

Investigation on Selected Factors (Demographic And Psychological) on Ecological Conscious Consumer behavior

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ABSTRACT

The goal of this research is to investigate the effects of demographical variables include age, gender, income, and education, and psychological factors include liberalism, environmental concern, and perceived consumer effectiveness on ecologically conscious consumer behavior. The method which has been used in the current study is descriptive-field study one and the main tools of the gathering of the data were questionnaires which have been distributed among the students from different selected universities. Analysis of the data carried out by the method of multi-variation analysis by using *LISREL* and *SPSS* software. The results of applying one way variance analysis show that among demographic characteristics just age and income have positive and meaningful influence on the ecologically conscious consumer behavior. Also the findings of utilizing factor analysis by *LISREL* software indicate Liberalism has a negative effect meanwhile “environmental concern” and “perceived consumers behavior” have a positive influence on the ecologically conscious consumer behavior.

KEYWORDS: Ecological conscious, consumer behavior, psychological factors, demographic characteristics, green marketing.

1. INTRODUCTION

Business ethics as an academic field deals broadlyly with moral criticism of business behavior. Within a market economy, business behavior is dependent to consumer behavior. Quite often businesses get the consumers they deserve and vice versa. Rather than criticizing business alone or passing on the blame to the market and to the consumers, it seems more fruitful to consider child labour, environmental risks, consumer theft as a shared responsibility of business and consumers. Ethical trade and ethical shopping initiatives invite consumers to take moral responsibility for consequences of purchasing behavior, i.e. how other people, animals and other natural environments directly or indirectly are influenced. In the internet age, such self-organization has become much more economically, easier and technologically (Brinkmann, 2003).

As the new millennium draws near, key questions remain unanswered. What is the nature of the ecologically conscious consumer of the future? Do these consumers differ from the ecologically conscious consumer of the past, and if so, how do they differ? A review of past literature in the area of ecologically conscious consumer behavior and an assessment of segmentation alternatives will be followed by the results of an empirical studies of ecologically conscious consumer behavior (ECCB) among college students. A discussion of these findings will attempt to shed light on the state of green marketing as we prepare for the new millennium (Straughan & Roberts, 1999).

So the main purpose of writing this paper is trying to survey the influence of ecological and demographic characteristics on ecological conscious consumer behavior in Iran Universities students.

2. LITERATURE REVIEW

2.1. Ecological consumer behavior

The ecologically oriented research has never been in the mainstream of the marketing academic community (Schlegelmilch et al, 1996). Also, certain marketing activities have been blamed as hostile to the environment due to the fact which they force consumers and customers to over-consumption. Indeed, there is some evidence which 30-40 percent of the environmental degradation has been brought about by the consumption activities of private households (Grunert & Grunert, 1993). There are certain suggestions which the overall consumption should be decreased in order to decrease the overall environmental damages (Kilbourne & Prothero, 1997).

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Definitely the environmental protection goals need multi-disciplinary cooperation. Within the marketing community, during the last three decades, a large of academics argued that both public policy and business should become more environmentally sensitive and socially responsible to respond to the people's increasing environmental concerns (Roberts & Bacon, 1997). Among other socio-economic sciences the Ecological Marketing "requires and wants" to offer its own contribution to the environmental protection. Therefore marketing may become a part of the solution (Peattie, 1995).

Indeed, the ecological marketing research has produced fruitful knowledge broadly with reference to the investigation of the factors which might be able to affect pro environmental behavioural changes (Jackson, 2005). This knowledge aims to be useful both to the public policy makers and to the organizations, that are interested in adopting ecological strategies of any type. It is common knowledge which the green markets remain marginal, while the tendency to over-consumption is the rule in all developed countries.

Although at times firms have mainly been accused of being responsible to cause environmental problems through, for example, utilizing inappropriate equipment, dangerous substances, and non-recyclable materials, consumers have also been blamed for their uncontrollable consumption of products and irresponsible treatment of the environment (Banerjee, 2002). On the one hand, understanding the motives, attitudes, behaviour, and actions of consumers with regard to ecological issues is of paramount importance in alleviating part of the problems associated with the environment (Roberts & Bacon, 1997). Thus a deeper understanding of the characteristics of green consumers by firms can lead to the design of more efficient and effective sustainability marketing programs (Rundle-Thiele *et al.*, 2008).

However, there is not still clear consensus in the extant literature regarding the forces motivating environmental concern among consumers, especially as regards cultural, societal and ethical ones. Also there is not adequate understanding about the consumer eco-friendly attitude-behaviour link, when the literature has treated the measurement of environmental attitudes and behaviour in a composite manner (Leonidou *et al.*, 2010).

2.2. Characteristics of Potential Customers

The nature of the green consumers must be understood to be able to introduce valuable incentives to enhance consumer uptake. Consumers' knowledge should be the focal point of all marketing activities (Bell & Emory, 1971). Studies have been conducted that address the features of green consumers. The researches have distinguished qualities of people who are likely to exhibit Ecologically Concerned Consumer Behaviour (ECCB) (Passey & Watt, 2002). These consumer features centre on (a) demographics including age, sex, income, education, and place of residence and (b) psychographics including political orientation, liberalism, perceived consumer effectiveness and environmental concern (Said, 1996).

So, in recent years, the analysis of some psychological variables, such as environmental concern, perceived consumer effectiveness, environmental knowledge, and collectivism have been broadly utilized. It can be said that environmental awareness and concern have enhanced since the early 1970's, but an attitude-behavior gap still exists Albayrak *et al.*, 2011).

2.3. Psychological Characteristics

2.3.1. Liberalism: refers to the political ideology that falls on the "left" dimensions of the broad left-right cleavage. Individuals with liberalistic views believe that organizations should be controlled in terms of their activities and outcomes, especially when these are harmful for society. In this respect, a politically liberal individual is more likely to have an environmentally-friendly spirit, since firms usually resist the environmental regulations imposed by governments (Leonidou *et al.*, 2010).

2.3.2. Environmental Concern (EC): Environmental concern has lots of definitions that depend on perspective as well as on its complicated and unstable nature. Several researches assume that environmental concern is synonymous with environmental attitude (Chan & Lau, 2004). Environmental concern is accepted as an individual's awareness of environmental problems and that individual's attempts to solve either them or willingness to contribute to such attempts. In the last thirty years, research efforts have provided a better understanding of environmental concern's theoretical side (Bamberg, 2003). For example, at first, environmental concern has been, considered as a unidimensional construct ranging from unconcerned about the environment at the low end to highly concerned at the high end, as evaluated by the new environmental paradigm (Milfont & Duckitt, 2004).

2.3.3. Perceived Consumer Effectiveness (PCE)

According to Ellen *et al.*'s (1991), perceived consumer effectiveness reflects the belief of people which their actions like purchasing environmental friendly products and subscribing to e-invoice campaigns will make a difference in helping to solve environmental problems, such as a reduce in pollution. In addition, perceived consumer effectiveness is related to people's knowledge and direct or indirect experiences (Ellen *et al.*, 1991). As perceived

consumer effectiveness differs from individual to individual, because of the dissimilarity in their knowledge and life experience, some will believe that their activities have evolutionary results whereas others may have little trust in their abilities to make any difference. Moreover, depending on behaviors and situations, perceived consumer effectiveness is a changing phenomenon. In other hand, dissimilar reflections can be observed in various positions (Kim & Choi, 2005).

2.4. Demographics characteristics

Although much study has been accomplished on the demographic profiles of green consumers, findings are still relatively mixed with some demographic features showing more consistent results than others. Based on past demographic profiling, green consumers basically fall in the following category: education, age, gender and income.

2.4.1. Education. In regards to education, demographic features done in the past show which education is related to green consumers' attitudes and behaviors. Most demographic profile researches done on the relationship between education and the green consumers behaviors have been positively correlated (Newell & Green, 1997).

Because most researches have found positive relationships between green consumers' education and behavior, we can expect that future results will be consistent.

2.4.1. Age. Generally, the socially responsible consumers' demographic features is young and/or pre-middle age. But results have been far from conclusive. No significant, positively and negatively correlations have been found as the results of related studies. So it would have to be said, the demographic profile of green consumers in regards to age is still questionable (Bui, 2005).

But the general belief is that younger individuals are likely to be more sensitive to environmental issues. There are a number of theories offered in support of this belief, but the most common argument is that those who have grown up in a time period in which environmental concerns have been a salient issue at some level, are more likely to be sensitive to these issues (Straughan & Roberts, 1999).

2.4.2. Gender. Gender-related researches between men and women in regards to the environment are also inconclusive. In general, researchers argue that women are more likely than men to be ecologically conscious (Banerjee & McKeag, 1994). In regards to the relationship between gender and environmental concern, it was found that the relationship to be significant. Moreover, some researches found that gender effects consumers' willingness to pay more for green goods in a statistically significant way. On the other hand, the relationship between gender and environmental concern to be insignificant. Thus, the demographic profile of green consumers in regards to gender is still uncertain (Bui, 2005).

2.4.3. Income. Income is generally thought to be positively related to environmental sensitivity. The most common justification for this belief is that people can, at higher income levels, bear the marginal enhancee in costs associated with supporting green causes and favoring green good offerings (Straughan & Roberts, 1999). Zimmer (1994) and Roberts (1996) found two absolutely results about the relationship between income and environmental concerns. Once again, in regards to the demographic characteristic of green consumers in relation to income, the results are far from being conclusive (Zimmer et al, 1994).

2.5. Conceptual framework of research

Considering research literature, the conceptual model below can be selected for the current study. This model measures the influence of psychological and demographic features on ecological conscious consumer behavior. In this model, psychological and demographic features have been considered as independent variables and ecological conscious consumer behavior has been seemes as a dependent variable.

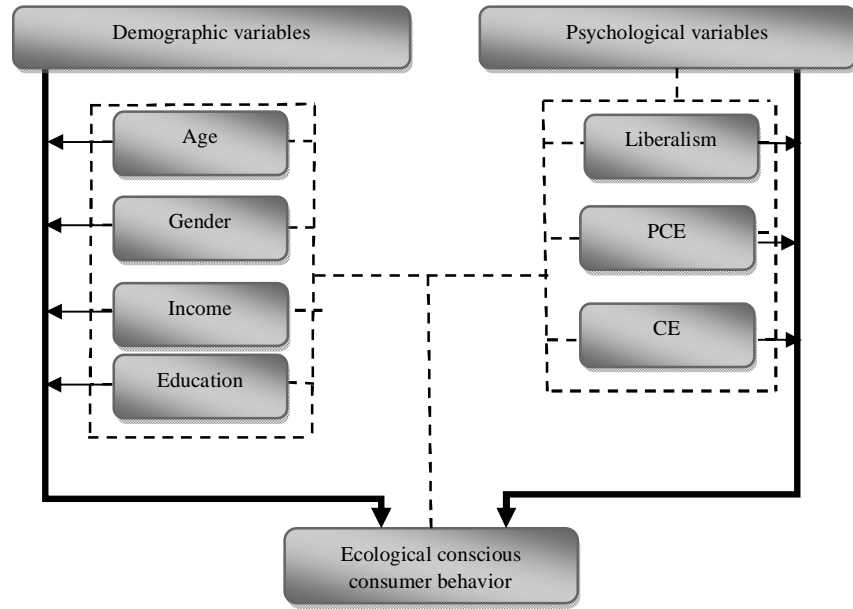


Figure 1: Conceptual framework of research

2.6. Hypotheses

According to the conceptual framework, main and secondary hypotheses can be explained as follows:

- 1- Psychological variables have a positive and meaningful influence on ecological conscious consumer behavior.
- 1-1- Liberalism has a positive and meaningful influence on ecological conscious consumer behavior.
- 1-2- Perceived consumer effectiveness has a positive and meaningful influence on ecological conscious consumer behavior.
- 1-3- Environmental concern has a positive and meaningful influence on ecological conscious consumer behavior.
- 2- Demographic variables have a positive and meaningful influence on ecological conscious consumer behavior.
- 2-1- Age has a positive and meaningful influence on ecological conscious consumer behavior.
- 2-2- Gender has a positive and meaningful influence on ecological conscious consumer behavior.
- 2-3- Income has a positive and meaningful influence on ecological conscious consumer behavior.
- 2-4- Education has a positive and meaningful influence on ecological conscious consumer behavior.

3. RESEARCH METHODOLOGY

The statistical society of this research was selected from 17,673 students distributed across 6 different universities in Iran. This number of statistical society seems inadequate; however, the sampling was done through stratified random method.

Table 1 shows the distribution of students in universities of the statistical society and the samples.

Table 1: statistical society and samples

Faculty name	All students	percent	Samples
Chemical engineering college- Science and Technology	604	0.03	15
Faculty of law- Islamic Azad University- South Tehran Branch	1541	0.09	39
Faculty of management and economy- Science and research branch	3000	0.17	72
Faculty of management- Islamic Azad University- Central Tehran Branch	3204	0.18	78
Faculty of management and economy- South Tehran branch	4324	0.24	102
Mashhad Binaloud University	5000	0.28	114
Sumation	17673	≈1	428

So the samples of the current study include 428 students who study in 6 mentioned universities.

Also current research can be considered as a descriptive survey if we observe it from data collection aspect and it would be an utilized study if the goals of the reseach are considered. For gathering the data, library method (refer to books, articles, theses, etc...) and fieldwork (questionnaire) were applied. The questionnaire was designed in three parts; 24 questions in ecological conscious consumer behavior, 19 questions in psychological factors, and 4 questions in demographic characteristics and then they were distributed among the samples (participants).

To analyze the data, Lisrel 8.54 (factor analysis), SPSS 19 (one-way variance analysis test) were applied.

Management experts were asked to evaluate the validity of questionnaires. To do this, the questionnaires were given to some university professors and experts in management. Then, they confirmed the used modifications and the questionnaires were given to the samples.

To determine the questionnaires' reliability, the 'Cronbach Alfa technique' was utilized. For this purpose, 30 people were selected by random (from the participants) and the questionnaires were given to them. The 'Cronbach's Alfa' values for all variables were calculated:

Table 2: the results of reliability

Variables	Cronbach Alfa
Ecological conscious consumer behavior	0.877
Perceived consumers' effectiveness	0.707
Environmental concern	0.880
Liberalism	0.775
Questionnaire (as a whole)	0.914

These values support the reliability of questionnaire, because the calculated results for cronbach's alpha are more than 0.7.

4. DATA ANALYSIS AND DISCUSSION

As mentioned, the purpose of the paper is surveying the effect driving factors affecting on electronic service quality. Therefore to survey the factors, structural equation model was applied.

4.1. Goodness of fit indices

Table 3 presents the tested statistical model, along with the standardized parameter estimates.

Table 3: Goodness fit of indices

	GFI	AGFI	RSMEA	df	χ^2
Indices amount	0.9	0.91	0.071	828	2597.82

As table 3 shows, the model represented a good fit to the data.

4.2. The relationship between variables

The relationships between research's variables are shown in table 3:

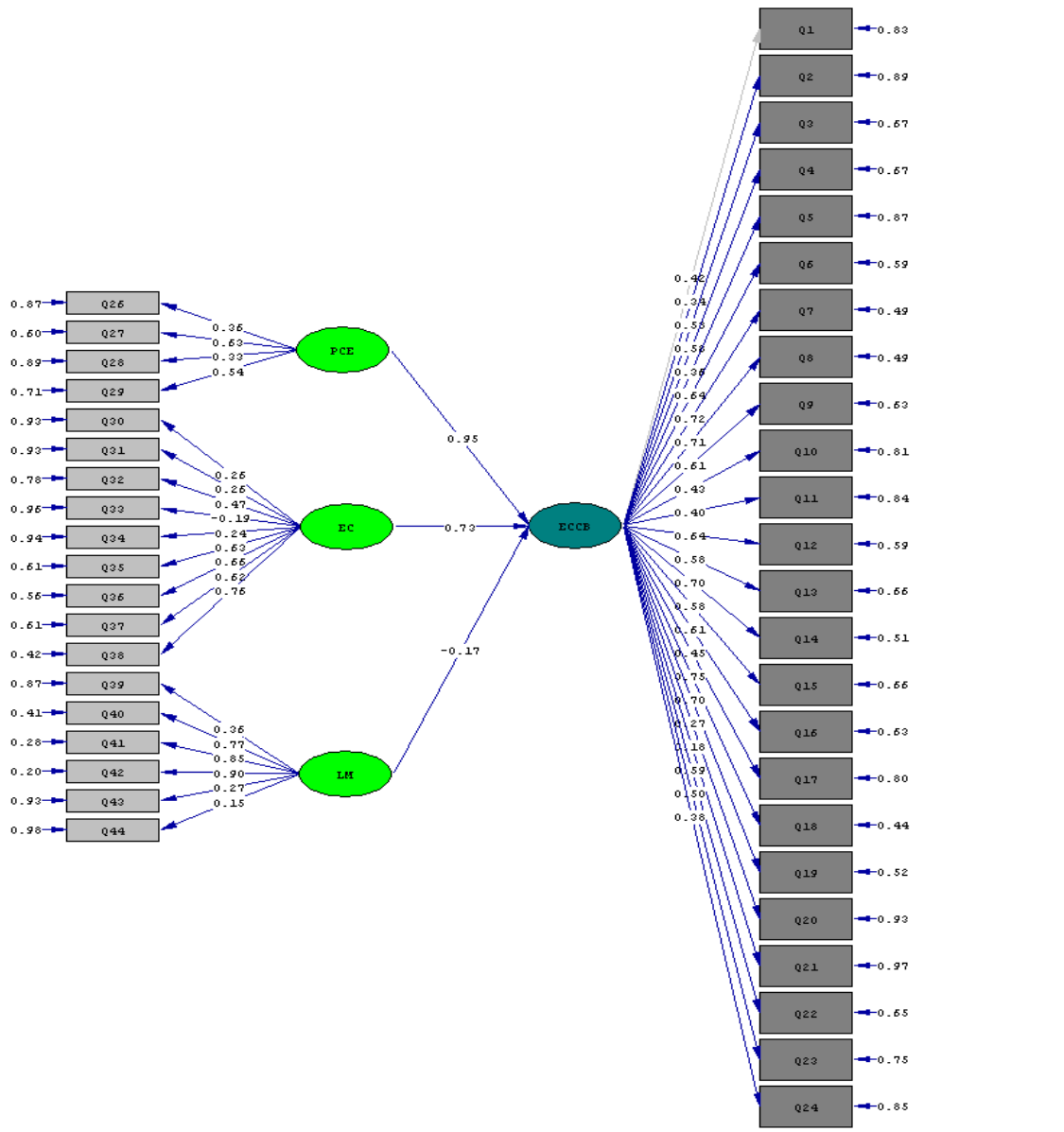
Table 3: The relationship between variables

Number	Path	R	t-value	Result	
1	Perceived consumers' behavior	ECCB	0.95	6.65	Accepted
2	Environmental concern		0.73	3.75	Accepted
3	Liberalism		-0.17	-1.97	Rejected

Table 3 shows that t-value amounts for "perceived consumers behavior" and "environmental concern" are more than +2 which means there are positive and meaningful relationships between these 2 variables and ecological conscious consumer behavior.

So as table 3 shows "liberalism" has negative influence on ecological conscious consumer behavior. Because t-value amount is between -2 and +2.

Figure 2 shows the output of LISREL software:



Chi-Square=2597.82, df=828, P-value=0.00000, RMSEA=0.071

4.3. The relationship between demographic characteristics and ECCB

To study the relationship between demographic characteristics and ecological conscious consumer behavior, one-way variance analysis test was utilized.

The results of applying this test, are shown in table 4:

Table 4: results of applying one-way variance analysis

Number	Path	F	Sig	Result	
1	Age	ECCB	9.207	0.000	Accepted
2	Gender		0.324	0.808	Rejected
3	Income		3.316	0.006	Accepted
4	education		1.370	0.216	Rejected

As table 4 shows there are positive and meaningful correlation between age and income with ecological conscious consumer behavior.

In other cases, no correlationship was observed.

5. Conclusion and suggestions

The current reseach with the porpuse of surveying the influence of ecological and demographic characteristics on ecological conscious consumer behavior, has been accomplished in a society which includes of 428 students in Iran different universties. In the sampled society 40% percent was men and 60% was women. The most frequency of certification (68.7 percent) were master. Meanwhile 23.8 percent of participants was less than 20, 39.3 percent was between 21-25, 20.6 was between 26-30, 6.8 percent was between 31-35 and 9.6 percent was more than 35 years old.

5.1. Results of applying factor analysis

The results from factor analysis show that “perceived consumers’ effectiveness” and “environmental concern” have positive influence on ecological conscious consumer behavior, meanwhile liberalism has negative affect on it. It should be mentioned that perceived consumers’ effectiveness has the most impact (0.95) on ecological conscious consumer behavior. Positive and meaningful influences of “perceived consumers’ effectiveness” and “environmental concern” on “ecological conscious consumer behavior” are consistent with related researches of Robert (1996) and Antil (1984) accordingly.

Also no correlationship between liberalism and ecological conscious consumer behavior has the same result with Gilg et al (2005).

Table 5: The results of applying factor analysis

Variables	Path	T-Value	Std dev
Perceived consumers’ effectiveness	0.73**	3.69	0.214
Environmental concern	0.95**	6.89	0.139
Liberalism	-0.04 ^{NS}	-0.31	0.129

NS: no correlationship

**.: meaningful correlationship when sig= 0.01

5.2. The results of applying one-way Variance Analysis

Findings of utilizing one way variance analysis show that there are positive and meaningful correlationship between students’ age and family income with their ecological conscious behavior. But there are no correlationship between samples’ gender and education with their ecological conscious behavior.

Attending to results, by increasing students’ age and income, their ecological conscious behavior will increase too. The positive correlationships between age with ecological conscious behavior are consistent with Lee (2008). Also positive and meaningful relationship between income with ecological conscious behavior is parallel with Newell & Green (1997) and is inconsistent with Roberts research in 1999.

No relationship between gender and ecological conscious behavior is inconsistent with Eagly (1987) who believed women because of social development, tend to make constant their behaviors attending to green motivators more than men.

Although the results of the current paper show no relationship between education and ecological conscious behavior, but Robert (1996) approved the positive relationship between these two variables. Meanwhile Kassarjian (1971) research implied that educational level has no affect on ecological conscious behavior which consistent with our research.

Table 6: The results of applying one-way variance analysis

Demographic Variables	Sig	Result
Age	0.000	Positive relationship
Gender	0.808	Negative relationship
Income	0.006	Positive relationship
education	0.216	Negative relationship

To identify green conscious consumer behavior, both psychological and demographic features should be considered to enable organizations meet consumers’ needs and acquisite competitive advantage. Because of increasing environment pollution, the customers tend to consume green goods. Therefore producers and marketers should attend to this point highly.

Local authorities, in charge of the recycling programmes and ecological organizations aiming to expand ecological activities, should realize that consumers are most likely to adopt any type of proenvironmental behaviour,

where cost and/or inconvenience are minimized. Thus, they should focus on making it easier and friendlier for a consumer to participate in their plans.

Besides expanding the green market and the participation in recycling, responsible national and European policies should acknowledge the need to reduce the overall over-consumption in the society. Governmental, non-governmental and non-profit organizations should aim at increasing not only consumers' attitudes but their non-materialistic and anti-materialistic values too.

The fact that an outward pro-environmental attitude is conducive toward ecological behavior that subsequently leads to a feeling of well-being, implies that public policymakers should take measures centring on the benefits of environmentalism for the people and the society at large.

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