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# Green buying behavior and the theory of consumption values: A fuzzy-set approach☆

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ABSTRACT

Using a consumer survey, this study examines whether consumption values can predict green buying behavior. The examination is based on the theory of consumption values and uses the fuzzy-set qualitative comparative analysis. The results show that the functional value is almost always necessary but is not sufficient by itself for predicting green buying. However, three "causal recipes" formed with the functional value are sufficient. These recipes use the emotional, conditional and social values combined individually with the functional value. Other three combinations of consumption values are also sufficient for predicting green buying. In contrast, the absence of the functional value is a sufficient condition for not green buying, as well as three other "causal recipes". This finding can help marketing managers develop appropriate strategies. Further, this finding supports and clarifies the role of the theory of consumption values by taking advantage of the fuzzy-set qualitative comparative analysis.



## 1. Introduction

Consumers have increasingly adopted sustainable lifestyles and sustainable consumptions of products and services that do not harm the environment and do not compromise the future (Oslo Symposium, 1994). Thus, new classes of consumers and products have emerged: green consumers (Webster, 1975) and green products (Ottman, Stafford, & Hartman, 2006). Therefore, companies need to understand who the green consumers are and what motivates their green buying behavior (Lin & Huang, 2012). In this way, companies can create and promote products that respond to their green consumers' needs through the use of green marketing activities (Peattie, 1992) that can result in better performance. For that reason, these topics have been the subject of many studies (e.g., Akehurst, Afonso, & Gonçalves, 2012; Bei & Simpson, 1995; Diamantopoulos, Schlegelmilch, Sinkovics, & Bohlen, 2003; Fraj & Martinez, 2006; Kim & Choi, 2005; Kilbourne & Pickett, 2008; Lin & Huang, 2012; Minton & Rose, 1997; Roberts, 1996; Webster, 1975). The values that influence the consumer's behavior are implicit criteria for making preference and evaluative judgments (Holbrook, 1996). Despite the importance of the knowledge about these values, no commonly accepted definition exists (e.g., Sánchez-Fernández & Iniesta-Bonillo, 2007). However, the evidence suggests that a multidimensional conceptualization of the customer's values shows more predictive ability on the customer's repurchase intention than a one-dimensional approach (Leroi-Werelds, Streukens, Brady, & Swinnen, 2014).

Through a consumer survey, this study investigates which values influence the purchase of green products (*gpp*). The paper uses the theory of consumption values developed by Sheth, Newman, and Gross (1991)) that is a multidimensional approach. This theory argues that five consumption values influence the consumer's behavior: functional, social, emotional, conditional, and epistemic values. Lin and Huang (2012) show that consumption values are significant in explaining the *gpp*.

Following a new analytical approach, this study proposes that the *gpp* does not depend only on consumption values individually but on combinations of consumption values. Therefore, the objective of the study is twofold: to identify the specific consumption values or combinations of consumption values that can better predict the *gpp* and to determine whether the consumption values or their combinations are the same or different when predicting no purchase of green products (~*gpp*). For this purpose, the study applies the fuzzy-set qualitative comparative analysis (fsQCA). The fsQCA is an appropriate approach to use for a complex configuration analysis (Ragin, 2000) because the approach identifies how the consumption values (causal conditions) combine to produce alternative paths (configurations) to achieve a similar solution (outcome), *gpp* or ~*gpp*, and which configurations will be necessary or sufficient to achieve the outcome (Fiss, 2007). This type of qualitative comparative analysis (QCA) has important advantages over regression-based approaches (Woodside, 2013).

After the introduction, the study presents the literature review and causal propositions followed by the section on the method. The section

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with the results is next. The study concludes with a discussion on the findings and the limitations and suggestions for future research.

## 2. Literature review

### 2.1. Green consumer, green product, and green buying behavior

The green consumer, or ecologically conscious consumer, can be defined as a consumer that takes into account the public consequences of his or her private consumption or who tries to use his or her purchasing power to promote social change (Webster, 1975). Furthermore, these consumers' behavior reflects their attitudes and actions toward environmental protection (Fraj & Martinez, 2006). The terms "green product" or "environmental product" usually describe products that protect or enhance the natural environment, the conservation of energy, and the reduction or elimination of toxic agents, pollution, and waste (Ottman et al., 2006). Some types of environmentally friendly consumer goods are organic food, energy-saving lamps, energy efficient appliances, solar thermal heating systems, and "green" electricity (Welsch & Kuhling, 2011; Young, 2008). The *gpp* relates to the purchasing habits of green products (Lin & Huang, 2012; Schlegelmilch, Bohlen, & Diamantopoulos, 1996). The purchase of green products has different motivations (e.g., flavor, health benefits, or ecological footprint) (Wier, Jensen, Andersen, & Millock, 2008). The identification and understanding of this motivation is essential for a marketing strategy's definition and therefore to its success.

### 2.2. Values and consumer behavior

Within the context of environmental behavior, the literature does not address the consumption practices from the point of view of the values that guide the consumer's behavior (Kilbourne & Pickett, 2008). According to Schwarts and Bilsky (1987)), values are concepts or beliefs about the desirable end states or behaviors that transcend specific situations, evaluate behaviors and events, and are ordered by relative importance. The values that influence the consumer's behavior are implicit criteria for making preference and evaluative judgments (Holbrook, 1996). The values also serve to guide actions, attitudes, judgments, and comparisons between specific objects and situations (Long & Schiffman, 2000). Therefore, considerable support exists for the role of values in the development of environmental beliefs, attitudes, and behaviors (Kilbourne & Pickett, 2008). Despite the importance of the knowledge about values, no commonly accepted definition exists (e.g., Sánchez-Fernández & Iniesta-Bonillo, 2007). However, the evidence indicates that the multidimensional conceptualization of the customer's values shows more predictive ability on the customer's repurchasing intention than the one-dimensional approach (Leroi-Werelds et al., 2014). According to Sheth et al. (1991), five values exist that determine behavior: functional, social, emotional, conditional, and epistemic values. Other authors question Sheth et al.'s (1991) approach and propose a different structure for the consumption values. For example, Sweeney and Soutar (2001) develop the PERVAL scale that is applied to durable goods. This approach eliminates the epistemic and conditional dimensions and separates the functional value into two dimensions: quality and price. Pura (2005) considers convenience and price as functional values and the social, emotional, epistemic, and conditional values by studying electronic directory services. However, Finch (2005) and Lin and Huang (2012) find that Sheth et al.'s (1991) consumption values influence the green consumer's behavior, thus giving support to the conceptualization of consumption values used in this research.

### 2.3. The theory of consumption values

The theory of consumption values developed by Sheth et al. (1991: 159) focuses on the consumption values that explain "why consumers choose to buy or not to buy (or use or not use) a specific product, why consumers choose one product type over another." This theory can be applied to different product categories like durable and nondurable consumer goods, industrial goods, and services (e.g., Lee, Lee, Kim, & Kim, 2002; Park & Rabolt, 2009; Williams & Soutar, 2009) and demonstrates an excellent predictive validity in more than 200 situations (Sheth et al., 1991). In the field of green marketing, Finch (2005) studies what motivates consumers to buy or not buy organic food, and Lin and Huang (2012) study the *gpp*.

The theory of consumption values has at its base three fundamental axiomatic propositions: the consumer's behavior is a function of various consumption values, the consumption values have different contributions in any purchase situation, and the consumption values are independent. Therefore, a decision can be influenced by any or all of the five consumption values. Each of these values has a different contribution in specific buying situations, each relates additively, and each has an incremental contribution.

#### 2.3.1. Functional value

The functional value is what mainly causes the consumer's choice. This function refers to the perceived utility of a product or service to attain utilitarian or physical performances that results from attributes such as durability, reliability, and price (Sheth et al., 1991). Lin and Huang (2012) find that some consumers care enough about environmental degradation that they are willing to pay more for green products. In addition, a study by Bei and Simpson (1995) confirms that consumers ponder the price and quality when they buy recycled products. The functional value (price) influences the purchase of green products (Finch, 2005).

#### 2.3.2. Social value

The social value refers to the perceived utility resulting from the product or service's association with one or more social groups, such as demographic, socioeconomic, and cultural (Sheth et al., 1991). The social value relates to approval and self-image improvement (Sweeney & Soutar, 2001) that influences the green consumer's behavior (Finch, 2005).

#### 2.3.3. Emotional value

The emotional value refers to the perceived utility that results from a product or service that provokes feelings or affective states. Bei and Simpson (1995) report that 89.1% of their study's respondents feel that they are preserving the environment when they buy recycled products. This emotional value influences the green consumer's behavior (Finch, 2005; Lin & Huang, 2012).

#### 2.3.4. Conditional value

The conditional value refers to the perceived utility that a product or service has as a result of a situation or set of circumstances (e.g., organic food in pregnancy). The product or service attains this value due to the situation: the presence of physical or social contingencies increase the functional or social value (Sheth et al., 1991). When the value is strongly linked to the product or service's use in specific contexts, the conditional value arises (Wang, Liao, & Yang, 2013). The conditional value influences the green consumer's behavior (Finch, 2005; Lin & Huang, 2012).

#### 2.3.5. Epistemic value

The epistemic value refers to the perceived utility resulting from a product or service that stimulates the desire for knowledge and offers novelty (Sheth et al., 1991). Knowledge is recognized in consumer research as a characteristic that influences all stages of the decision process (Laroche, Bergeron, & Forleo, 2001). A further explanation for seeking novelty relates to gaining the skills to solve problems (Lin & Huang, 2012). The green consumer's behavior is influenced by epistemic value (Lin & Huang, 2012).