

The Mediating Role of Environmental Concern and Perceived Consumer Effectiveness on the Relationship between Consumer Skepticism Toward Advertising and Green Purchasing Behavior

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Abstract

The purpose of this study was to examine the mediating role of Environmental Concern (EC) and Perceived Consumer Effectiveness (PCE) on the behavior of Green Purchasing. Survey with questionnaire instrument involving 299 respondents and using the structural equation model found the skeptical attitude towards direct effect on EC and PCE. PCE becomes a full-fledged mediating role in the influence of consumer skepticism toward advertising and consumer's green purchasing behavior, unlike the EC that cannot mediate those relationships.

Keywords: Environmental Concern, Perceived Consumer Effectiveness, Skeptic, Green Purchasing Behavior

1. Introduction

Currently, the rate of environmental destruction around the world is continually increasing and it has exacerbated the latest level of global warming. The global temperature on Earth has increased and potentially brought a variety of adverse chain reactions which could endanger the survival of mankind, including the expansion of the desert due to uncontrolled deforestation, melting polar ice caps, sea level rise, the extinction of animal and plant species, disrupted agricultural activity and productivity, and enhanced distribution and potential for increase in natural disasters.

The menace of various phenomena for the survival of mankind has led to environmental concern for a group of consumers who feel responsible for environmental damage, known as the green consumers. The emergence of green consumers has urged the industrial sectors to augment their concerns on the environment. Consequently, there is an expectation for the design and production of product or service that can be classified as green products (products that do not bring negative effects to the environment).

Environmental sensitive behavior involves an individual's attempt to diminish destructive actions that may be harmful to the natural and physical environment. It can be done by reducing resources and energy use, using anti-toxic materials and reducing waste production (Kollmuss & Agyeman, 2002). One sort of environmental sensitive behavior is the "green purchasing behavior" in which consumers carry out brand research; use biodegradable bags, biodegradable soaps, natural detergents; buy items with biodegradable packaging; and refuse to use styrofoam packages from restaurants (Minton & Rose, 1997; Schwartz & Miller, 1991). Green purchasing behavior has become one of the most popular research topics among academics, especially in the last three decades. Furthermore, consumer demographics becomes one of the most widely used methods. Nevertheless, literature review indicated that it obtained limited results to explain the green purchasing behavior (Mainieri et al, 1997; Schlegelmilch et al., 1996). Therefore, in recent years, the analysis of several psychological variables, such as environmental problems, perceived consumer effectiveness, environmental knowledge, and collectivism have been initially used. Many researchers argued that environmental consciousness and awareness have increased since the early 1970s, but behavior gaps still exist (Kilbourne & Pickett, 2008).

Various studies conducted over the past few decades (Lee, 2009; Rahbar & Wahid, 2011; Lee, 2008; D Souza, 2004) indicated that consumers are aware and willing to pay more for the efforts to "go green" (Cherian & Jacob, 2012). Likewise, Lung et al., (2012) found that consumers from emerging markets in the study sites (Thailand, Malaysia, Korea, Hong Kong, and Australia) are willing to pay more for green products. Seeing the magnitude of the community's positive response to green products in compared to conventional products, the market for green products is continually improved.

Fostering public awareness of the environment is a vital effort to conserve the environment. Meanwhile, public skepticism is a factor as determinant of an accelerated destruction of the environment. Industry could perceive the community skepticism in association with the public response to green advertising. Consumer skepticism toward green advertising is closely related to environmental stance. Attractive green advertisement will help reducing the consumer skepticism. Waskito and Wahyono (2016) reported that advertisements that have a relevant theme and content can lessen the consumer skepticism. Furthermore, consumer involvement in environmental awareness will also further reduce their skepticism.

According to Crosby, Gill, and Taylor (1981) environmental concerns are the concern of community about protecting the environment. In this context, community acts as assessor of green advertising of a product/service. After the assessment, public will determine the attitude, whether to believe or be skeptic toward the green advertising. For those who already have environmental concerns, skepticism toward green advertising is higher. It is because the frequent emergence of “green washing”, which is green advertising with misleading, unsubstantiated, insignificant, or even false claims. People are usually concerned about the latest environmental issues.

Previous studies have shown that most consumers consider themselves to be environmentally sensitive individuals, yet the claim is frequently inconsistent with consumers’ behavior and purchasing activity. Such a case is demonstrated in the United Kingdom where there is a significant gap between environmental awareness and behavior (Young et al., 2010). Despite consumers’ favorable attitudes toward organic foods (between 46-67%), only 4-10% of them actually buy such goods (Hughner et al., 2007), and this trend has lasted for the last three years (Young et al. 2010).

Similar results have been found by studies conducted in the United States (Alwitt & Pitts, 1996; Kilbourne & Pickett, 2008) although they suggested that further research is required to confirm the relationship between attitudes and behavior. Furthermore, Lee (2009) investigated the relationship between environmental attitudes and behavior shows that: (1) further studies are required to confirm the relationship between environmentally friendly attitudes and behavior; (2) the focus of research may be re-directed to other variables that are better at predicting environmental behavior.

Based on the significant growth of the recent market of green products, this study analyzed the effect of consumer skepticism toward green purchasing behavior, either directly or through the mediation of consumer concern and effectiveness toward environmental conservation. Subsequently, it attempted to explain the inconsistency of consumer behavior with the variables. Therefore, this study revealed the influence of environmental concern, perceived concern effectiveness and consumer skepticism toward green purchasing behavior. In the first section, the relationship between these three concepts in the perspective of green purchasing behavior is described and a conceptual model is proposed, both of them aimed to explain the green purchasing behavior.

2. Theoretical Background

Green Marketing

The contemporary world seems to be obsessed with the “Green” issues. The rise of such issues is driven by a severe detrimental impact of the rapid emergence of phenomena, such as global warming and uncontrolled population growth, which has led to the near extinction of natural resources and the potential threat to the future and well-being of human species (Sevil, 2011). Green marketing has endured transformational stage since 1975, which was initiated since a workshop was organized and implemented by the American Marketing Association under the heading of “Ecological marketing practices for sustainable development of the world”. Nowadays, most of businesses seek for ecological responsibility as a critical success factor for marketing or facing management challenges ahead. A revolutionary change was brought in the 1980s, when marketers had to specifically build a systematic mechanism to ensure customer satisfaction and loyalty in the context of rapidly increasing consumer-friendly products (Ottman, 1993). High publicity of green marketing in the economic sector occurred into the

West in 2000, after a very aggressive response from customers in the 1990s (Ottman, et al. 2006). As a consequence, the motivation of customers towards environmentally friendly products purchasing was doubled. Companies are bound to adopt or in certain cases adapt to “green strategy”, in order to cope with increasing consumer awareness about the environment and sustainability (Ginsberg & Bloom, 2004). Regardless of adopting and adapting the “green strategy”, companies must instill rational and credible environmental claims in advertisement and communication messages, to differentiate themselves from competitors and may be able to gain competitive benefits from it (Conolly & Prothero, 2003).

Previous studies clearly indicated the existence of a relationship between green products and the right segment, which showed a high level of responsiveness in terms of selecting green products from regular non-green products. Marketers come up with new creative advertisements are not necessarily included as “green products” thus the customers should be able to distinguish between the various competing brands and products based on their choice. Taghian, Lamb, & Perotiatkos (2007) asserted that from the customer’s point of view, a number of choices about the environmental advertising can be entertained. Like the other parts of the world, Asia also endured the ongoing threats of global warming, population explosions and other environmental threats as faced by citizens and the government (Lee, 2008).

Green Consumers

Green consumers are individuals who base their purchasing behavior on a more environmentally safe product and even willing to pay a higher price for such products. It was portrayed in 1990 where approximately 70% of Americans claimed that they refused particular products or performed brand switching for environmental reasons. Many corporate marketers responded this trend by involving “green advertising” or “ecolabelling,” which allowed the marketers to claim their products are made of environmentally friendly materials or packaged in an environmentally friendly package. In fact, the introduction of green products increased by 20% higher than other new products.

Green advertising has led to an increase in confusion among consumers who conduct eco-friendly purchasing behavior but not sure about the meaning of environmental claims in products and packages. Most of them are concerned about the rules and insistence of environmentalists. Transparent and accurate environmental marketing is required to help consumers being more environmentally friendly conscious and to increase the number environmentally friendly products market.

According to Environmental Protection Agency, the environmental information for consumers will help consumers become more environmentally conscious, a growing trend called “green consumerism” is taking root in making purchasing decisions based on accurate information and can be trusted about environmental attributes products so as to encourage manufacturers to produce goods that have fewer adverse environmental impacts. Furthermore, to promote the right environmental marketing, some facts about environmental claims should be maintained. Certain claims can be confusing, deceptive, and frequently inaccurate. Public claims that have different meaning to different consumers makes it difficult to decide precisely the attributes of the environment and what is the impact of a product or package offer. The following is examples of several general vague claims. Claims such as “Safe for the environment,” “environmentally friendly,” and “eco-save” are trivial and often misleading. Nevertheless, every production will have an impact on the environment, although the impact of some products is less than others. For example, how much recycled material is used? Is recycled

materials used in the product or package? Is recycled content coming from a consumer waste stream or industrial waste stream? Hence, to make sure the percentage of recycled materials used in products or packages listed is required.

A claim that the product containing recycled content could mean that only two percent of products are made from recycled materials. Also, more and more companies allow customers to find out where recycled materials come from. Post-consumer materials are the ingredients previously used in business and consumer products, such as newspapers, plastic bottles, glass containers, or aluminum cans. Memo is pre-consumer material originating from the manufacturing process which will have otherwise ends up in the waste stream, such as clippings and other materials used to make product. Meanwhile, customers will look for as much as specific information about recycled content. For example, certain label claims will read, "Product contains 40 percent of pre-consumer recycled content and 20 percent post-consumer recycled content." Claims of degradable and compostable are the two most common types of degradation biodegradation and photo degradation. Biodegradable materials break down and decompose when they are exposed to natural elements, such as air, moisture, bacteria, and other organisms. The photodegradable material crumbles into small pieces when they are exposed to sunlight. The benefits of degradable products mainly depend on how the products are discarded. Degradable product may be suitable for compost, but it has very little effect when buried, recycled, or burned. Compost is a substance like humus that enriches the soil and returns nutrients to the earth. Products that claim to be "degradable" or "compostable" may be used for compost if there are facilities that can be safely, effectively and legally composted. If there are facilities nearby, customers may check to find out what the material they receive for compost. Many facilities are allowed to receive only certain types of solid waste. For example, facilities may only receive certain wastes and leaves, therefore, plastic bags or disposable diapers will not be processed as "degradable" or "compost". Furthermore, approximately 67% of waste is buried.

Advertising Creativity

Creative advertising is original, authentic, not imitate, astounding, unpredictable, unexpected, meaningful advertising that can affect emotions. Creative advertising makes the audience pay attention to it in detail. The notion about the effectiveness of creative advertising was propounded by Kover, Goldberg & James (1995), Shapiro & Krishnan (2001) and Till & Baack (2005). Meanwhile, Shimp (2000) suggested that creative advertisings are those different from most of the advertisings. Nevertheless, advertisements that similar with most of the kinds will not be able to penetrate the competitive crowd and will not be able to attract the attention of customers.

Nearly 90% of European customers perceive that buying green products can make a difference to the environment, yet only 26% of them buy such products regularly (EC, 2013). In addition, 77% of European consumers are willing to pay a premium price for green products, yet more than 50% of European customers do not believe in the claims as contained in green advertisements (EC, 2013). In a nutshell, the percentages implied the facts in which two main assumptions can be drawn: on the one hand, people appear to be environmentally conscious of the impacts of goods on the environment, as indicated by the high potential of fresh and green markets (Polonsky, 2011; Bleda & Valente, 2009; Zaman, Miliutenko & Nagapetan, 2010). On the other hand, in this same environmental scenario, there is a behavioral gap between

purchasing attitudes and behavior; people intend to buy green products, but in fact, they do not do it (Gupta & Ogden, 2009; Pickett-Backer & Ozaki, 2008).

Studies on the attitudes toward advertising revealed the construction that involves multiple sides (Andrew, 1989). In a world of intense competition, it is not easy to solve the chaos and let the advertising message becomes the only one to be heard by the target audience. Therefore, it is difficult for an advertiser to face real time in obtaining their message in front of customers to see if they lack creativity and innovation. Nevertheless, many customers still consider the advertising message as interference rather than as important or useful source of information (Commins, 1996). Instead of conveying a message, advertisers spend a lot of time in crafting the right message, bringing claims that will result in at least skepticism and possible risks. Literature shows that various green advertisements served to customers get too differential responses in the form of positive or negative feedback (Ong & Phau, 2007).

The power of advertising arguments is an extreme essential element with the ability to influence the two key results of each marketed product given: Attitude to advertising and purchase intentions (Spack et al, 2012). This study challenged the understanding of strong claims by dealing with moderate claims. Weak claims were not included because they merely slightly affect customers (Spack et al, 2012), more likely to increase skepticism (Carlson, Grove & Kangun, 1991), and therefore practically inadequate for marketers in the green industry (Albayrak, Aksoy & Caber, 2013).

Some researchers have found common ground in believing skepticism to be one of the main factors affecting purchasing intention and advertising attitudes (Richards, 2013; Albayrak, Aksoy & Caber, 2013). Over the years, the products promoted to be environmentally friendly are considered to have the illusion of environmental characteristics and eventually cause severe symptoms in an individual distrust (Do Paco & Reis, 2012; Tucker et al, 2012; Fowler & Close, 2012). It can be argued that skepticism toward green advertising may be partly derived from the general skepticism toward advertising (Matthes & Wonneberger 2014). However, despite the undeniable influence of general skepticism as in green skepticism, the two constructs proved different (Mohr, Eroğlu & Ellen, 1998). Even skepticism toward green advertising mainly occurred in 1990, especially because of environmental claims (Crane, 2000). If people do not believe the green claims, the arguments contained in them are primordial roots that are skeptical of the green advertisements going on (Spack et al., 2012; Maronick & Andrews, 1999; D'Souza & Taghian, 2005). Therefore, understanding on how different levels of skepticism can moderate the influence of claims power over individual responses seems to be the key to building either the failure or success of a green advertisement (Tucker et al., 2012; Do Paco & Reis, 2012).

Although many green studies are new accounts for the construct of skepticism when considering environmental claims—as the dependent variable or preconditions (Gangadharbatla & Paladino, 2013), few academics use it as a moderator (Xie & Kronrod, 2012; Shrum, McCarty & Lowrey, 1995). Nevertheless, among these very few studies (Xie & Kronrod, 2012; Shrum, McCarty & Lowrey, 1995), general skepticism toward advertising is considered inadequately explicating the skepticism toward green advertisements. Therefore, this study is the first which involved skepticism toward green advertising as a moderator. This particular perspective makes it possible to focus on skepticism directed at the environmental categories, helping our understanding of how moderation of relationships between claims of power and attitudes of advertising as well as purchasing behavior. In contrast to previous studies which focused on the effects of the power of non-hedonic claims (Spack et al., 2012)

toward green goods (Tucker et al., 2012), this study involved hedonic products. In Europe in particular, hedonic green products have grown exponentially in the green market (Euromonitor, 2012). Nonetheless, this category of products is less highlighted hence the scientific research on such products is done more slowly (Cervellon & Carey, 2011; Kong & Zhang, 2013).

Generally, hedonic products are often fun items that meet individual selfish needs (Diefenbach & Hassenzahl, 2011). Under such a circumstance, the fact that the available hedonic product is perfectly green can provide a legitimate reason for purchasing, both for individuals who are genuinely concerned about the environment and those status-seeking more signals, which validates impure sense of altruism for their environment by purchasing green products (Alba & Williams, 2013; Cervellon & Carey, 2011).

Hypotheses

Environmental Concern (EC)

Environmental Concern (EC) has various definitions that depend on the point of view as well as on the intricate and unstable properties (Chan & Lau, 2004). For example, Crosby et al. (1981) defined it initially as an intense protective attitude toward the environment and subsequently as a general attitude that has an indirect effect on attitudes through behavioral intentions (Gill et al., 1986). Meanwhile, some studies suggested that the EC is identical with the attitude of environmental conservation (Chan & Lau, 2004).

According to Stern, Dietz and Kalof (1993), three different values orientations, to self, other beings and biosphere and each orientation can freely influence the goals to politically act in the preservation of the environment. In general, one's self-oriented environmental concern for the environment consists of oneself, plants and animals, and other human beings. Expectancy-value models of attitude theory shows that consumers will have better attitudes toward products which are perceived to have more value attributes (Fishbein & Ajzen, 1975 *in* Finisterra & Reis, 2012).

Furthermore, in the Theory of Planned Behavior (TPB) (Ajzen, 1985 *in* Finisterra & Reis, 2012), the idea essentially explained that a decision to act is not made spontaneously, but rather the result of a rational process in which the behavior is indirectly influenced by attitudes, norms, and perceptions of control. Smith et al. (2008) suggested that some researchers have studied the extent to which self-identity may be a useful additional factor in TPB. Thus, rigorous advertising campaigns can help companies to position their brands and influence perceptions as well as consumer trust, which in turn will create customers with a certain inclination to think and act.

Chan and Lau (2004) and Dunlap and Jones (2002) offered one of the most inclusive EC definitions. EC is accepted as an inviolate awareness for environmental issues and the efforts that a person undertakes to either solve or fulfill their willingness in contributing to the effort. The main research topic on environmental concerns can be combined in three groups: (1) to define concepts and to enable researchers to analyze these concepts in various research areas; (2) to understand the factors that shape environmental concerns; (3) to prove the relationship between environmental concern and attitude (Bamberg, 2003).

In the last thirty years, many studies attempted to provide a better understanding of the theoretical side of the EC (Bamberg, 2003). For instance, environmental concerns are initially viewed as unidimensional constructs ranging from low to high levels of awareness, as measured by new environmental paradigms (Milfont & Duckitt, 2004). Currently, many researchers (Schultz, 2000; Stern & Dietz, 1994; Snelgar, Roberts & Bacon, 1997) claimed that

environmental concerns are a concept with several sub-dimensions. For example, Schultz (2000) proposed that environmental concerns have three correlated factors: attention for self (egotism), for others (altruistic), and for biosphere (biosphere). However, the results of research on the effect of EC on environmental behavior—as the most important aspect of this—have been disappointing. Many empirical studies analyzing the direct empirical relationship between EC and behavior suggested that this relationship is low to moderate (Bamberg, 2003). Researchers have attempted to explain inconsistencies between attitudes and behaviors by linking them to a number of factors, such as low correlations among environmental behaviors, various degrees of specificity in behavioral attitudes, effects of external variables and lack of measurement reliability and validity (Mainieri et al., 1997).

The relationship between these weak attitudes leads some researchers to consider additional variables such as emotion, cost-benefit, and consumer perceptions of effectiveness, trust and demography (Lee & Holden, 1999). Bang et al., (2000) confirmed that consumers—who are more concerned about environmental issues—express a willingness to pay higher prices for renewable energy than those who are less concerned. Kim and Choi (2005) pointed out that it is far more likely that people who are very concerned about environmental issues will buy eco-friendly products than those who are less concerned. Most studies are also based on the assumption that EC levels have a direct and strong influence on people's behavior regarding recycling and energy saving, purchasing environmentally friendly products or selecting tourist modes (Bamberg, 2003). In accordance with this, we predicted the following:

H1: Environmental Concern has a direct and positive influence on GPB

Perceived Consumer Effectiveness (PCE)

Most researchers do not agree on a common definition of perceived consumer effectiveness (PCE). However, the definition of PCE proposed Ellen et al., (1991) is most appropriate for the context of this study. PCE reflects the belief that their actions (e.g. purchasing environmentally friendly products) will make a difference in helping solve environmental problems, such as pollution reduction. In addition to EC, people who strongly believe that their environmentally sensitive behavior can lead to positive consequences or perhaps more results to engage in environmental harmful behaviors than others (Kim & Choi, 2005; Lee & Holden, 1999).

Ellen et al. (1991), for example, found that PCE has a direct effect on environmentally conscious behavior. In addition, PCE is linked to community knowledge and direct or indirect experience. PCE differs from person to person, the result is due to the inequalities in their knowledge and life experiences in which some believe that their actions have an evolutionary outcome while others may have little confidence in their ability to make a difference. In addition, depending on the behavior and situation, PCE is a phenomenon of change. In other words, different reflections can be observed in various situations (Kim & Choi, 2005). If customers perceive that environmental concerns can be solved with certain behaviors, such as an aluminum refinery package for recycling, then beliefs about these issues can change their behavior. Therefore, high PCE is needed to encourage consumers to have a positive attitude that affects their actual purchases (Ellen et al., 1991; Berger & Corbin, 1992; Lee & Holden, 1999). Hence, the effect of PCE on GPB (green purchasing behavior) is estimated as follows:

H2: PCE has a direct and positive influence on GPB.

Skepticism (SKEP)

Due to the recent fierce competition, companies have to show more that their products have the highest quality. Unfortunately, some commercial advertising regulations allow some companies to exaggerate the characteristics of their products. Obermiller and Spangenberg (1998) emphasized the free market system has increased the level of community skepticism. Consumers who consider environmental claims to be exaggerated or motivated by profits may think that advertising can mislead them and make the wrong decision.

Nevertheless, some academics claimed that consumer's attitude toward green advertising is due to the wrong people, unfounded or exaggerated claims (Carlson, Stephen, & Kangun, 1993). Pro-environmental groups or individuals, in particular, generate exaggerated claims in which they are theoretically correct but practically incorrect (Ellen et al., 1991). Chase (1991) found that the majority of participants call themselves and report their participation in environmental conservation with the consumption of eco-friendly products, such as the purchase of recycled products or the package using biodegradable bags. In addition, most of them (73%) are aware of the environmentally safe labeling on the packaging, but 47% are unsure of the accuracy of advertiser information about the environmental impact of the product (Mainieri et al., 1997).

Several studies reported that most consumers from various countries, such as the United States and the People's Republic of China, are skeptical about the environmental claims of the company (Chan & Lau, 2004). Calfee and Ringold (1988) argued that consumers who are naturally skeptical about environmental claims can only be persuaded if evidence is found against their beliefs. Green consumers are considered to make good green purchasing decisions at the level of compromise required to purchase green products or with a level of confidence for green products (Peattie, 2001).

Generally, consumer skepticism toward environmental claims reduces the positive impact on consumer behavior. For example, Obermiller et al., (2005) stated that the proposed relationship between advertising and purchase behavior does not exist when consumers are skeptical toward advertising. In his research on the green consumer purchasing intentions, Mostafa (2006) also showed that the effect of SKEP was negative for purchasing intentions. As a result of the above explanation, we propose three hypotheses as follows:

H3a: SKEP has a direct and negative influence on GPB.

H3b: SKEP has a negative influence of mediation on GPB through EC.

H3c: SKEP has a negative influence of mediation on GPB through PCE.

The theoretical relationships in the proposed model were oriented with the discussion as shown in Fig. 1. This model provides a summary of their existing constructs and relationships to each other. In this model, EC and PCE are directly and positively associated with GPB while SKEP is directly and negatively related to three variables. SKEP is also associated with GPB using EC and PCE as the mediator variables.

3. Research Methods

Respondents

Survey with visit and direct interview was done simultaneously with the distribution of 300 questionnaires to respondents in Solo City. The results of the field survey obtained 307 respondents who were willing to participate. Subsequently, the results from as many as 299 respondents (97.3%) could be processed while the remaining eight questionnaires (2.7%) were not used because many items were not answered.

Measurement

Variable perceptions of the scale of consumer effectiveness were measured by the scale of green purchasing behavior in the form of five items of questions obtained from Kim and Choi (2005). S when EC with 13 items was obtained from Stern and Dietz (1994) was given and in the last section, the SKEP scale with 13 items was obtained from Mohr et al., (1998). Each dimension was measured at seven points at intervals of (1) “strongly disagree” to (7) “strongly agree”. The results of factor analysis are shown in Table 1.

Table 1 shows the results of factor analysis with the principal component analysis method of tractive variable manifesting four factors based on Eugin value. Cumulative percentage contribution of all factors variable is 85.759%. Giving the name of each factor that were previously determined in advance considering the purpose of factor analysis for this study was to ensure whether the items of the proposed question really represent the desired variable constructs. The reliability coefficient is shown by the Cronbach alpha coefficient ranging from 0 to 1. Reliability test results can be seen in table 2.

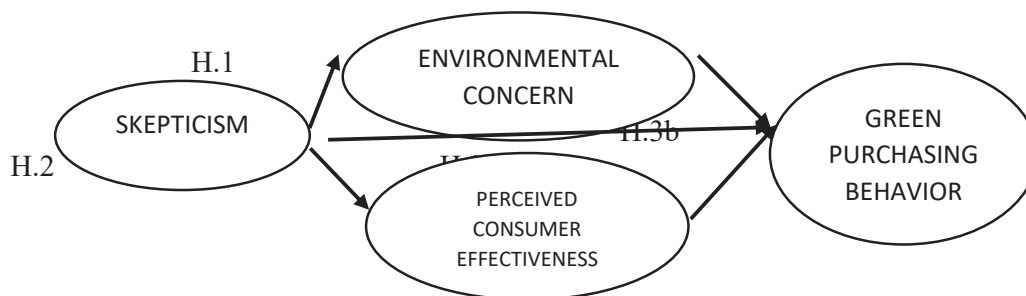


Fig. 1. Research Model.

Table 1
Factor Analysis Results

	1	2	3	4
Skeptic4	.854	-.291	-.060	-.129
Skeptic3	.836	-.342	-.096	-.156
Skeptic7	.830	-.238	-.173	-.122
Skeptic1	.822	-.259	-.223	-.055
Skeptic6	.797	-.345	-.213	-.137
Skeptic2	.749	-.386	-.112	-.160
Skeptic5	.703	-.382	-.134	-.205
ec2	-.409	.836	.159	.151
ec3	-.374	.825	.199	.154

ec4	-.363	.820	.191	.155
ec1	-.391	.814	.181	.189
ec6	-.459	.784	.175	.140
ec5	-.202	.657	.096	.230
gpb1	-.195	.195	.878	.368
gpb3	-.201	.204	.876	.365
gpb2	-.205	.221	.873	.340
pce3	-.177	.205	.347	.875
pce1	-.205	.234	.361	.858
pce2	-.158	.243	.374	.849

Source: Data processing.

Table 2. Reliability Test

Variable	Reliability Score
Skepticism	0.953
Perceived Consumer Effectiveness	0.979
Environmental Concern	0.955
General Purchasing Behavior	0.990

Source: Data processing.

4. Result and Discussion

The interrelationship model of variables is shown in Fig. 1. The sixth stage is the evaluation of the goodness-of-fit criteria. The result of measurement criteria of conformity measurement is shown in table 3:

Table 3. Fit index for Model

goodness of fit measures	calculation of measures	acceptability
Chi-square test	281.448	Marginal
Goodness-of-fit index	0.888	Accepted
Normed fit Index	0.908	Accepted
Comparative fit Index	0.956	Accepted

Source: Data processing.

Figure 2 shows the maximum likelihood estimation for determining the relationship in the hypothetical model. The full estimation results are shown in Table 4. Critical ratios are obtained from the quotient between the estimated parameters divided by the standard error. The level of significance is 95%, with t table value of 1.645. If the critical ratio value is greater than the value of t table, the parameter estimation is claimed significant.

To answer the first research question, “Does the consumer’s awareness on the environment have a direct and positive effect on the behavior of purchasing environmentally friendly

products?” The results show the estimated value of 0.106 with CR 1.088 which means insignificant. Consumer awareness toward the environment has insignificant effect on green product purchasing behavior. Their perception of engagement using environmentally friendly products is not directly accompanied by their purchasing behavior. It reasserts the findings reported by Waskito & Harsono (2012).

The results of this study, however, differ from the study carried out by Lee and Holden (1999) who found a relationship between behavioral attitudes with additional variables such as emotion, cost-benefit, consumer effectiveness perceptions, trust and demography. It demonstrated the level of consumer awareness toward the environment can increase the purchasing behavior of green products. This result also does not support Bang et al., (2000), Kim & Choi (2005), and Bamberg (2003) whose research confirmed that consumers who are more concerned about environmental issues also expressed willingness to pay higher prices for renewable energy than those who are less concerned.

Answering the second question, “Does the perceived consumer effectiveness directly and positively affect the behavior of general purchasing behavior?” The results obtained the estimated value of 0.773 and CR 12.362, which means significant. Consumers who believe they can take part in protecting the environment will have a direct impact on eco-friendly purchasing behavior. They are willing to spend more money to buy environmentally friendly products. Such consumers have the belief that purchasing environmentally friendly products is a real behavior that contributes to preserve the environment. These results support the research done by Ellen et al., (1991) who found that PCE has a direct effect on environmental concern behavior. Similarly, the results reaffirm several studies (Ellen et al, 1991; Berger and Corbin, 1992; Lee and Holden, 1999; and Kim and Choi, 2005), which concluded that consumers perceive environmental problems can be solved by particular behaviors.

Table 4. Maximum Likelihood Estimation Result

Regression Weights	Estimate	SE	CR	Information
PCE <----- Skeptic	-0.549	0.074	-7.423	Significant
EC <----- Skeptic	-0.838	0.063	-13.273	Significant
GPB <----- Skeptic	-0.142	0.112	-1.262	not significant
GPB <----- PCE	0.773	0.063	12.362	significant
GPB <----- EC	0.106	0.097	1.088	not significant

Sources: Data processing.

To answer the third question, “Are skepticism directly and negatively affect green purchasing behavior?”. The results obtained the estimated value of -0.142 and CR-1.262 implying skeptical attitudes has insignificant effect on green purchasing behavior. The higher one’s skepticism towards green advertising does not directly affect their purchasing behavior toward green products. This could also mean that the intention to buy green products can be done through green advertising, but it also cannot. It means that further research which underlies factors of a person’s attitude toward the selection of eco-friendly products, other than the factor of green advertising, is required.

This result does not fully support the findings of Obermiller et al., (2005) and Mostafa (2006) who emphasized the skepticism toward green advertising. It is probably because the skepticism attitude of consumers in Indonesia is not only applicable to green products but also to other products.

To answer the fourth and fifth questions relating to the effect of skepticism on the behavior of purchasing green products mediated by consumer awareness toward the environment and their effectiveness suggests that consumer high skepticism toward green advertising will directly affect the perceived consumer effectiveness on the role they carry out to promote environmental sustainability. Similarly, a positive attitude toward green advertising impacts on the desire to use green products. Consumer attention to sustainability is higher if they believe in green advertising. These variables fully mediate the effect of consumer skepticism toward green advertising and their purchasing behavior on green products. Nevertheless, in contrast to perceived consumer effectiveness that has a direct influence on eco-friendly purchasing behavior, consumer attention to the environment fails to mediate skepticism and green purchasing behavior. It means that if consumers have a high skepticism toward green advertising, despite of their actual and high concern for the environment, it still cannot change their purchasing behavior on environmentally friendly products.

The result confirmed the findings of Chan and Lau (2004), Calfee and Ringold (1988), and Peattie (2001), in which consumers who are naturally skeptical about environmental claims can only be persuaded if evidence is found against their beliefs. Green consumers are considered making good green purchasing decisions at the level of compromise required to buy green products or with a level of confidence for green products. Meanwhile, the level of environmental concern is inadequate as a variable that mediates their skepticism toward green advertising and green product purchasing behavior.

E. Conclusion

The hypotheses and the results of the analysis are demonstrated in Table 5.

Table 5. Hypothesis Testing Results

No.	Hypothesis	Information
1	H1: Environmental Concern has a direct and positive influence on GPB	Not supported
2	H2: PCE has a direct and positive influence on GPB.	Supported
3	H3a: SKEP has a direct and negative influence on GPB.	Not supported
4	H3b: SKEP has a negative influence of mediation on GPB through EC.	Not supported
5	H3c: SKEP has a negative effect of mediation on GPB through PCE.	Supported

Source: Data processing.

Table 5 shows that skepticism toward green advertising is not directly related to green purchasing behavior. Skepticism has an effect on green purchasing behavior only when the consumers are able to demonstrate that they are capable of contributing to the environment when they purchase environmentally friendly products.

Limitations of Research

1. Respondents obtained different information from the published green advertisements, while the survey method in this study could not control the input messages enjoyed by the respondents.

2. The pause when filling questionnaire implies the respondent should recall the advertisement they have ever watched, which might lead to a bias of information.
3. Respondents did not obtain specific green product restrictions, so the advertisement varied with different advertising messages and themes.

Suggestions for Future Research

1. Researchers should use laboratory studies in order to control the uniformity of advertisements seen by respondents.
2. Laboratory studies can eliminate the pause of advertisement thus the respondents would not provide assessment solely based on their memories.
3. Further research is necessary to restrict certain products to specific theme of advertisement. Therefore, the perception of all respondents at the time of the assessment is focused at the same advertisements.

Implications

1. The results of this study provide input for producers of environmentally friendly products in giving information about their products to the public.
2. Marketers should realize that consumer skepticism toward green advertising has contribution to the behavior of purchasing green products.
3. The arrangement of green advertising that involve the emotional level and perception of consumer engagement is essential.
4. Companies should pay more attention to the environment by educating the public about the importance of environmental conservation by consuming environmentally friendly products. Community involvement and awareness will ultimately increase their purchasing intentions toward green products.

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