table 4 Validity and reliability

	AVE	Composite Reliability	R Square
Attitude	0.805603	0.973719	0.664532
Behavior	0.832887	0.961297	0.632335
Intention	0.891422	0.970441	0.535533
Knowledge	0.658012	0.938771	
Product Attribute	0.671541	0.934579	

The model shows the effects of knowledge, product attribute, and attitude on the consumer intention and behavior to buy. The consumer knowledge on the environment-friendly products and the attributes were able to explain 66.5% of their attitudes towards the products. Both the variables have significant impacts, but the impact of the knowledge on environmental product is higher than the knowledge of consumers on product attributes.

The consumer attitude on environmentally friendly product has high and significant effect on the consumers' intention. Similarly, the consumer intention on environmentally friendly product has high and significant influence on the consumers' behavior to buy the environmentally friendly product. The intention variable is able to explain 63.2 percent variability of the consumer behavior. The detail of the model explaining about the influence of knowledge, product attributes, and attitude towards the intention and behavior to buy environmentally friendly product is described as the following figure.

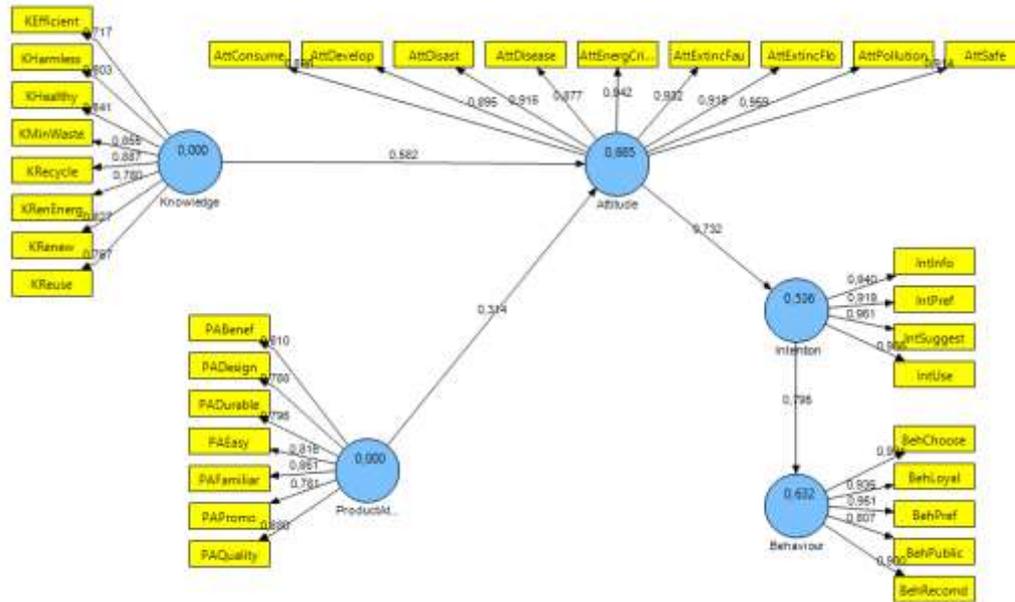


Figure 1 The factors influencing the intention and behavior to buy environmentally friendly products

The independent and intervening variables have potential to directly influence the consumer behavior. However, the direct path coefficient is not as high as the indirect path coefficient. For example, the consumer attitude to buy the products is significant, but the impact is higher when the variable through the intervening variable, which is intention to buy. The details of the total effects are the following.

Table 5 Total effects

	Attitude	Behavior	Intention
Attitude		0,582	<b>0,732</b>
Intention		<b>0,795</b>	
Knowledge	<b>0,582</b>	0,339	0,426
Product Attribute	<b>0,314</b>	0,183	0,230

## Discussion

This study had proven the Theory of Reasoned Action (Ajzen, I., and Fishbein, 1975; Ajzen & Fishbein, 1980), which contends how human behave, to be affected by knowledge, attitude, and intention. Similarly, the theory introduced by Schiffman and Kanuk (2007 in Bray, 2008), and developed by Medeiros and Ribeiro (2016), had also been proven, where the

Indonesian consumers, in relation to the environment-friendly products, did selection and evaluation in performing their purchase. The higher the knowledge of the consumers, the more positive of the consumers' evaluation, and such condition motivates them to have positive attitude towards the products. Moreover, the knowledge and attitude variables were capable of improving intention and behavior of purchasing the environment-friendly products.

The Indonesian consumers had evolved their purchase behaviors, from utility approach to psychodynamic approach. It was evidenced by the significant effect on the product attributes of green product on the consumer attitude. However, the effect of the product attributes variable was not as high as the effect of the Environmental Knowledge.

The consumers also developed in purchase behaviors from the identity and ego and superego aspects, from the biological needs to reality principle and morality values (Freud, 1923 in J.M.S Pearce et al., 1996). Reality principle was proven by the level of the environmental knowledge, whereas, the morality value is part of convenience developed from within the knowledge and social values. In this study, the superego was an attitude of the consumers towards green products, which was explained by 66.5 percent by the environmental knowledge and product utility or attribute. The remaining 33.5 percent was affected by conditional and social values, as explained by Biswas and Roy (2015). In this case, the Indonesian green consumers experience an un-coordinated, instinctive change, to become coordinated instinctive, which, in turn, play critical and moral roles.

However, demographic factor allowed each consumer to have different green product preferences, as proven by a study by Medeiros et al. (2016). Demographic factors play an important role according to the Theory of Psychosocial developed by Erikson (1950, 1985 in Fleming, 2004), in which human has different challenges by his or her age. Teenage to young adult was dominated by strong identity with optimistic/pessimistic natures. As an adult, human begins to think about the contribution to society and even possesses an ego integrity that tends to be positive personality. Therefore, results of this study will be more meaningful when it involves more samples with different, but specifically-recognized backgrounds.

## **Conclusion**

Indonesian consumers have evolved, not only consider the product utility but also have outward looked for the sake of the natural environment and human being. This study proved that the consumer preferences towards the green product apply to the theory of reasoned action and theory of planned behavior. The product knowledge and attributes had significantly affected the Indonesian consumers' attitude, intention, and behavior towards the green products. Once they have comprehended the risk of people activities, they would put green product as priority, loyal, and voluntary publish their preferences through social media.

The managerial implication of this study, in particular in Indonesia, is that while the product price was high, and the producers did not perform an optimal promotion of their environment-friendly products, the environment-friendly products had a good image before the consumers. Therefore, the promotional effort of the environment-friendly products offers many benefits, not only for the purchasing consumers but also for the environment. The producers must promote a good packaging for the environment-friendly products as a differentiated strategy, which is unique and different from the other products.

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