

Chapter 9

Green Consumer Segmentation: Managerial and Environmental Implications from the Perspective of Business Strategies and Practices

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Abstract With the new millennium, environmental concern entered a new phase, with stricter governmental regulations and incentives. Currently, within environmental issues, there is a broader challenge to commitment with economic and social goals. This is motivating companies and organizations to participate in transformation processes with the aim of minimizing the negative impacts of their activities. Within this context, new business philosophies, emerged empowering organizations to consider sustainability issues that have come to be viewed as an innovative and differentiating factor, providing competitive advantages (Fraj-Andrés, Martínez-Salinas, & Matute-Vallejo. *Journal of Business Ethics*, 88, 263–286, 2009; Leipziger. *The corporate responsibility code book*. Greenleaf Publishing Limited, 2016; Leipziger. *The corporate responsibility code book*. Greenleaf Publishing Limited, 2016). Therefore, organizations have begun incorporating these concerns in their processes, adopting green management policies, and including green marketing strategies in order to remain competitive (Straughan & Roberts. *Journal of Consumer Marketing*, 16(6), 558–575, 1999; Rivera-Camino. *European Journal of Marketing*, 41, 1328–1358, 2007). From the marketing perspective, the importance of understanding green consumer behaviour in order to develop better segmentation and targeting strategies is highlighted. Green consumers are changing significantly. Consumers, although with some reluctance, are moving to greener products. The Mintel organization reported that the number of consumers buying green has tripled

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in recent years. Furthermore, it found that the number of consumers that never bought green products have decreased. These results show that widespread environmental awareness had an important role in purchasing behaviour, with more consumers considering the environmental impact of their buying decisions and looking for a greener alternative to their conventional purchasing options. The existing literature suggests that previous research regarding the green consumer profile has different perspectives. The first group of researchers attempted to characterize green consumer profile using sociodemographic variables such as age, gender, education, income and occupation. In turn, the second group of researchers used psychographic variables instead of sociodemographic ones (Mainieri, Barnett, Valdero, Unipan, & Oskamp. *Journal of Social Psychology*, 137(2), 189–204, 1997). This chapter aims to better explore the importance of green consumer segmentation and its implications from a management point of view. More specifically, the aim is to analyze which variables better characterize green consumers (sociodemographic and psychographic). At the end, a theoretical framework is proposed to enable and support organizations to better understand green consumer profile. It also enables managers and marketers to target and develop better marketing strategies for these segments.

9.1 Introduction

In the last few decades, environmental concern has become prevalent, and consumers began looking for more environmentally friendly alternatives to their traditional purchases.

The National Geographic and GlobeScan conducted a study, *Greendex* (2010), which evaluated the sustainability of international consumerism. This study, which included a survey of 17,000 consumers from 17 countries, revealed that consumers are very concerned about the environment, and this is reflected in their daily consumer preferences.

Ecologically conscious consumers are defined as “individuals who seek to consume only products that cause the least—or do not exercise any—impact on the environment” (Roberts, 1996). According to Hailes (2007), a “green consumer is the one who associates the act of purchasing or consuming products with the possibility of acting in accordance with environmental preservation”. The green consumer knows that by refusing to purchase products that are harmful to the environment, they are contributing to environmental preservation. Therefore, green consumers avoid buying products that they perceive as risky to health, damaging the environment during production, use or final disposal, consuming much energy, having excessive packaging, and containing ingredients from threatened habitats or species (Hailes, 2007).

The existing literature suggests that the previous research regarding green consumer profile can be viewed from different perspectives. The first group of researchers made an attempt to characterize green consumer profile using sociodemographic variables such as age, gender, education, income and occupation. For

instance, Roberts (1996) identified a general ecological consumer profile: high income and education, as well as a prestigious profession. According to the author, higher education and a higher level of income significantly explain green consumer profile and behaviour.

In turn, the second group of researchers used psychographic variables instead of sociodemographic ones (Mainieri, Barnett, Valdero, Unipan, & Oskamp, 1997). These variables include values, interests, attitudes and other characteristics related to personality. Some years later, also explored these variables. In their research, the authors made an effort to categorize consumers according to their behaviour and attitude towards the environment. As a result, four segments were identified: committed environmentalists, mainstream environmentalists, occasional environmentalists, and non-environmentalists. The conclusions showed that a committed environmentalist tends to be older, middle class, active within the community, and politically involved.

The authors accomplish that although sociodemographic variables are important, individual values and attitudes also play a key role in distinguishing environmentalists from non-environmentalists. People with environmentally friendly behaviour tend to be more altruistic and less hedonistic. The study states that focusing on psychographic factors is more relevant to profiling green consumers than sociodemographic variables, since, with the passage of time, people change their attitudes. Such a change in attitudes might result in behavioural change as well.

9.2 Green Marketing: Definition and Evolution

The emergence of green consumers has contributed to the development of a new approach in marketing, viz., the so-called green marketing. Although green marketing has been discussed since the 60s, it was in the late 80s and early 90s that the concept began to be generalized. The American Marketing Association held the first workshop on the topic in 1974. Here, green marketing was defined as “the study of positive and negative aspects of pollution and depletion of energy sources” (Kinneer & Taylor, 1973).

By the 70s, a few authors had published their first articles on the theme (Kassarjian, 1971; Fisk, 1973; Kinneer, Taylor, & Ahmed, 1974). According to Kilbourne and Beckmann (1998), in these first definitions, the focus was on environmentally concerned consumer profiles. In turn, van Dam and Apeldoorn (1996) state that, by that time, the efforts were to develop an approach focusing on social marketing. These attempts revealed the possibility of a more active response to social and environmental problems (Fisk, 1974).

Ottman (1993) believes that the emergence of green marketing is a result of the finding that companies are being evaluated on their product/service performance, as well as their social and environmental responsibility.

Green marketing appears to be part of a solution not only for seeking and satisfying consumer needs and desires, but also for monitoring them within a context of environmental responsibility.

According to Polonsky (1994), green marketing consists of “all planned activities to generate and facilitate exchanges in order to satisfy human needs and desires with the least impact possible on the environment”. This statement adds an important dimension: a more humanistic marketing concept that includes ecological and social aspects based on the minimization of environmental damage. Crane (2000) argues for the existence of a relation between morality and green marketing, because the environment implies some ethical questions that marketing has to align with.

As stated by Peattie (2001), there is a need to approach green marketing in a dynamic way. In the beginning, the concept was more focused on an ecological perspective, but as the interaction between the economy and the environment developed, the concept evolved to include sustainable marketing.

Green marketing, argues Peattie (2001), can be characterized into three “ages”. The first age was the 70s, where the focus was on ecological marketing because the emphasis was on particular environmental problems, such as air pollution, depletion of oil reserves, and the impact of pesticides on the environment. The second age was the 80s, which is stated by the author as environmental marketing. The main concerns at this point were regarding clean technology, understanding and targeting the “green consumer”, and observing socio-environmental performance as a source of competitive advantage. The current, third age, is sustainable marketing, which focuses on creating sustainable development and a sustainable economy. Aligned with these principles, Peattie and Charter (2003) defined green marketing as “an holistic management process responsible for identifying, anticipating and satisfying customer needs and society in a profitable and sustainable perspective”.

In this sense and according to these authors, marketers should not only look for internal processes of production, but also for the impact that production and consumption have in the development of a sustainable society.

Sustainable development is an orientation that aims to “meet the needs of the present without compromising the ability of future generations to meet their own needs” (UNWCED, 1987).

For Bridges and Wilhelm (2008), sustainability movement may be viewed as incorporating a diverse group of social activist organizations whose goals, policies, ideologies, and action plans share a common “worldview”. This worldview incorporates ecological (environmental), social (equity), and financial (economic) sustainability, which are often referred to as the “three Es” that constitute the “triple bottom line” (Savitz & Weber, 2006). Consistent with the triple bottom line, Peattie (2001) indicated that sustainable economic development poses major challenges for marketing. The author points out that the aim should not focus only on customers’ satisfaction and profits to investors in the current generation, but should also include future generations. There is also an equity challenge that includes encouraging fair distribution across nations of the costs and benefits of economic development. Another challenge is what the author called “needs/wants challenge”. The objective is to focus more on goods and services that meet the “basic survival needs” of poor nations instead of the “wants” of wealthy nations.

Thus, since green marketing is considered a major trend, it is important to understand the emergence of green consumers and their profile.

9.3 Green Consumers: Sociodemographic Characterization

Sociodemographic characterization was very popular in the 70s and in the 80s, when the first studies attempting to profile the green consumer were conducted.

Berkowitz and Lutterman (1968) and Anderson and Cunningham (1972) were pioneers in studying the profile of greenconsumers. Anderson and Cunningham (1972) characterized green consumers as individuals who, besides satisfying their personal needs, are also concerned about the welfare of society and the environment. These authors also state that they belong to a socio-economic class above the average and professional occupations of recognition and status. In a few words, they typified the green consumer as female, 40-years-old, with higher education level and socio-economic status than average.

Other researchers also arrived at similar conclusions, highlighting that women tend to be more environmentally conscious than men (Banerjee & McKeage, 1994). In turn, Reizenstein, Hills, and Philpot (1974) found that only men were more willing to pay more to control air pollution; Balderjahn (1998) also concluded men tend to have a more intense relation between attitudes and use of environmentally conscious products than women.

Despite the wide range of sociodemographic variables used by several authors, the ones that proved to be more significant to profiling green consumers are:

- Age: Several authors have explored the relation between age and other variables. However, results are contradictory. Some found non-significant relations between age and green behaviour (Do Paço, Raposo, & Filho, 2009; Kinneer et al., 1974; Straughan & Roberts, 1999) while others found significant positive relations (Samdahl & Robertson, 1989; Memery, Megicks, & Williams, 2005)
- Gender: This was also explored by several authors (MacDonald & Hara, 1994; Roberts, 1996; Roberts & Bacon, 1997; Samdahl & Robertson, 1989; Stern, Dietz, & Kalof, 1993; Straughan & Roberts, 1999). Most researchers argue that women are more likely to act in a more environmentally friendly way than men. However, final results are not conclusive. Empirical studies show that women are more sensitive to environmental issues and perceive them better than men do, therefore, become green consumers more often (Do Paço et al., 2009; Memery et al., 2005; Ottman & Reilly, 1998). On the other hand, some researches indicate that men possess a deeper environmental knowledge, while women care more about the environmental quality (D'Souza, Taghian, & Lamb, 2006).
- Income: According to Awad (2011), income was always perceived to have a positive relation to green consumer behaviour because it is assumed that green products cost more than conventional ones. Although this variable was taken in consideration by several authors, results are not convincing (Anderson & Cunningham, 1972; Kassarjian, 1971; Kinneer et al., 1974; Roberts, 1996; Roberts & Bacon, 1997; Samdahl & Robertson, 1989). Ottman and Reilly (1998) argue that consumers who have higher purchasing power than average are more sensitive to environmental issues in comparison to those who receive average or

low income, which is why green product prices are not a barrier for them. However, general findings are not conclusive.

- Education has a positive relationship with green consumer behaviour in the majority of the performed studies (Aaker & Bagozzi, 1982; Roberts, 1996; Schwartz & Miller, 1991). Consumers with higher literacy level better perceived environmental issues and tend to act in accordance (Ottman & Reilly, 1998; Memery et al., 2005; Do Paço et al., 2009). In turn, Samdahl and Robertson (1989) and Straughan and Roberts (1999) observed that education did not have a positive relation with green consumer behaviour.

As stated before, sociodemographic variables were commonly utilized in the 80s and 90s mainly due to the fact that green consumers were too niche, and variables like higher education or higher income were determinant to profiling these consumers. From the 90s onwards, psychographic and behavioural variables began to be considered by researchers.

9.4 Green Consumers: Psychographic Characterization

Despite the identification of the green consumer profile through social, economic and demographic characteristics, as previously mentioned, several authors argue that psychographic variables provide more relevant insights into green consumer behaviour (Akehurst, Afonso, & Gonçalves, 2012; Anderson & Cunningham, 1972; Awad, 2011; Banerjee & McKeage, 1994; Chan, 1999; Kassarian, 1971). The most prominent psychographic variables taken into consideration by the existing studies are:

- Altruism: It is defined as “the concern about the welfare of society and others”. It was analyzed by Stern et al. (1993) and Straughan and Roberts (1999). Altruism plays an important role in political activism, but sometimes is inconclusive if there is a direct cost involved. Straughan and Roberts (1999) examined this variable and found a positive correlation with green consumer behaviour. This means that the green consumer is likely to be more altruistic than conventional consumers, and this variable seems relevant to explain green consumer behaviour. Altruism is somehow related to another psychographic variable taken into consideration in several studies, i.e., collectivism. In terms of definition, collectivism is similar to altruism, but it is understood as a cultural value, as a sense of interdependence among people. Several authors argue that collectivistic individuals tend to have more pro-environmental attitudes and behaviours (Chan, 2001; Gupta & Ogden, 2009; Kim, 2011; Kim & Choi, 2005; McCarty & Shrum, 2001).
- Environmental concern: It is commonly defined as the individual’s awareness of environmental problems and their willingness to be part of the solution (Chan & Lau, 2000; Dunlap & Jones, 2002). Several authors correlated this variable with environmental friendly behaviour (Kinnear et al., 1974; Roberts & Bacon, 1997;

Straughan & Roberts, 1999). According to Maloney, Ward, and Braucht (1975), environmental concern is related to the emotions and knowledge level, as well as to a readiness to change behaviour. Bang, Ellinger, Hadjimarcou, and Traichal (2000) and Kim and Choi (2005) argue that the level of a consumer's environmental concern is strongly linked to their willingness to buy green products.

- Perceived consumer effectiveness (PCE): It can be considered the most important variable in green consumer profile analysis and can be defined as “the consumer's perception of the extent to which their actions can make a difference in solving environmental problems” (Ellen, Wiener, & Cobb-Walgren, 1991). In other words, it is the extent to which consumers believe that they, as individuals, can make a difference, through actions such as purchasing green products, recycling, subscribing to e-invoices, among others, in contributing to environment protection. PCE predicts a variety of purchase decisions (Ellen et al., 1991), for example buying biodegradable products (Berger & Corbin, 1992) and sustainable dairy products (Vermeir & Verbeke, 2007). Consumers will act proactively if they perceived their actions as effective for environment preservation (Moisander, 2007). PCE has been included in several studies and is assumed to be an important predictor of pro-environmental consumer behaviour, outstanding all other sociodemographic and psychographic variables (Kinnear et al., 1974; Balderjahn, 1988; Ellen et al., 1991; Berger & Corbin, 1992; Roberts, 1996; Roberts & Bacon, 1997; Straughan & Roberts, 1999; Joonas, 2008; Gupta & Ogden, 2009; Young, Hwang, McDonald, & Oates, 2010; Kim, 2011; Tan, 2011; Albayrak, Caber, & Moutinho, 2011; Akehurst et al., 2012).

9.5 Green Consumer Segmentation

The green market and green consumers are subject to segmentation and it is important to identify which similarities and differences between the various types of green consumers can be used to group them in a particular green segment based on their characteristics, buying behaviour, demanding, expectations and marketing mix.

As we have seen previously, in recent decades, a number of studies and surveys have been conducted with the aim of increasing knowledge about the green consumer. With regard to market segmentation, investigations show that there are many “shades of green”.

Several market research consulting groups have developed studies regarding green consumers' segmentation, namely: Natural Marketing Institute, Mintel, Yankelovich, GfK Roper Consulting e Insight and Research Group. Most of them classify green consumers into five segments:

- True Green Consumers: These consumers are more active and demonstrate greater commitment to the environment and translate it into their purchases. They are generally environmental leaders and activists. As depicted in Table 9.1, they are named Lohas (Lifestyles of Health and Sustainability, Natural Marketing

Table 9.1 Green market segmentation (USA)

Natural Marketing Institute (2006)		Mintel (2006)		Yankelovich (2007)		GfK Roper Consulting (2007)		Insight Research Group (2007)	
Lohas	17%	Super Greens	12%	GreEnthusiasts	13%	True blue	30%	Green gurus	17%
Naturalities	21%	True Greens	68%	GreenSpeaks	15%	Green black	10%	Conscientious citizens	24%
Drifters	19%	Light Greens		GreenSteps	25%	Sprouts	26%	Guidance seekers	24%
Conventionals	20%			GreenBits	19%	Grouzers	15%	Bystanders	17%
Unconcerned	21%	Never	20%	GreenLess	29%	Apathetics	18%	Hype haters	18%

Source: City Manager Weekly (2008)

- Institute), Super Greens (Mintel), Greenthusiasts (Yankelovich), True Blue (GfK Roper Consulting), and Green Gurus (Insight Research Group);
- Ecologically Concerned Consumers: Those consumers are willing to pay more for green products, but there are some obstacles related to their behavior (e.g., green products are not available in all stores and many consumers don't want to change their routines and make extra effort to buy the products. Therefore, convenience and time are main barriers). In Table 9.1, they are classified as Naturalities (Natural Marketing Institute), True Greens (Mintel), Greenspeaks (Yankelovich), Green Back (GfK Roper Consulting) and Conscientious Citizens (Insight Research Group).
 - Moderately Green Consumers: These purchase only green products if they meet their main needs. They care about the environment, but would only spend a little more to buy green. In Table 9.1, they are named Drifters (Natural Marketing Institute), Light Greens (Mintel), GreenSteps (Yankelovich), Sprouts (GfK Roper Consulting) and Guidance Seekers (Insight Research Group).
 - Occasional Green Consumers: They are concerned about the environment, but believe that individual behaviour can contribute very little to solve environmental problems. They rarely buy green products based on ecological attributes. In Table 9.1, they are identified as Conventionals (Mintel), GreenBits (Yankelovich), Grouzers (GfK Roper Consulting), and Bystanders (Insight Research Group);
 - Apathetic Consumers: These consumers are not concerned about the environment and do nothing to contribute to a change in consumption patterns. They essentially "don't buy and don't care". In Table 9.1, they are named Unconcerned (Natural Marketing Institute), Never (Mintel), Greenless (Yankelovich), Apathetics (GfK Roper Consulting) and Hype Haters (Insight Research Group).

As indicated in Table 9.1, there is a core of committed consumers who are aware of environmental problems and proactively buy green products regularly. Depending on the consultant group, the group of green consumers comprise 10–12% of adult consumers. Another group that occasionally buys green products represents 8–24% of all consumers. About 19–25% of the consumers are aware of the existence of green products and tried to buy them, but do not buy them often. Moderated green consumers are those who care about the environment to some extent, but this is not translated into action. They are too busy to buy green products and complain about the cost of products and quality. This group ranges from 14 to 20% of adult consumers who might be persuaded to buy green products based on quality, cost and availability. About 53–65% of all consumers have purchased green products at some point.

GfK Roper Green Gauge reported, as shown in Table 9.2 that within the scope of a decade, truly green consumers grew and the apathetic decreased.

To sum up, green consumers are an increasing segment. Investigations and market surveys indicate that consumers are increasingly expressing concerns about the environment.

Many of the studies aimed at identifying typical demographic qualities of the green consumer. For example, females, young people and people with a relatively

Table 9.2 Green segmentation evolution (1996–2007)

	1996 (%)	2007 (%)
True blue	10	30
Green back	5	10
Sprouts	33	26
Grousers	15	15
Apathetics	37	18

Source: GfK Roper Consulting (2007)

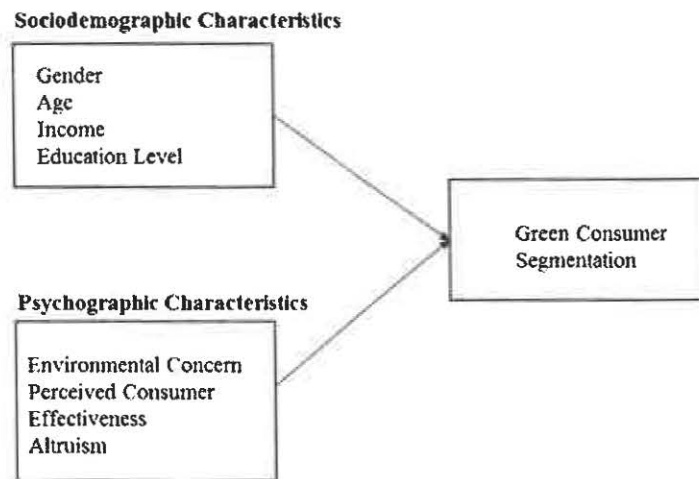


Fig. 9.1 Conceptual model

high education and income were identified as most likely to engage in green consumer behaviour. However, many contradictory views of the probable green consumer were put in evidence.

Other research, notably more recent ones, have used psychographic characteristics such as environmental concerns to identify the green consumer. Such characteristics turned out to be better at explaining variations in green consumer behaviour than demographic criteria. Perceived consumer effectiveness has been particularly highlighted as being useful in predicting actual buying behaviour.

Within this context, derived from the literature review and with the objective to propose a model to help managers and marketers better segment green consumers, the following research framework is proposed (Fig. 9.1).

9.6 Conclusions and Implications

The contribution of this chapter is the proposition of a model derived from literature that enables academic scholars and marketing managers to identify segments of similar green customers and potential customers to prioritize the groups to address, understand their behavior, and respond with appropriate marketing strategies.

According to the literature, there is a growing awareness that businesses need to incorporate economic, social and environment pillars into their core (Fraj-Andrés et al., 2009); Leipziger, 2016); Rivera-Camino, 2007). Corporate leaders are responsible for their organizations' impact on society and the environment beyond legal compliance and the liability of individuals.

Companies and organizations around the world are struggling with a new role, which is to meet the needs of the present generation without compromising the ability of future generations to meet their own needs. Organizations are being addressed to take responsibility for the ways their operations impact societies and the environment.

Green marketing has evolved within this context, and it is now crucial to rethink marketing strategies: from targeting green consumers with green products to broadening the targeted consumer group and including green claims of the products as one of the appeals when compared to conventional ones. This will require an extended set of marketing tools for strategy and planning, as well as a more active role for businesses.

There are companies that develop green marketing strategies as part of their social corporate responsibility. Most often, these activities are not incorporated in the business, since top managers associate the relation between environment and business as extrinsic to the business itself. Therefore, the first step is for managers and marketers to realize that green marketing can be profitable, rather than purely altruistic.

In agreement with, there are two basics requirements of green marketing: top management involvement and long-term objectives, which includes consumers' education.

Thus, one of the challenges that green marketing faces is to incorporate environmental issues into business and to invest in research and development in order to create products that are environmentally friendly, but at the same time retain their functionality, while also being profit-driven. Then, the challenge for marketers will be to develop strategies targeting the environmental consumer.

Enterprises and managers often claim that "there is no market for green products". They indicate that the process of greening production and consumption should start with consumer demand. So, it becomes essential to understand who the green consumers are, which variables better describe their profile, and then group them into segments.

The research framework proposed unveils two complementary perspectives on green consumer segmentation: the first is based on sociodemographic variables (gender, age, income, and education level) and the second, that has been prominent

in more recent researches, takes into consideration the most relevant psychographic variables (environmental concern, perceived consumer effectiveness, and altruism). Previous studies have shown that certain demographic and psychographic variables are significant for differentiating between the “greener” segment and other segments.

The combination of both perspectives is proposed to be the yardstick to segment green consumers into groups, taking into account the most relevant variables for differentiating them.

Intersections among sociodemographic research and psychographic research are expected to bring originality into the segmentation of green consumers. The segmentation of green consumers will also contribute to practical considerations, such as how to communicate successfully with the green consumer in the context of corporate marketing or public policy communications.

Corporate social responsibility is becoming a leading principle of top management and entrepreneurs. Organizations can reexamine their pattern of behaviours. Knowing their consumers is fundamental to better understanding their journey toward a sustainable approach.

It would be interesting to perform further research to validate the model empirically. In terms of limitations, the model presented is a generic one, and some variables depending on the green product category of a specific business might be added to enrich the analysis.

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