

ECOLOGICAL CONSUMER BEHAVIOUR: REVIEW AND SUGGESTIONS FOR FUTURE RESEARCH

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In early seventies marketing was considered as an activity rather unfriendly to the environment. It has been criticized as a contributing factor to what is known as "overconsumption".

Overconsumption is considered as responsible for certain aspects of environmental degradation of today. In nineties facing the crisis and protecting the environment is the "name of the game".

Different disciplines are approaching environmental protection. Ecological marketing nowadays aims to offer its contribution to this global problem.

Peattie (1995, p. 28) defines ecological-environmental marketing as "... the holistic management process responsible for identifying, anticipating and satisfying the requirements of customers and society, in a profitable and sustainable way". Ecological marketing is thought to be a part of the *societal* (Kotler, 1991, p. 15) and the *social* (Lazer, 1993, p. 47; Bloom and Novelli, 1981, p. 87; Sarmaniotis, 1991, p. 53) marketing concepts.

Ecological marketing may be adopted by either businesses or non-profit organisations. It is apparent though, that no organisation would undertake the risk and the trouble to adopt an ecological strategy, unless it is forced by regulation or unless it is convinced that there is a profitable segment of ecologically conscious consumers in the market.

Recent research suggests that in the last decade there is an impressive increase in environmental consciousness in U.S.A (The Angus Reid Group, 1991; Hastak, et al., 1994) and in Great Britain (Dembkowski and Hanmer-Lloyd, 1994). The question is if the increase in environmental concern impacts on consumer behaviour. The

ABSTRACT

In this paper a literature review on Ecological Conscious Consumer (E.C.C.) and his/her behaviour is presented. A taxonomic synopsis of the findings is appeared in a detailed table. The data analysis leads to the conclusion that several important differences exist. Most of the studies have focused on fragmentary aspects of E.C.C. A theoretical framework is proposed, as an attempt to meet the challenges of such a research effort. The dimensions of this framework are also discussed. Future research may undertake the task to provide data within this holistic and multidimensional approach.

RÉSUMÉ

Ce travail présente une revue bibliographique sur le Consommateur Conscient Ecologique (C.C.E.) et son comportement. Un tableau détaillé donne le résumé taxonomique des résultats. L'analyse des données fait ressortir des différences importantes. La plupart des études ont porté sur les aspects fragmentaires du C.C.E. Le cadre théorique proposé essaie de relever les défis d'un tel effort de recherche. Les recherches futures pourraient viser à fournir des données dans le cadre de cette approche holistique et multi-dimensionnelle.

research data indicate that there is a rather contradictory picture of consumer views. In U.S.A 70% to 90% have suggested that they are concerned with or influenced by the environmental impacts of their purchases (Chase and Smith, 1992; Cramer, 1991). In a A.J. Walter Thompson survey in 1990 (Shrum, et al., 1995) 82% of the respondents supported that they would be willing to pay 5% more for a product that was environmentally friendly, while the previous year that part was only 49% (Levin, 1990). In England, Schlegelmilch, et al.,

(1996) believe that the increase in environmental consciousness has a profound effect on consumer behaviour with the "green" product market expanding at a remarkable rate.

Their opinion is consistent with a MINTEL survey results which concluded that 27% of British adults were prepared to pay up to 25% more for green products (Prothero, 1990).

There are also opposite opinions to this belief. Troy (1994) argues that "consumer purchases don't seem to reflect their intentions as measured by environmental surveys". Peattie (1995, p. 154) suggests that "... such observed differences are usually blamed upon an over-reporting of environmental concern and not in purchase".

Shrum, et al., (1996) argue that "both social marketers and traditional marketers point out to the fact that, polls results aside, both voluntary compliance and purchase of green products are not very impressive".

The picture in Greece seems rather similar to this last observation. The very few in number relevant studies show a "gap" between ecological concern and purchasing behaviour (Centrum/Yankelovich, 1993; Sarmaniotis and Tilikidou, 1994; Pantis et al., 1996).

This paper aims to present an updated review of relevant literature, to comment on the findings and to investigate possible dimension for future research.

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A holistic theoretical framework is also discussed as an alternative approach.

REVIEW OF LITERATURE

A selected number of relevant articles, covering two and a half decades is presented in Table I. This review contains 24 studies, in total, all of these surveys —with the exception of one experiment (Hopper and Nielsen, 1991) —in which probability sampling was used. The review covered 17 marketing articles, 7 publications from other social sciences such as business studies (Balderjahn, 1988) environmental studies (Dunlap, 1975) and sociology (Koenig, 1975; Buttel and Flinn 1976; Buttel, 1979; Hopper and Nielsen 1991; Scott and Willits, 1994).

The strong majority of the research studies agree that determining the characteristics of the ecologically conscious consumer (E.C.C.), and of the ecological consumer behaviour (E.C.B.) is not an easy task. Things are getting even harder when it is expected to draw implications for the marketers. The main issue refers to both the choice and the measurement of the variables. There is always a need to define the dependent and independent variables and the use of scaling in order to obtain the desirable measurement accuracy.

It is noticed that *dependent variables* vary either in terms of concept and/or construct. *Environmental Concern* is being found in 11 articles (Kassarjian, 1971; Anderson and Cunningham, 1972; Kinnear, Taylor and Ahmed, 1974; Koenig, 1975; Webster, 1975; Buttel and Flinn, 1976; Henion and Wilson, 1976; Murphy, Kangun and Locander, 1978; Buttel, 1979; Bohlen, Diamantopoulos and Schlegelmilch, 1993; Sarmaniotis and Tilikidou, 1998), while *Behaviour* is examined in 8 articles (Murphy, Lacznia and Robinson, 1979; Antil, 1984, Balderjahn, 1988; Pickett, Kangun and Grove, 1993; Scott and Willits, 1994; Shrum, McCarty and Lowrey, 1995; Schlegelmilch, Bohlen and Diamantopoulos, 1996; Sarmaniotis and Tilikidou, 1998) and *Recycling* is examined in 6 articles (Webster, 1975; Vining and Ebreo, 1990; Hopper and Nielsen, 1991; Ebreo and Vining, 1994; Sarmaniotis and Tilikidou, 1998; Shrum and McCarty, 1998). There are also two articles referring to *Proenvironmental activities* and to *Voting Preference* (Dunlap, 1975 and Crosby, Gill and Taylor, 1981).

A rather noticeable number of *independent variables* appears in the articles. An attempt is made to classify them in four categories: demographics, knowledge, attitudes and individual differences.

a. In reference to *demographics* most of the papers conclude that they are not very good predictor variables. Hardly though it is found a study avoiding their use. The findings for *age* do not always follow the same direction. There are studies establishing negative relationship between age and environmental concern, (Buttel and Flinn, 1976; Buttel 1979; Sarmaniotis and Tiliki-

dou, 1998), or zero relationship (Kassarjian, 1971; Kinnear, Taylor and Ahmed, 1974; Koenig, 1975; Murphy, Lacznia and Robinson, 1979; Antil, 1984; Bohlen, Diamantopoulos and Schlegelmilch, 1993; Pickett, Kangun and Grove, 1993; Shrum, McCarty and Lowrey, 1995). There are also some studies finding positive relationship (Balderjahn, 1988; Vining and Ebreo, 1990; Scott and Willits, 1994). It is hard to tell whether the young consumers are more or less environmentally concerned than their older counterparts. There is a possibility that people who were more ecologically conscious in early seventies are still the same in nineties, only now they are older. They are maybe the so-called baby boomers in U.S.A (Ottman, 1993, p. 20), born between 1946 and 1964, all original activists, anti-war, anti-big business and pro-environment. There is also a possibility that ecological consciousness, or a specific dimension of it, for instance recycling (Shrum et al, 1994) had been a relative novelty ten to fifteen years ago, while nowadays it is becoming a mainstream, being adopted regardless of age.

Income has been examined in several studies. In almost half of the cases income seems to be unrelated with the relevant dependent variable (Anderson and Cunningham, 1972; Koenig, 1975; Murphy, Kangun and Locander, 1978; Pickett, Kangun and Grove, 1993; Shrum, McCarty and Lowrey, 1995; Sarmaniotis and Tilikidou, 1998). The other half show a positive relationship (Webster, 1975; Balderjahn, 1988; Vining and Ebreo, 1994; Scott and Willits, 1994; Sarmaniotis and Tilikidou, 1998).

Education provides a similar pattern. Most of the studies failed in proving any relationship (Kassarjian, 1971; Anderson and Cunningham, 1972; Kinnear, Taylor and Ahmed, 1974; Koenig, 1975; Webster, 1975; Murphy, Lacznia and Robinson, 1979; Antil, 1984; Vining and Ebreo, 1990; Bohlen, Diamantopoulos and Schlegelmilch, 1993; Pickett, Kangun and Grove, 1993; Shrum, McCarty and Lowrey, 1995; Sarmaniotis and Tilikidou 1998). There are also some studies in which positive relationship has been indicated (Buttel and Flinn, 1976; Balderjahn, 1988; Scott and Willits, 1994; Sarmaniotis and Tilikidou 1998).

Sex has been examined scantily and it was found to be positively related in one study (Webster, 1975), where women appeared to be rather more sensitive. In contradiction Scott and Willits (1994) found men to be more ecologically concerned. All other studies have failed to establish any relationship.

In a few studies other socio-demographic variables have been examined, such as *occupation*, *marital status*, *number of children*, *persons in household* but no statistically significant differences were found.

b. *Knowledge* variable is appeared in three studies. Antil (1984) and Schlegelmilch, Bohlen and Diamantopoulos (1996), indicated positive relationship, while Pickett,

Kangun and Grove (1993) found no relationship between knowledge and behaviour.

c. In reference to *attitudes* the most analysed relationship is the attitude-behaviour link (Shrum, Lowrey and McCarty, 1994; Schlegelmilch, Bohlen and Diamantopoulos, 1996). Several measures of attitudes provide a variety of results. Positive relationship of behaviour were found with *Ecological Concern* Crosby, Gill and Taylor, (1981), Antil (1984), Balderjahn (1988), Scott and Willits (1994), Shrum, McCarty and Lowrey (1995), Schlegelmilch, Bohlen and Diamantopoulos (1996), and with *Social Responsibility* Sarmaniotis and Tilikidou (1998). Shrum and McCarty (1998) found negative relationship between *Recycling Behaviour* and *Inconvenience* and positive with *Importance*. Webster (1975), Murphy, Laczniaik and Robinson (1979), Pickett, Kangun and Grove (1993) and Ebreo and Vining (1994), in their efforts found that attitudes do not relate with behaviour variables.

d. The main variables falling into *individual differences* category are either *values* or *traits*.

Politics have been used by Kassarijahn (1971), Dunlap (1975), Koenig (1975), Bohlen, Diamantopoulos and Schlegelmilch (1993), Scott and Willits (1994), Schlegelmilch, Bohlen and Diamantopoulos (1996). *Altruism* has been used by Hopper and Nielsen (1991). *Alienation* has been used by Anderson and Cunningham (1972), Koenig (1975), Crosby, Gill and Taylor (1981), Balderjahn (1988), Pickett, Kangun and Grove (1993). *Perceived consumer effectiveness* by Kinnear, Taylor and Ahmed (1974), Webster (1975), Antil (1984) and *Locus of control* by Henion and Wilson (1976), Balderjahn (1988), Shrum and McCarty (1998). A plethora of other variables are found in limited number of studies (e.g. *Dogmatism* by Anderson and Cunningham, 1972, *Understanding* by Kinnear, Taylor and Ahmed, 1974, *Dominance* by Webster, 1975, *Individualism* and *Collectivism* by Shrum and McCarty, 1998). It seems that approximately half of the psychographic independent variables are related —although weakly according to the authors —with the dependent variables, while the other half are unrelated (**table 1**).

FUTURE RESEARCH DIRECTION

The preceded analysis of the related literature shows a considerable discrepancy in the findings in various environments. The most recent study in Greece (Sarmaniotis and Tilikidou, 1998) using a single measure including both attitudes and behaviour (Antil and Bennett, 1979)

did not succeed to provide conclusive evidence supporting the unidimensionality. The research data do not provide a well accepted E.C.C. profile in different countries. Place, time and methodology are usually considered as the main reasons of the observed differences. The theoretical framework as another possible reason fails to attract popularity. The overwhelming majority of the papers have focused on fragmentary aspects of the E.C.C. and his/her behaviour. A holistic theoretical framework could be challenged as a tentative effective approach. It can be defined as a framework which incorporates all the dimensions of the ecological consciousness concept. Acknowledging the difficulties of this attempt a version of such a framework is presented. *Ecological consciousness* (Schlegelmilch et al., 1996) is proposed, as a multidimensional construct. It obtains two main axes: the *ecological concern* and the *ecological consumer behaviour*. The first axis includes the *knowledge*, the *attitudes* and the *individual differences* dimensions. The second axis includes the *pro-environmental purchase*, the *pro-environmental post-purchase* and the *pro-environmental activities* dimensions (**figure 1**). The content of each dimension follows.

Knowledge is considered a necessary predictor variable. As Peattie (1995, p. 161) points out “the theory is that consumers who are knowledgeable about environmental problems, will be motivated towards green consumer behaviour...”. To establish the links in the research effort between environmental knowledge and behaviour is not an easy task. (Hines et al., 1987; Schann and Holzer, 1990; Martin and Simintiras, 1995; Amyx, et al., 1994). The main difficulty is to clarify the adequate content of environmental knowledge. A possible approach to capture the essence of it might focus on research points such as: the degree and the depth of

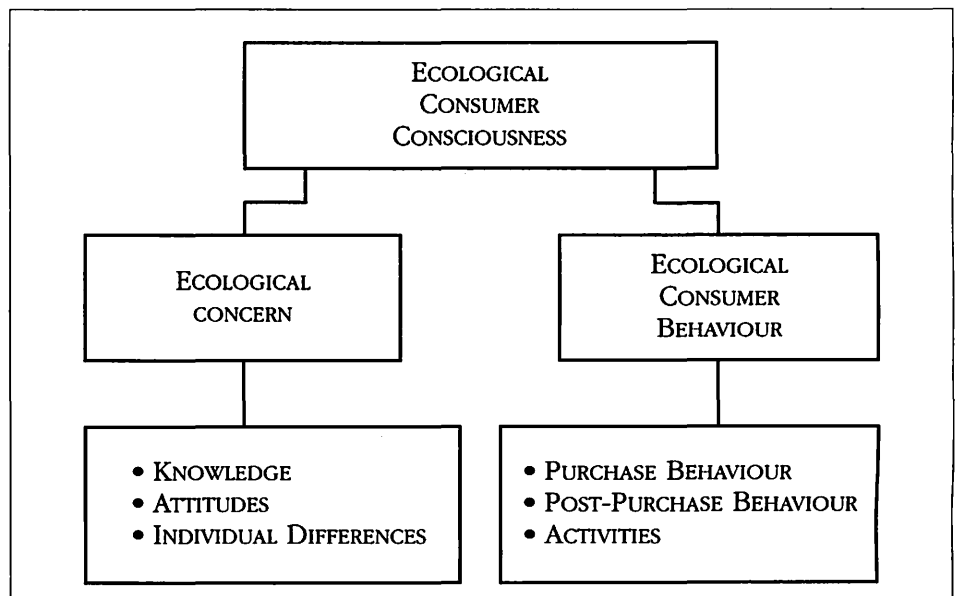


Figure 1 - A holistic framework.



information a person holds on certain, global environmental problems, the sources of such information, the perceived importance of these problems and the information about possible actions a person can adopt in favour of the environmental protection.

In reference to *attitudes*, the exploratory power of a general attitude construct seems unsuitable for this framework. There is a definite need for a specific attitude construct (Martin and Simintiras, 1994; Schlegelmilch et al., 1996). An approach to this direction may focus on the following research points which refer to the consumer's attitude towards: é) the problem of the environment in general (how serious they feel it is), ii) the importance of the environmental problems as compared with other global problems (economy, education, unemployment etc.), iii) the ecologically friendly products, versus the ecologically harmful products, iv) the responsibility of social actors involved into the environmental protection (government, ecological groups, businesses etc.), v) the post-purchase activities protecting the environment, vi) other, various pro - environmental activities.

The *individual differences* dimension contains personality variables, values and lifestyle psychographic measures. A clear majority of the papers suggests that psychographics are better predictor variables than demographics in consumer research. Psychographics provide deeper, more internal information about persons (Engel et al., 1990, p. 701). They help marketers in under-

standing consumer motivation and their results are mostly used in the development of creative, communication strategies. The critical point here is which specific psychographics might describe better the E.C.C.. This point is beyond the aim of this paper.

Ecological *purchase behaviour* is centred around the *avoidance* of ecologically harmful products and the *choice* of buying ecologically "friendly" products. A consumer's intention to buy "green" might be viewed through a marketing mix standpoint. This view raises research issues in *product* (what specific products are consumers most likely willing to buy?), in *price* (are consumers willing to pay more and how much more for each product category?), in *promotion* (what promotion tools seem to be more effectively communicative?), in *place* (where would the consumers like to find and buy the ecological products?).

Recent research shows the importance of *recycling* as the key element of *post-purchase behaviour* (Peattie, 1995, p. 89). Shrum et al. (1994) offer a marketing mix framework to examine recycling programme, which applies directly to the proposed holistic framework. According to them a particular recycling programme is a product, which is marketed to the general public or consumers. Price may be thought as the cost of the recycling to the individual, which may take the form of financial cost, or cost of time and effort (inconvenience). Distribution may be thought as the means of accomplishing the recycling, where and how is the consumer

going to give away his trash after sorting it. Promotion mix as well may use several techniques, such as advertising a recycling programme, or offering incentives such as contests, raffles and lotteries. This last *pro-environmental activities* dimension has been rather neglected by academic research. A relevant construct, suitable for this holistic framework might contain other, besides purchase, pro-environmental activities, such as: not throwing trash on the ground, energy conservation (less warm water, less electricity), water conservation, making less noise, cleaning a shore, a park, a school yard, demonstration against an environmentally hazardous programme, giving money to an ecological organisation, membership into an ecological organisation, voting for a green party, or a green candidate etc.

CONCLUDING REMARKS

Given the extant literature, this paper tried a taxonomic synopsis of the findings (**table 1**) and commented on the issues associated with the Ecological Conscious Consumer (E.C.C.) and his/her behaviour. The data analysis leads to the conclusion that several important differences exist. The findings do not support a well accepted E.C.C. profile in different countries. Most of the studies have focused on fragmentary aspects of E.C.C. concept and his/her behaviour. A theoretical framework is proposed as an attempt to overcome data discrepancy. The dimensions of this framework are also discussed. Future research may undertake the task to provide data within this holistic and multidimensional approach. ●

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