Ecological Attitudes and Knowledge Affect Future Purchase Intentions: The Elaboration Likelihood Model for Environmentally Friendly Products

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Abstract

The environmental characteristics of products have become increasingly important to consumers. The more closely a product's image matches the buyers' self-concept, the higher the purchase intention is for that product. Thus, Concerns related to the environment are evident in the increasingly environmentally conscious marketplace. Targeting consumers are willing to pay more for environmentally friendly products. The elaboration process of advertising data among consumers can take two separate routes depending on the level of involvement. This article discusses conceptualization of the ecological attitudes and knowledge will affect future purchase intention by Elaboration Likelihood Model, and the external price willingness which moderate the relationship.

key words: ecological attitudes, ELM, Environmentally Friendly Product

Introduction

The attitude-behavior relationship is defined in many theories or models (Fishbein, 1967). Kassarjian (1979) were led to the conclusion that "attitudes clearly have become the central focus of consumer behavior research". Not only are there a large number of empirical studies on consumer attitude formation and change, but there are also a large number of different theories of persuasion vying for the attention of the discipline (Kassarjian 1982; Petty, et al., 1983). By disclosing their personal information such as name, address, and personal preference, consumers assist the firm to design and produce better quality and tailor-made products. In return, customers expect to receive better products and other related benefits (Wu, 2008). Ecological Concern cover three different
dimensions of knowledge, affection, and commitment over environmental issues. The Ecological attitudes and Knowledge Scale (EAKS) developed by Maloney, Ward, and Braucht (1975) was adapted. This scale has proven criterion validity and high reliability (Hong and Zinkhan, 1995).

Although research pertaining to the effect of self-concept on purchase intention is rare, Landon (1974) and Belch (1978) found that both actual and ideal self-concept influence purchase intention (though their degree of relative impact is different). That is, the more closely a product's image matches the buyer's self-concept, the higher the purchase intention is for that product (Petty, et al., 1983). Zaichkowsky (1986) related to the relationship between the concept of involvement and the cognitive elaboration of the advertisement. In her view, this variable takes on considerable importance in the study of advertising effectiveness, as involvement serves as a mediating variable in determining the degree of the advertisement's influence on the receiver (Te'eni-Harari, 2007). Customers adapted to this new threatening situation by considering environmental issues when shopping (e.g., checking if the product is wrapped in recycled material) and by purchasing only ecologically compatible products (e.g., biodegradable paint, CFC-free hairspray or unbleached coffee filters). Perhaps the most convincing evidence supporting the growth of ecologically favorable consumer behavior is the increasing number of individuals who are willing to pay more for environmentally friendly product (Laroche, et al., 2007).

Eco-labeling may be defined as making relevant environmental information about a product available to the appropriate consumers through the product label to promote an environmental goal, cause or objective through consumer choice (Truffer, et al., 2001). Products may be labeled based on a wide range of environmental considerations, such as recycled content, biodegradability, toxic emissions, waste generation, harm to wildlife, etc. By contributing to the decision-making process inherent in product selection, purchasing, use and disposal, eco-labeling has wide implications for consumers, businesses and government (Banerjee and Solomon, 2003). According to Banerjee and McKeage (1994), green consumers strongly believe that current environmental conditions are deteriorating and represent serious problems facing the security of the world. Conversely, consumers who do not engage in environmentally friendly behavior perceive that ecological problems will “resolve themselves.” Therefore, an individual’s perception about the severity of ecological problems might influence his/her willingness to pay more for ecologically compatible products (Laroche, et al., 2007).

**Conceptual Framework**

A proposed conceptual framework for the study of design is presented in Figure 1. The framework draws on four key literature bases and illustrates four categories of the ecological attitudes and knowledge, involvement, price variance, and consumers purchase intention. There have propositional that involvement mediating effect of ecological attitudes and knowledge between consume purchase intention, and moderating effect of the price willingness.
Figure 1. A conceptual framework is involvement mediating effect of ecological attitudes and knowledge between consume purchase intention, and moderating effect of the price willingness.

Literature review

Ecological Attitudes and Knowledge

Ecological concern refers to the degree of emotionality, the amount of specific factual knowledge, the level of willingness, as well as the extent of actual behavior on pollution-environment issues (Maloney and Ward, 1973).

Maloney, Ward, and Braucht (1975) develop the EAKS scale consisting of four subscales: affection (A), knowledge (K), verbal commitment (VC), and actual commitment (AC) to measure ecological concern. In their formulation of the Ecological Concern Index, Kinnear and Taylor (1973) also emphasize that the level of ecological concern a person demonstrates will be a function of both his attitude and her behaviors (Li, 1997).

Involvement

Zaichkowsky (1986) related to the relationship between the concept of involvement and the cognitive elaboration of the advertisement. In her view, this variable takes on considerable importance in the study of advertising effectiveness, as involvement serves as a mediating variable in determining the degree of the advertisement's influence on the receiver. Yet despite the considerable research on involvement, many researchers are convinced that no complete understanding of the involvement concept has yet been formulated. In the view of some, it is very important that additional work be conducted to examine the issue of involvement (Day, Stafford, and Camacho, 1995; Zaichkowsky, 1986). Krugman (1965) has proposed an alternative view that has achieved considerable recognition among consumer researchers. According to this view, increasing involvement does not increase resistance to persuasion, but instead shifts the sequence of communication impact. Krugman (1965) argues that under high involvement, a communication is likely to affect cognitions, then attitudes, and then behaviors, whereas under low involvement, a communication is more likely to affect cognitions, then behaviors, then attitudes (see also Ray et al. 1973; Petty and Cacioppo, 1983).

This view stems from our Elaboration Likelihood Model (ELM) of attitude change (Petty and Cacioppo 1981). The basic tenet of the ELM is that different methods of inducing persuasion may work best depending on whether the elaboration likelihood of the communication situation (i.e., the probability of message- or issue-relevant thought occurring) is high or low. When the elaboration
likelihood is high, the central route to persuasion should be particularly effective, but when the elaboration likelihood is low, the peripheral route should be better.

The ELM contends that as an issue or product increases in personal relevance or consequences, it becomes more important and adaptive to forming a reasoned and veridical opinion. Thus, people are more motivated to devote the cognitive effort required to evaluate the true merits of an issue or product when involvement is high rather than low. If increased involvement increases one's propensity to think about the true merits of an issue or product, then manipulations that require extensive issue- or product-relevant thought in order to be effective should have a greater impact under high rather than low involvement conditions. On the other hand, manipulations that allow a person to evaluate an issue or product without engaging in extensive issue- or product-relevant thinking should have a greater impact under low rather than high involvement. (Petty and Cacioppo, 1983)

Central Routes

The different theories of persuasion possess different terminologies, postulates, underlying motives, and particular "effects" that they specialize in explaining—these theories emphasize one of two distinct routes to attitude change (Petty and Cacioppo 1981, 1983). One, called the central route, views attitude change as resulting from a person's diligent consideration of information that s/he feels is central to the true merits of a particular attitudinal position. The theoretical approaches following this route emphasize factors such as (1) the cognitive justification of attitude discrepant behavior (Cummings and Venkatesan, 1976; Festinger, 1957); (2) the comprehension, learning, and retention of issue- or product-relevant information (Bettman, 1979; Hovland, Janis, and Kelly, 1953; McGuire, 1976); (3) the nature of a person's idiosyncratic cognitive responses to external communications (Cacioppo and Petty, 1980a; Greenwald, 1968; Petty, Ostrom, and Brock, 1981; Wright, 1980); and (4) the manner in which a person combines and integrates issue- or product-relevant beliefs into an overall evaluative reaction (Ajzen and Fishbein, 1980; Lutz and Bettman, 1977; Troutman and Shanteau, 1976; Petty, et al., 1983). This logic results in the following proposition:

Proposition 1: The high ecological attitudes and knowledge consumer is positively and significantly related to the purchase intention for environmentally friendly products.

Peripheral Routes

A second group of theoretical approaches to persuasion emphasizes a more peripheral route to attitude change. Attitude changes that occur via the peripheral route do not occur because an individual has personally considered the pros and cons of the issue, but because the attitude issue or object is associated with positive or negative cues or because the person makes a simple inference about the merits of the advocated position based on various simple cues in the persuasion context (Petty and Cacioppo, 1983).

The theoretical approaches following the peripheral route emphasize factors such as (1) whether a simple attitudinal inference can be made based on observing one's own behavior (Bem, 1972; Scott, 1978); (2) whether the advocacy falls within one's latitude of acceptance or rejection (Newman and Dolich, 1979; Sherif and Nebergall, 1965); (3) whether some transient situational utility is associated with adopting a particular attitude (Schlenker, 1978, 1980); and (4) whether an advocated position or product is classically conditioned to basic but issue irrelevant cues, such as food and pain (Janis, Kaye, and Kirschner, 1965; Stemthal and Craig, 1974), or is associated with secondary cues, such as
pleasant pictures and attractive endorsers (Kelman, 1961; Mitchell and Olson, 1981; Mowen, 1980; Petty, et al., 1983). Attitude changes induced under the peripheral route are postulated to be relatively temporary and un-predictive of behavior (Petty and Cacioppo, 1983).

Proposition 2: The low ecological attitudes and knowledge consumer is no significantly related to the purchase intention for environmentally friendly products.

Price Willingness

Concerns related to the environment are evident in the increasingly environmentally conscious marketplace. Over the years, a majority of consumers have realized that their purchasing behavior had a direct impact on many ecological problems (Laroche, et al., 2007). Customers adapted to this new threatening situation by considering environmental issues when shopping (e.g., checking if the product is wrapped in recycled material) and by purchasing only ecologically compatible products (e.g., biodegradable paint, CFC-free hairspray or unbleached coffee filters). Perhaps the most convincing evidence supporting the growth of ecologically favorable consumer behavior is the increasing number of individuals who are willing to pay more for environmentally friendly products (Laroche, et al., 2007).

In 1989, 67 percent of Americans stated that they were willing to pay 5-10 percent more for ecologically compatible products (Coddington, 1990). By 1991, environmentally conscious individuals were willing to pay between 15-20 percent more for green products (Suchard and Polonsky, 1991). By 1993, Myburgh-Louw and O'Shaughnessy (1994) conducted a mail survey of female consumers in the UK to examine their perceptions of environmental claims on the packaging of clothes detergents. They found that 79 percent of their sample agreed to pay up to 40 percent more for a product which was identical in every respect to their own brand and which had been proven to be green (Laroche, et al., 2007). I argue this point when over psychological price ceiling will be have the reverse effect.

Proposition 3: Price willingness moderate the relationship between involvement and consume purchase intention. When price more height the effect will be reduce.

Purchase Intention

Although research pertaining to the effect of self-concept on purchase intention is rare, Landon (1974) and Belch (1978) found that both actual and ideal self-concept influence purchase intention (though their degree of relative impact is different). That is, the more closely a product's image matches the buyers' self-concept, the higher the purchase intention is for that product. The projection of these findings into an advertising setting leads to the prediction that a product described as being congruent with viewers' self-concept would elicit higher purchase intention than a similar product that does not match viewers' self-concept quite so well. Moreover, studies of the attitude-behavior relationship suggest that purchase intentions are highly related with product attitudes (Ryan and Bonfield, 1975). As such, advertising expression congruent with one's self-concept is expected to elicit both a positive attitude toward the advertised product and a favorable purchase intention (Hong and Zinkhan, 1995).

Methodology
Subjects and Design

In this study data will be collected by using two steps. First steps used Ecological attitudes and Knowledge Scale to measure participates’ environment attitudes. Second steps used experiment test the involvement and purchase intention.

A total of 200 male and female undergraduates at the University of I-shu university participated in the course; 50 subjects were randomly assigned to each of the cells in a 2 (involvement: high or low) x 2 (argument quality: strong or weak) factorial design. The subjects were isolated from each other so that they could complete the experiment independently, and subjects in a single session participated in different experimental conditions.

Involvement with purchase decisions is conceptualized as a behavior change in decision strategy and resulting choice that occurs only when the consumer sees the purchase or consumption situation as personally relevant or important (Zaichkowsky, 1986). Involvement with purchase decisions was studied experimentally in the context of selection of a product for a gift (Clarke and Russel, 1978).

Subjects reported they would spend more money, shop more stores and spend more time when shopping for a low-involvement product for a gift. The amount of search and money expended for the high-involvement products was the same regardless of whether the product was for themselves or for a gift. Additional work investigated and confirmed the hypothesis that gift-giving situations differ in involvement and that these differences directly influence the amount of effort devoted to the purchase selection process (Belk, 1982). Thus, the high involvement product we choose MP3, and the low involvement product we choose shampoo. Other way the argument quality we separate the product was for oneself or for a gift.

Measures

Independent Variable

The Ecological attitudes and Knowledge Scale (EAKS) has proven criterion validity and high reliability. The original true/false and multiple-choice question formats of the EAKS were, however, replaced by interval scales. To reduce the burden on respondents, the scale was shortened to a 16-item Likert scale, with responses ranging from 1, “strongly disagree,” to 7, “strongly agree.”

Dependent Variable

Three dependent measures were assessed: memory, the evaluation of product preference, and purchase intention. Memory was measured using aided and unaided recall, and recognition of the brand presented in the ads. Product preference was measured in two ways. Under the first method, respondents indicated their preference toward the brand advertised on a 7-point Likert-type scale. Following Mitchell and Olson (1981), this scale consisted of four bipolar evaluative items (bad-good, unpleasant-pleasant, poor quality-good quality, and dislike very much-like very much). The reliability (Cronbach's alpha) of this scale ranged from 0.79 to 0.92, depending upon the types of appeals used to advertise each brand. The mean value of these four items was used as an indicator of product preference. Another method was a rank-order measure in which subjects ordered the two brands along with two actual brands according to the degree to which they preferred each brand. Behavioral intention toward each brand was assessed on two scales. One was a composite scale of two subscales. One subscale was a global 7-point bipolar scale with end points labeled “definitely
would not" and "definitely would buy" (coded 1-7). This subscale parallels one used in previous studies (e.g., Mitchell & Olson, 1981). Another subscale involved use of the Juster (1964) scale, which is distinct from Likert-type scales in that it provides a verbal description, along with a numerical probability in parentheses, for each of the 11 anchors of the scale. This scale primarily operationalizes purchase intention as a probability measure, and in this sense, is similar to the likelihood scale used in past studies (e.g., Smith & Swinyard, 1983). These two subscales were combined, and the resulting Cronbach's alpha was 0.87. The second method was a rank-order measure similar to the one used to assess brand preference. (Hong and Zinkhan, 1995). This article chooses the Smith and Swinyard, (1983) scales.

Price willingness

According to Laroche (2001), three questions were used measure respondents’ willingness to pay more for environmentally friendly products. Each question was measured on a nine-point Likert scale (strongly disagree to strongly agree). Laroche scale only measure 10 percent more for environmentally friendly products. In this article I used 10 percent, 20 percent, 30 percent, and 40 percent to test the consumer’s willingness limit for environmentally friendly products.

Conclusion

This article provides a conceptualization of the high degree ecological attitudes and knowledge people for green products despite the relatively high purchase intention. The more closely a product's image matches the buyers' self-concept, the higher the purchase intention is for that product. That will coincide with the ELM theory, but the price will be an important regulator of variables, when over psychological price ceiling will be have the reverse effect.

Reference


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