TOWARDS A BETTER UNDERSTANDING OF ENVIRONMENTAL CONSCIOUSNESS: A PROPOSED FRAMEWORK

Patricia Arttachariya1*

¹Martin de Tours School of Management and Economics, Assumption University

ABSTRACT

The increasing degradation of the environment has made people more aware 0f and concerned both developed and developing economies. The fact that individuals are largely blamed with this degradation has put a stronger focus on the attitude and behavior of individual consumers toward the environment with a view to mitigating the problems related to pollution and natural resources depletion. This paper aims to review extant literature on environmental consciousness and its antecedents. Based on a multidimensional perspective, this paper also proposes a framework to clarify the linkages between predictor variables and environmentally conscious behavior.

Keywords: Pro-environmental behavior, attitudes, socio-demographics, value-orientation, environmental consciousness.

สำนักหอสมุด มหาวิทยาลัยบูรพา วารสารใช้ภายในหอสมุด 2 7 ก.ค. 2559

^{*} Corresponding author: E-mail address:phdsm.au.edu@gmail.com

Introduction

The 1960s saw a new awakening on issues related to the natural environment. In fact, it was during this decade that the impact of marketing decisions on the environment first began to be written about by marketing scholars. Kotler and Levy (1969) were the first researchers to introduce the concept of 'societal marketing management'. Subsequently, several papers related to environmental issues and the role of marketing were published in the 1970s. Some of them were on 'societal marketing' (Lavidge, 1970; El-Ansary, 1974; Takas, 1974), 'social responsibility and marketing' (Kotler & Zaltman, 1971; Davis, 1973), and 'ecological marketing strategy' (Kassarjian, 1971). Despite this early interest on environmental issues shown by scholars, the research on the issue remained sporadic during the 1980s. The 1990s, however, saw a renewed interest owing to the stricter environmental regulations, pollution problems, and growing public pressure to protect the environment in many countries of the world.

Several authors have argued that problems stemming from environmental degradation can cause an ecological crisis (Peattie, 1995; McCarty & Shrum, 2001; Jackson, 2005). Worldwide, people are now aware of climate change, famine, carbon emissions and natural disasters on their quality of life. A UNEP (2010) report claimed that over 60 percent of all environmental impacts are caused by household consumption with over three-fourths of this impact occurring during the end usage stage. A report issued by the Intergovernmental Panel on Climate Change warns about the impacts of man-made climate change on people's quality of life and income. The report

outlines 'key risks' such as deaths from global warming, famines caused by temperature change, poverty traps experienced by farmers due to lack of available water to grow crops, infrastructure breakdowns because of extreme weather, the rise of dangerous and deadly heat waves and the failure of land and marine ecosystems (Bangkok Post, 2013, p.7). It is because of the 'man-made' negative outcomes on the environment that researchers have turned their attention toward the environmentally

conscious consumer. The objective of this paper is to identify relevant antecedents that influence environmentally conscious behavior. In addition, the paper attempts to draw up a comprehensive framework that explains the linkages between the predictor variables and environmentally conscious behavior.

Literature review

The growing interest related to environmental issues in the 1990s saw numerous articles published on topics related to the environment; however, they have been criticized as being too fragmented, diverse, and unable to provide a holistic picture (Banerjee et al. 2003; Baker & Sinkula, 2005; Menguc & Ozanne, 2005).

Environmental protection is strongly linked to the term sustainability. The definition of this term has been a source of controversy among scholars with many overlapping terms appearing in the literature, such as, 'environmentalism' (Stainer & Stainer, 1997; Van Doorn & Verhoef, 2011); 'eco-friendly' (Han et al., 2011); 'corporate social responsibility' (Galbreath, 2009; Mysen, 2012), 'green' (Beard & Hartmann, 1997; Olson, 2013) and 'environmental consciousness' (Zelezny & Schultz, 2000). These terms have often been used interchangeably in the literature.

Factors underpinning environmental consciousness Several factors have been known to impact the ecological behavior of consumers. Among these have been "Internal" factors (knowledge, environmental concern, socio-demographics and values orientation), "External" (media, interpersonal influence and country-specific factors), and "Intervening" (perceived product necessity, willingness to pay more, and personal benefits). Each factor will be discussed in greater detail in the following sections.

Internal Factors

Environmental Knowledge

Environmental knowledge can be abstract or concrete. Abstract knowledge pertains to knowledge concerning environmental issues, problems, causes and solutions, whereas concrete knowledge emphasizes behavioral knowledge that assists in decision making and

implementation (Schahn & Holzer, 1990). The literature thus far indicates mixed findings on the relationship between environmental knowledge and behavior. For instance, Hines, Hungerford and Tomera (1987) in their meta-analysis based on 128 previous studies found a correlation of 0.30 between environmental knowledge and behavior. Kilkeary (1975) and Dispoto (1997) found a positive relationship between the two variables. In contrast, Schahn and Holzer's (1990) study showed that eco knowledge had no relationship with their respondents' performance of environmentally-friendly actions. In summary, it can be concluded that a positive association between environmental knowledge and behavior is still evident in the majority of studies.

Environmental Concern

Dunlap and Jones (2002) defined environmental concern as "the degree to which people are aware of problems regarding the environment and support efforts to solve them and or indicate the willingness to contribute personally to their solution" (p.485). Many researchers have defined environmental concern from an attitudinal perspective. Crosby, Gill and Taylor (1981) defined environmental concern as a strong positive attitude toward preserving the environment. Later, Zimmer, Stafford and Stafford (1994) defined environmental concern as 'a general concept that can refer to feelings about many different green issues'. Several studies have found a correlation between environmental concern and environmentally friendly behavior (Kinnear et al. 1974; Van Liere & Dunlap, 1981; Roberts & Bacon, 1997; Straughan & Roberts, 1999). In putting an action-orientation into their definition, Kim and Choi (2005) confirmed that consumers with high environmental concern show a stronger tendency to buy green products than those with less concern.

Socio-demographic factors

Several studies have attempted to describe the characteristics of environmentally conscious consumers but the results thus far have been contradictory (de Paço & Raposo, 2009).

Age, for instance, has been studied frequently with

studies arguing that younger individuals are more environmentally conscious than older individuals. Nevertheless, these results have been reversed over the last two decades with authors claiming that older people are more environmentally conscious than younger people (Samdahl & Robertson, 1989; Roberts, 1996; D'souza et al. 2007). Several authors have also attempted to associate age and environmental conscious behavior. Some have found non-significant results (Kinnear et al. 1974; McEvoy, 1972). Others have found positive and significant results (Samdahl & Robertson, 1989).

In terms of gender, researchers have found women are more likely to have stronger degree of environmental consciousness than men (Straughan & Roberts, 1999). However, a study by Balderjahn (1988) reported a stronger relationship between environmental attitude and anti-polluting products among men rather than women. Straughan and Roberts (1999) argued further that women's social development and sex role differentiation make them more conscious of their actions toward others than men. The final results on gender thus still remain inconclusive.

Income has been investigated in several studies related to environmental attitude (Anderson & Cunningham, 1972; Anderson et al. 1974; Kassarjain, 1971; Kinnear et al. 1974; Newell & Green, 1997; Roberts & Bacon, 1997; Samdahl & Robertson, 1989, Zimmer et al. 1994). In these studies, consumers with higher income were more likely to support costs related to green causes. In contrast, other studies have shown negative relationship between income and environmental consciousness (Roberts, 1996; Samdahl & Robertson, 1989). In fact, income was shown to have an inverse relationship with frequency of conservation behavior (FCB) implying that individuals with higher incomes were less likely to engage in conservation behavior.

Researchers have argued that consumers with higher education are more positive toward issues related to the environment and are more likely to undertake environmentally responsible behavior. A positive relationship was found between education and environmental consciousness in many studies (Aaker & Bagozzi, 1982; Anderson et al. 1974; Kinnear

et al. 1974; Newell & Green, 1997; Roberts & Bacon, 1997; Schwartz & Miller, 1991). Nonetheless, Samdahl and Robertson (1989) found a negative correlation between education and environmental attitude. In their paper, Laroche et al. (2001) argued that education of consumers is a means for increasing perceived convenience and credibility in being environmentally friendly. Laroche et al. (1996) used the term ecoliteracy, which is a measure of respondents' ability to identify, or define a number of ecologically-related symbols, concepts and behaviors.

Value Orientation

Value has been defined as an enduring prescriptive or proscriptive belief that a specific end state of existence or specific mode of conduct is preferred to an opposite end state or mode of conduct for living one's life (Kahle, 1996; Rokeach, 1986). In a comprehensive empirical study on socio-demographics and environmental consciousness, Diamantopolous et al. (2003) argued that socio-demographic variables were of limited use to characterize the behavioral aspects of environmental consciousness. Instead, a deeper knowledge of consumers' psychological variables such as environmental knowledge and values may be more relevant in explaining environmental consciousness and consumption behavior (Bezençon & Blili, 2010; Follows & Jobber, 2000; Leonidou et al. 2010; Mostafa, 2007; Shaw & Shiu, 2003).

Previous studies have found environmental activism to be strongly linked to values regarding the importance of the environment in a person's life (Steel, 1996). Altruism is a value which reflects concern that the needs and desires of others are more important than one's own. Stern et al. (1993) examined the role that altruism and egoism played in influencing green behavior. Political orientation (Liberalism) has also been reviewed in previous literature which suggests a difference between individuals with a liberal political background who are more likely to portray a positive attitude toward the green movement as compared to those with conservative political views (Awad, 2011). Biospheric and ecocentric values are more commonly found among environmentalists who prefer to work with the environment rather than relying on technological solutions (Gilg et al. 2005).

External Factors

Media

Media is another important external factor impacting environmental consciousness as all forms of media provide the right information to consumers and help in developing individual and group environmental consciousness (Rios et al. 2006). Consumers, in order to make rational choices in their purchases of environmentally-friendly products, need information provided by media to form opinions and attitudes. In the uses and gratifications theory, it is argued that consumers are both active and goal-directed with main media used as a resource to satisfy needs. Hence, media messages have the potential to establish standards for behavior, attitudes and values.

Interpersonal Influence

It has been found that significant others have a strong impact on consumer behavior. Bearden et al. (1989) argued that the influence of others is a significant determinant of an individual's behavior. Social norms assess a consumer's feelings as to what significant others would think of an action being contemplated and also concerns the perceived social pressure to comply or not comply and the likelihood of social approval for performing the behavior (Ajzen & Fishbein, 1977; Ajzen & Madden,1986). Peers, family groups, and other influential bodies provide an individual with modeling instructions and social persuasion (Bandura, 1989) making these normative others exert a strong influence on decisions that are related to the purchase of environmentally-friendly products. Gronhoj (2006) argued that the role of the family is particularly crucial in developing environmental awareness and subsequent responsible environmental behavior.

Country-specific factors

According to per Triandis (1982), culture is a much more significant determinant of environmental consciousness than demographic factors. As most of the environmental marketing segments which have been published have a Euro-American context, it is important to evaluate differences in cultures when dealing with consumer behavior related to environmental consciousness (Cheah & Phau, 2011). The cultural dimensions of low uncertainty avoidance, high power distance, and forward-looking orientation (Hofstede, 1980) in many Euro-American societies, contribute to more stringent government initiatives and laws concerning environmental issues. Carson and Moulden (1991) confirmed that environmental laws are more stringent in developed countries than in emerging economies. In contrast, Carrete et al. (2012) argued that because emerging economies tend to be burdened with many more environmental problems related to air and water pollution, overdevelopment of infrastructure, etc, people in these countries are more likely to be knowledgeable about the environment and lend their support toward preventing environmental degradation. Cheah and Phau (2011) argued that an individualistic orientation is not very conducive to environmental friendliness. In their studies, McCarty and Shrum (1994) and Triandis (1993) concluded that collectivist orientation among people tends to make them more environmentally-friendly, whereas individualists are more likely to be environmentally-unfriendly. Since most of the emerging economies have collectivist orientation (Hofstede, 1994), it is likely that people in these countries have begun to be more positive toward the environment and environmentally-friendly products.

Environmental Attitude

Previous literature has confirmed that an individual's attitude toward problems pertaining to the environment in general, may impact on his/her willingness to engage in responsible environmental behavior. For instance, consumers with strong utilitarian values, were more likely to purchase recycled products (Bei & Simpson, 1995). Mainieri et al. (1997) argued that specific consumer beliefs and general environmental attitudes were significant predictors of green purchasing behavior among American consumers. In Ajzen's (1991) Theory of Planned Behavior (TPB) attitude was thought to be a critical predictor of behavioral

intention. In summary, it is believed that a positive attitude toward the environment will result in the purchase of environmentally-friendly products, whereas a negative attitude toward the environment will dissuade consumers from buying such products (McCarty & Shrum, 1994).

Intervening Variables

Perceived product necessity

Consumers buy two types of products – luxuries and necessities. Luxury items require higher investment of time and money, involve higher risks and a more careful search by consumers for information. On the other hand, necessities are commonly owned products that carry a lower risk and tend toward less complexity in decision making. Consumers show a different degree of willingness to buy environmentally-friendly products in cases of luxury and necessity products. It is believed that when a product is a necessity, consumers' attitude toward the environment will not play a major role in affecting purchasing behavior for environmentally-friendly products. In contrast, Sharma et al. (1995) and Solomon (1996) argued that consumers' attitude toward the environment in relation to necessities should have a more substantial impact on their purchase behavior.

Willingness to pay more

H'Mida et al (2008) in their study, argued that if a consumer is environmentally conscious, he/she would show greater willingness to pay more for a green product. Nevertheless, in a study conducted in India by Manaktola and Jauhari (2007), it was found that despite Indian consumers' positive attitude toward hotels adopting green practices, they were unwilling to pay more for them. Hence a positive attitude toward the environment might not translate to a willingness to pay more for green products. In a cross-cultural study conducted by Sriram and Forman (1993) it was observed that for high-involvement products (such as cars and washing machines) environmental characteristics were not important to consumers if that implied paying a higher price. In contrast, consumers were willing to pay more if products were in the low-involvement category (recycled paper).

Personal Benefits

Previous literature has noted a gap between consumers' positive attitude toward the environment and their purchasing behavior of environmentally-friendly products or recycling compliance. Engaging in responsible environment behavior requires investment of time, money, and other costs. Thus, consumers who have a positive attitude toward the environment may not necessarily buy environmentally-friendly products. Studies on consumer behavior show that despite a large number of consumers expressing their concern for environmental problems, few are willing to sacrifice their personal lifestyle or are willing to act at personal expense for the benefit of the environment. Stanley and Lasonde (1996) argued that consumers with pro-environmental attitudes might not engage in specific environmental behavior as their choices may be based on personal benefits and costs. Follows and Jobber (2000) argued that purchase of green products is a result of a trade-off between environmental issues and the individual's cost-benefit assessment. Carrete et al. (2012) who studied 15 Mexican families in four urban regions. found that respondents were willing to engage in environmentally-friendly behavior only when the economic benefits were perceived as being higher than the non-monetary costs.

Environmentally Conscious Behavior

Zelezny and Schultz (2000) defined environmental consciousness as an element of the belief system which refers to specific psychological factors related to individual's likelihood to engage in pro-environmental behavior. Stern (1997) explained that pro-environmental behavior encompasses all kinds of behavior that save valuable resources, such as energy and materials, in the environment. In similar vein, Steg and Vlek (2009) defined pro-environmental behavior as "behavior that harms the environment as little as possible or even benefits the environment" (p. 309). All three definitions point to the fact that environmentally conscious consumers

attempt to preserve the environment by opting for alternatives that are friendly and do less damage. Sanchez and Lafuente (2010) employed a behavioral dimension of environmental consciousness to distinguish between three types of behavior: environmental activism (collective behaviors such as belonging to an environmental group); individual behavior (recycling); and others which are related to higher costs (green consumer behavior, reducing the use of a car, etc). Hence, as per these authors, environmental consciousness is the degree to which a person engages in diverse pro-environmental behavior, particularly those which are costly.

One of the reasons why the extant literature has portrayed such a fragmented picture of environmentally conscious behavior is because of its multidimensional perspective and difficulties in measurement. Individuals vary in their degree of environmental consciousness ranging from a general concern for the environment to more specific product-related behavior (Sharma & Bansal, 2013). As explained earlier, researchers might not be able to provide an adequate explanation on environmentally conscious behavior based on attitude toward the environment. There are many more variables such as product necessity, personal benefits and willingness to pay more, which are likely to intervene in the relationship between environmental attitude and environmentally conscious behavior. Consumers may show different types of environmentally conscious behavior with some engaging in a high degree of such behavior whilst others may choose not to perform such behavior. In the area of environmentally conscious purchasing behavior, previous research has focused on the purchase of personal and household goods/services (energy for the home, travel), environmentally-related goods (heating and cooling the house), household waste disposal and green consumerism (buying recycled products and organic food) (Park & Ha, 2012). Based on the literature reviewed in previous sections, the study proposes a framework for environmentally

conscious behavior as shown in Fig 1 below:

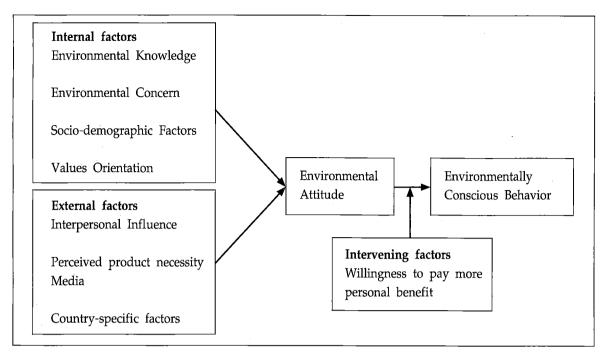


Fig. 1: Proposed framework

Conclusion

Evidence shows that 30 to 40 percent of environmental degradation has been caused by the consumption activities of private households (Grunert, 1993), hence consumers must be made to realize the hazardous impacts of environmental degradation on their well-being. This paper attempts to identify and explain extant literature on environmental consciousness and its antecedents. The multidimensional framework can provide marketers with a better understanding of environmental consciousness so as to design appropriate marketing strategies and message appeals. The socio-demographic and value orientations in the framework will also assist in targeting segments of environmentally conscious consumers, allowing marketers to assess the segments' attractiveness so that the right positioning strategy is arrived at for each segment.

References

- Aaker, D.A. & Bagozzi, R.P. (1982). Attitudes toward public policy alternatives to reduce air pollution. *Journal of Marketing*, *1*, 85-94.
- Ajzen, I. & Fishbein, M. (1977). Attitude-behavior relations: a theoretical analysis and review of

- empirical research. *Psychological Bulletin, 84* (5), 888-918.
- Ajzen, I. & Madden, T. (1986). Predictions of goal-directed behavior: attitudes, intentions and perceived behavioral control. *Journal of Experimental Social Psychology*, 23(5), 453-474.
- Ajzen, I. (1991). Theory of Planned Behavior. Organization Behavior and Human Decision Processes, 50, 179-211.
- Akehurst, G., Afonso, C. & Gonçalves. (2012). Re-examining green purchase behavior and the green consumer profile: new evidences. *Management Decision, 50*(5), 972-988.
- Anderson, W.T., Henion, K.E., & Cox, E.P. (1974). Socially vs. ecologically responsible consumers. AMA Combined Conference Proceedings, 36, Spring and Fall, 304-311.
- Anderson, W.T. Jr. & Cunningham, W.H. (1972).

 The socially conscious consumer. *Journal of Marketing*, *36*, July, 23-31.
- Awad, T.A. (2011). Environmental segmentation alternatives: buyers' profiles and implications. *Journal of Islamic Marketing*, *2*(1), 55-73.
- Baker, W.E. & Sinkula, J.M. (2005). Environmental marketing strategy and firm performance:

- effect on new product performance and market share. *Journal of the Academy of Marketing Science, 33*(4), 461-475.
- Balderjahn, I. (1988). Personality variables and environmental attitudes as predictors of ecologically responsible consumer patterns. *Journal of Business Research*, 17(1), 51-56.
- Bandura, A. (1986). Social cognitive theory, in Vasta, R. (Ed.), *Annals of Child Development:*Six theories of child development, 6. JAI Press, Greenwich, CT: 1-60.
- Banerjee, S. B., Iyer, E.S. & Kashyap, R.K. (2003). Corporate environmentalism: antecedents and influence of industry types. *Journal of Marketing*, *67*(2), 21-34.
- Bangkok Post (2013). Climate report offers glimpse of scary future. November 4, p. 7.
- Beard, C. & Hartmann, R. (1997). Naturally enterprising eco-design, creative thinking and the greening of business products. *European Business Review*, *97*(5), 237-243.
- Bearden, W.O., Netemeyer, R.C. & Teel, J.E. (1989). Measurement of consumer susceptibility to interpersonal influence. *The Journal of Consumer Research*, 15(4), 473-481.
- Bei, L.T. & Simpson, E.T. (1995). The determinants of consumers' purchase decisions for recycled products: an application of acquisition-transaction utility theory, in Kardes, F.R. and Sujan, M. (Eds.) Advances in Consumer Research, Provo, UT, 257-261.
- Bezençon, V. & Blili, S. (2010). Ethical products and consumer involvement: what's new? *European Journal of Marketing*, 44(9/10), 1305-1321.
- Carrete, L., Castaño, R., Felix, R., Centeno, E. & González, E. (2012). Green consumer behavior in an emerging economy: confusion, credibility, and compatibility. *Journal of Consumer Marketing*, 29(7), 470-481.
- Carson, P. & Moulden, J. (1991). *Green is gold:* business talking to business about the environmental revolution. Harper Business, Toronto.
- Chan, R.Y.K. & Lau, L.B.Y. (2000). Antecedents of

- green purchases: a survey in China. *Journal* of Consumer Marketing, 17(4), 338-357.
- Cheah, I. & Phau, I. (2011). Attitudes towards environmentally friendly products -the influence of ecoliteracy, interpersonal influence and value orientation. *Marketing Intelligence & Planning*, 29(5), 452-472.
- Crosby, L.A., Gill, J.D., & Taylor, J.R. (1981). Consumer voter behavior in the passage of the Michigan container law. *Journal of Marketing*, 45, Spring, 19-32.
- Davis, K. (1973). The case for and against business assumptions of social responsibilities. *Academy of Management Journal*, 16(2), 312-322.
- de Paço, A. & Raposo, M. (2009). Green segmentation: an application to the Portuguese consumer market. *Marketing Intelligence & Planning*, 27(3), 264-379.
- Diamantopolous, A., Schlegelmilch, B.B., Sinkovics, R.R. & Bohlen, G.M. (2003). Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation. *Journal of Business Research*, 56(6), 465-480.
- Dispoto, R.G. (1997). Interrelationships among measures of environmental activity, emotionality and knowledge. *Educational and Psychological Measurement*, *37*, Summer, 451-459.
- D'souza, C., Taghian, M. & Khosla, R. (2007). Examination of environmental beliefs and its impact on the influence of price, quality and demographic characteristics with respect to green purchase intention. *Journal of Targeting, Measurement and Analysis for Marketing,* 15(2), 69-78.
- Dunlap, R.E. & Jones, R. (2002). Environmental Concern:
 Conceptual and Measurement Issues. In
 Handbook of Environmental Sociology edited
 by Dunlap and Michelson. 482-542. London:
 Greenwood Press,
- El-Ansary, A.I. (1974). Societal marketing: a strategic view of the marketing mix in the 1970s. *Journal of the Academy of Marketing Science*, 2(4), 553-566.
- Follows, S. and Jobber, D. (2000). Environmentally

- responsible purchase behavior: a test of consumer model. *European Journal of Marketing, 34* (5/6), 723-746.
- Galbreath, J. (2009). Building corporate social responsibility into strategy. *European Business Review*, 21(2), 109-127.
- Gilg, A., Barr, S. & Ford, N. (2005). Green consumption or sustainable lifestyles? Identifying the sustainable consumer. *Futures*, *37* (6), 481-504.
- Granzin, K.L. & Olsen, J.E. (1991). Characterizing participants in activities protecting the environment: a focus on donating, recycling, and conservation behaviors. *Journal of Public Policy & Marketing*, 10, 1-27.
- Grunert, S. C. (1993). Everybody seems concerned about the environment but is this concern reflected in (Danish) consumers' food choice? *European Advances in Consumer Research*, 1, 428-433.
- Gronhoj, S. (2006). Communication about consumption: a family process perspective on 'green' consumer practices. *Journal of Consumer Behavior*, *5*(6), 491-504.
- Han, H., Hsu, L.T.J., Lee, J.S. & Sheu, C. (2011). Are lodging consumers ready to go green? An examination of attitudes, demographics, and eco-friendly intentions. *International Journal of Hospitality Management*, 30(2), 345-355.
- Hines, J.M., Hungerford, H.R., & Tomera, A.N. (1987). Analysis and synthesis of research on responsible environmental behavior: a meta-analysis. *Journal of Environmental Education*, 18(2), 1-8.
- H'Mida,S., Chavez, E., and Guindon, C. (2008). Determinants of pro-environmental behaviors within individual consumers. *Journal of Economic Literature (JEL) Classification M, 32*, 1-12.
- Hofstede, G. (1980). Culture's Consequences: International Differences in Work-related Values. Sage, Newbury Park, CA.
- Hofstede, G. (1994) *Cultures and Organizations. Software of the Mind.* Harper Collins Publishers,
 London.

- Jackson, T. (2005). Motivating sustainable consumption: a review of evidence on consumer behaviour and behavioural change. Report to the Sustainable Development Research Network, SDRN, Surrey.
- Kahle, L.R. (1996). Social values and consumer behavior: research from the list of values. *The Psychology of Values: The Ontario Symposium, 8,* Lawrence Erlbaum Associates, Hillsdale, NJ: 135-150.
- Kassarjian, H.H. (1971). Incorporating ecology into marketing strategy: the case of air pollution. *Journal of Marketing*, *35*(7), 61-65.
- Kilkeary, R. (1975). The energy crisis and decision making in the family. *The National Technical Information Service*, US Department of Commerce, PB238782.
- Kim, Y. & Choi, S.M. (2005). Antecedents of green purchase behavior: an examination of collectivism, environmental concern, and perceived consumer effectiveness. *Advances in Consumer Research*, 10, May, 191-197.
- Kinnear, T.C., Taylor, J.R., and Sadrudin, A.A. (1974). Ecologically concerned consumers: who are they? *Journal of Marketing*, *38*, 20-24.
- Kotler, P. & Levy, S.J. (1969). Broadening the concept of marketing. *Journal of Marketing*, *33*(1), 10-15.
- Kotler, P. & Zaltman, G. (1971). Social marketing: an approach to planned social change. *Journal of Marketing*, 35(3), 3-12.
- Laroche, M., Bergeron, J. & Barbaro-Forleo, G. (2001).

 Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing*, 18(6), 503-520.
- Laroche, M., Toffoli, R., Kim, C., and Muller, T.E. (1996). The influence of culture on pro-environmental knowledge, attitudes, and behaviors: a Canadian perspective, in Corfman, K.P. and Lynch, J.G. (Eds), *Advances in Consumer Research*, Association for Consumer Research, Provo, Utah, *23*, 196-202.
- Lavidge, R.J. (1970). The growing responsibilities of marketing. *Journal of Marketing*, *34*(1), 25-28.

- Leonidou, C. & Leonidou, L. (2011). Research into environmental marketing/management: a bibliographic analysis. *European Journal of Marketing*, 45 (1-2), 68-103.
- Leonidou, C., Leonidou, L., & Kvasova, O. (2010).

 Antecedents and outcomes of consumer environmentally friendly attitudes and behavior. *Journal of Marketing Management, 26* (13/14), 1319-1344.
- Luzio, J.P.P. & Lemke, F. (2013) Exploring green consumers' product demands and consumption processes The case of Portuguese green consumers. *European Business Review, 25* (3), 281-300.
- Mainieri, T. & Barnett, E. (1997). Green buying: the influence of environmental concern on consumer behavior. *Journal of Social Psychology*, 137 (2), 189-204.
- Manaktola, K. & Jauhari, V. (2007). Exploring consumer attitude and behavior towards green practices in the lodging industry in India. *International Journal of Contemporary Hospitality Management,* 19 (5), 364-377.
- McCarty, J.A. & Shrum, L.G. (1994). The recycling of solid wastes: personal values, value orientations and attitudes about recycling as antecedents of recycling behavior. *Journal of Business Research*, *30* (1), 53-62.
- McCarty, J.A. & Shrum, L.G. (2001). The influence of individualism, collectivism, and locus of control on environmental beliefs and behavior. *Journal of Public Policy & Marketing, 20* (1), 93-104.
- McEvoy, J. III (1972). The American concern with the environment, in Burch, W.B. Jr., Check, N.H. and Taylor, L. (Eds.), *Social Behavior*, *Natural Resources and the Environment*, Harper & Row, New York, NY.
- Menguc, B. & Ozanne, L.K. (2005). Challenges of the 'green imperative': a natural resource-based approach to the environmental orientation-business performance relationship. *Journal of Business Research*, 58 (4), 430-438.
- Mostafa, M.M. (2007). Gender differences in Egyptian consumers' green purchase behavior: the effects

- of environmental knowledge, concern and attitude. *International Journal of Consumer Studies*, 31(3), 220-229.
- Mysen, T. (2012). Sustainability as corporate mission and strategy. *European Business Review*, 24, (6), 496-509.
- Newell, S.J. & Green, C.L. (1997). Racial differences in consumer environmental concern. The *Journal of Consumer Affairs*, 31(1), 53-69.
- Olson, E. (2013). It's not easy being green: the effects of attribute tradeoffs on green product preference and choice. *Journal of the Academy of Marketing Science*, 41(2), 171.
- Park, J. & Ha, S. (2012). Understanding pro-environmental behavior A comparison of sustainable and apathetic consumers. *International Journal of Retail & Distribution Management, 40* (5), 388-403.
- Peattie, K. (1995). Environmental Marketing Management: Meeting the Green Challenge. Pitman, London.
- Rios, F., Martinez, T., Moreno, F., & Soriano, P. (2006). Improving attitudes toward brands with environmental associations: an experiential approach. *The Journal of Consumer Marketing*, 23(1), 26-34.
- Roberts, J.A. (1996). Green consumers in 1990s: profile and implications for advertising. *Journal of Business Research*, *36*(3), 217-231.
- Roberts, J.A. & Bacon, D.R. (1997). Exploring the subtle relationship between environmental consciousness and environmentally conscious consumer behavior. *Journal of Business Research*, 40, 79-89.
- Rokeach, M. (1986). *Beliefs, Attitudes and Values: A Theory of Organization and Change.* Jossey-Bass, San Francisco, CA.
- Samdahl, D.M. & Robertson, R. (1989). Social determinants of environmental concern: specification and test of the model. *Environment & Behavior*, *21*(1), 57-81.
- Sanchez, M.J. & Lafuente, R. (2010). Defining the measuring environmental consciousness. *Revista Internacional de Sociologia (RIS), 68,* Septembre-Decembre, 731-755.

- Schahn, J., & Holzer, E. (1990). Studies of individual environment concern the role of knowledge, gender, and background variables. *Environment & Behavior*, 22: 767-786.
- Schwartz, S.H. (1977). Normative influences on altruism, in Berkowitz, I. (Ed.) *Advances in Experimental Social Psychology, 10*, 222-279. Academic Press, New York, NY,
- Schwartz, J. & Miller, T. (1991). The earth's best friends. *American Demographics*, 13, 26-35.
- Sharma, S., Shimp, T.A. & Shin, J. (1995). Consumer ethnocentrism: a test of antecedents and moderators. *Journal of the Academy of Marketing Science*, 23(1), 26-37.
- Sharma, K. & Bansal, M. (2013). Environmental consciousness, its antecedent and behavioural outcomes. *Journal of Indian Business Research*, *5*(3), 198-214.
- Shaw, D. & Shiu, E. (2003). Ethics in consumer choice: a multivariate modeling approach. *European Journal of Marketing*, 45 (7/8), 1051-1067.
- Solomon, M. (1996) Consumer Behavior: Buying, Having, and Being. Prentice-Hall, USA.
- Sriram, V. & Forman, A.M. (1993). The relative importance of products' environmental attributes: a cross-cultural comparison. *International Marketing Review*, *10*(3), 51-70.
- Stainer, A. & Stainer, R. (1997). Ethical dimensions of environmental management. *European Business Review*, *97*(5), 224-230.
- Stanley, L.R. & Lasonde, K.M. (1996). The relationship between environmental issue involvement and environmentally-conscious behavior: an exploratory study. Advances in Consumer Research, 23, 183-188.
- Stern, P.C. (1997). Toward a working definition of consumption for environmental research and policy, in Stern, P.C., Dietz, T., Ruttan, V.R., Socolow, R.H. and Sweeney, J.L. (Eds.) *Environmentally Significant Consumption: Research Direction*, National Academy Press, Washington, DC., 12-35.
- Steel, B.S. (1996). Thinking globally and acting locally? Environmental attitudes, behavior and activism. *Journal of Environmental*

- Management, 47(1), 27-36.
- Steg, L. & Vlek, C. (2009). Encouraging pro-environmental behavior: an integrative review and research agenda. *Journal of Environmental Psychology*, 29(3), 309-317.
- Stern, P., Dietz, T. & Guagnano, G.A. (1993). Value orientations, gender and environmental concern. *Journal of Social Issues*, *50*(3), 65-67.
- Stern, D. I. (1997). Interpreting ecological economics in the neoclassical paradigm: limits to substitution and irreversibility in production and consumption, *Ecological Economics* 21, 197-215.
- Straughan, R. & Roberts, J.A. (1999). Environmental segmentation alternatives: a look at green Consumer behavior in the new millennium. *Journal of Consumer Marketing*, 16(6), 558-575.
- Takas, A. (1974). Societal marketing: a businessman's perspective. *Journal of Marketing*, 38 (4), 2-7.
- Tilikidou, I. (2013). Evolutions in the ecologically conscious consumer behavior in Greece. *EuroMed Journal of Business, 8*(1), 17-35.
- Triandis, H.C. (1982). Dimensions of cultural variation as parameters of organization theories. *International Studies of Management and Organization*, 12(4), 139-169.
- Triandis, H.C. (1992). Handbook of industrial and organizational psychology, 2nd ed. Davies Black Publication.
- United Nations Environmental Programme (UNEP) (2010). Assessing the environmental impacts of consumption and production: priority products and materials. www.unep.org/resoucepanel/documents/pdf/PriorityProductsAnd Materials_Report_Full.pdf. (accessed 12 September, 2013).
- Van Liere, K.D. & Dunlap, R.E. (1981). Environmental concern: does it make a difference how it's measured? *Environment and Behavior*, 13 (3), 651-676.
- Van Doorn, J. & Verhoef, P.C. (2011). Willingness to pay for organic products: differences between virtue and vice foods. *International Journal of Research in Marketing*, 28(3), 167-180.

- Zelezny, L.C. & Schultz, P.W. (2000). Promoting environmentalism. *Journal of Social Issues*, *56*, 365-371.
- Zimmer, M., Stafford, T.F. & Stafford, M.R. (1994). Green issues: dimensions of environmental concern. *Journal of Business Research*, *30* (1), 63-74.