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# How to catch the generation Y: Identifying consumers of ecological innovations among youngsters



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#### ABSTRACT

The economic damage of environmental pollution is remarkable, thus protecting the environment has become a pressing issue during the last decades. Consequently, for companies there is an obvious need to consider environmental issues in product development and to understand why consumers adopt ecological innovations. The success of eco-innovations, however, depends on the individual adoption decision of the consumer. Hence, the question arises, why do consumers adopt ecological innovations? By integrating two areas of consumer characteristics, namely environmental consciousness and consumer innovativeness with a special focus of young consumers as the next generation of eco-innovators, the present study provides an answer to this question. Furthermore, we focus on the promising market segment of young consumers as they are potential agents of change. In total 446 young consumers were surveyed. The results provide insights on what drives eco-innovativeness and thus, how to market new ecological products. Structural equation modeling led to the result that joyful consumption is an important antecedent of domain-specific eco-innovativeness. Additionally, a biospheric value orientation leads to higher eco-innovativeness, whereas altruistic values reduce eco-innovativeness. The results show that practitioners and product designers have to take into account not only the benefit for nature but also the hedonic component of a new product.

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#### 1. Introduction

In a world of limited natural resources, the need for ecological considerations in product development and consumption is obvious. The environmental impact of innovations is therefore of interest to both research and practice (Banerjee et al., 2003; Pujari, 2006). Solving ecological problems without losing economic competitiveness is the heart of the so-called ecological innovations. By developing new ecological products, companies are able to gain competitive advantage and improve their corporate image (Chang, 2011). Furthermore, new market segments can be captured (Castiaux, 2012) and ecological innovations have a positive impact on long term employment (Harabi, 2000). Despite their economic and environmental relevance, the flop rate of innovations in general reaches alarming levels (Wilke and Sorvilla, 2003). Ultimately, the success of eco-innovations depends on the individual adoption decision of the consumer. Within the diffusion process, the first group of adopters, the so called innovators (Rogers Everett (1995) are of special relevance. Innovators influence the number of adopters in the following time period, through the communication of their adoption decision and experience (e.g. word-of-mouth) (Bass 1969). However, the question arises, why do consumers adopt ecological innovations? Previous research provided valuable insights in green consumer behavior in general, but only recently started to focus on innovative ecological products (e.g. Jansson et al., 2010). Despite its relevance for business and society, so far, little is known about the characteristics of people that quickly adopt innovative ecological products.

To address this issue, we focus on two areas of consumer characteristics, which melt into the term "ecological innovation": *environmental consciousness* and *consumer innovativeness*. We utilize the construct of eco-innovativeness as a domain specific consumer characteristic that predicts the actual ecological adoption behavior. The higher the degree of eco-innovativeness, the likelier is the early adoption of innovations in the area of ecological friendly products and services. Consequently, eco-innovators are those individuals who possess a higher degree of eco-innovativeness than others.

Moreover, the present study focuses on the promising market segment of the *younger consumers* or the *generation Y* (Bolton et al., 2013) for three reasons. First, young consumers have a high spending power (Moses, 2000) and they are willing and able to consume (Abela, 2006). Second and more importantly, young consumers can be described as "agents of change" and are thus more open to innovative technologies (Tellis and Yin, 2010; Spero and Stone, 2004; Bentley et al., 2004; Steenkamp et al., 1999). And third, younger consumers

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tend to be more aware of existing and upcoming environmental problems (Franzen and Meyer, 2010). At a first glance, the first and second reason seem to contradict the third one. The ability and willingness to gather material possessions (i.e., consumerism) has been seen as one of the causes of environmental problems (O'Shaugnessy and O'Shaugnessy, 2002). But if we do understand what triggers the adoption decision for an ecological innovation, the increasing *green purchasing power* of young consumers will be for the benefit of the environment and thus the society in general.

To sum up, previous literature provides only insufficient evidence of factors that influence innovative consumption behavior in the area of ecological products and services. Additionally, young consumers who are a very important target group for ecological innovations have not yet been considered in previous research. The present study aims to fill this void and answers the following question: Which factors influence the eco-innovativeness of young consumers? We propose and empirically test an integrative model. The results of this research allow a better understanding of young consumers in the domain of eco-innovations and give valuable implications for research, product development and marketing.

#### 2. Theoretical background

The present study is grounded in two theoretical areas of consumer research. On the one hand we utilize the concept of consumer innovativeness and on the other hand we address the area of ecological consumption. On this foundation our research proposes a comprehensive theoretical model to predict innovativeness in the area of green consumption.

Innovative consumers are an important target group of companies developing and launching new products. The construct of consumer innovativeness has been extensively researched in the past decades (see Bartels and Reinders, 2011 for a recent review). According to Midgley and Dowling (1978, p. 235), innovativeness can be described as "a function of (yet to be specified) dimensions of the human personality". Psychologists describe the influence of personal characteristics on behavior in a hierarchical approach. Rather general traits influence less abstracts characteristics and finally specific behavior (Holtzman, 1965). Midgley and Dowling (1978) build on this reasoning and were the first to conceptualize innovativeness on different levels of abstraction. They distinguish between the trait-like personal characteristic innate innovativeness, domain-specific innovativeness and actualized innovativeness. On the highest level of abstraction, innate innovativeness is defined as "the degree to which an individual makes innovation decisions independently of the communicated experience of others" (Midgley and Dowling, 1978, p. 235). Domain-specific innovativeness refers to consumer innovativeness in a certain area of interest (e.g., fashion, cars, technical equipment, and ecological products). Actual innovativeness describes the adoption of a certain product.

Taking into consideration the hierarchy of influences from abstract to specific levels, it is not astonishing that constructs on a high level of abstraction fail to predict specific behavior (Lastovicka and Joachimsthaler, 1988). Thus, antecedents of innovativeness have to be operationalized on the same level of abstraction to avoid the generality/specificity issue in consumer research (Goldsmith et al., 1995). This assumption is supported by a literature review on empirical studies of antecedents of innovativeness by Hoffmann and Soyez (2010). Rather general traits influence innate innovativeness (e.g., dogmatism, Jacoby 1971) and more specific characteristics influence innovativeness in a certain domain (e.g., opinion leadership and involvement, Jordaan and Simpson, 2006). We build on this reasoning and suggest to include antecedence of domain-specific eco-innovativeness on the same level of abstraction.

The second area of theory focuses on pro-environmental consumer behavior. A large body of literature deals with green consumer behavior. Research in this context focuses either on general non-

consumption behavior (e.g., recycling, driving habits; Follows and Jobber, 2000) or on general consuming behavior (e.g., purchase of ecological products; Hartmann/Apaolaza-Ibánez 2012; Griskevicius et al. 2010). New ecological products or green innovations respectively, have only recently been subject of empirical studies (e.g. Jansson et al., 2010).

Soyez et al. (2009) classify research on pro-environmental behavior in several stages. In an early stage, researchers started to describe the ecological conscious consumer by socio-demographic variables and personality traits (e.g., Berkowitz and Lutterman, 1968). In a second stage, social scientists tried to explain pro-environmental behavior by pro-environmental attitudes (e.g., Weigel, 1983; Maloney and Ward, 1973). Various attitude-behavior models, which have been developed to explain pro-environmental behavior, are based on the theory of reasoned action (e.g., Kaiser et al., 1999) or on the extended theory of planned behavior (e.g., Mannetti et al. 2004; Kalfatis et al., 1999). A third stage of literature addresses underlying personal and cultural value orientations (e.g., Soyez, 2012; Stern et al., 1993). Rokeach (1968, p. 161) defines values as "centrally held, enduring beliefs which guide actions and judgments across specific situations and beyond immediate goals to more ultimate end-states of existence". Accordingly, values do not refer to a specific object, but serve as guiding principles in various domains of life (Schwartz, 1992). Research on green consumer behavior gave evidence that values antecede proenvironmental behavior (e.g., Stern et al., 1993). Pro-environmental value research distinguishes between an eco-centric/biospheric value orientation and an anthropocentric/altruistic value orientation. Whereas the former implies that individuals seek to protect nature for its own sake, the latter emphasizes the benefit of a clean environment for humankind (de Groot and Steg, 2007; Thompson and Barton, 1994; Stern et al., 1993). Thus, the distinction between whether an individual protects nature because of the benefits for humankind or for nature's sake, is a central issue in the research on proenvironmental value orientation.

Based on this theoretical background the integrated model is developed by analyzing antecedents from the two described areas of consumer research to answer the following overall research question: Which factors influence the eco-innovativeness of young consumers?

#### 3. Integrated model and hypotheses

The present study combines environmental consciousness and consumer innovativeness in an integrative model for young consumers. Innovativeness is conceptualized on two levels of abstraction. Following Midgley and Dowling (1978), we reason that innate innovativeness influences domain-specific eco-innovativeness. Although this relationship found evidence in various areas (e.g., electronic equipment and fashion; Goldsmith et al.; 1995), up to our knowledge, the Midgley–Dowling-Hierarchy has not been tested in the domain of ecological innovations. Thus, we hypothesize:

**H1.** The higher innate innovativeness, the higher domain-specific ecoinnovativeness.

Buying decisions are often not a result of a rational consideration of advantages and disadvantages, but influenced by the opinion others have about the product in question (Childers and Rao, 1992). A construct that describes this influence is called susceptibility to interpersonal influence and was first introduced by Bearden et al. (1989). Susceptibility to interpersonal influence describes the importance of relevant others for individual buying decisions. In the case of rather social desirable actions, like the purchase of pro-environmental products, a strong influence of susceptibility to interpersonal influence can be assumed. Innate innovativeness, however, as defined by Midgley and Dowling (1978) is the willingness to adopt new products *independently* 

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