

INVESTIGATE VIA INTERNET THE PERSONAL VALUES IN LIFE AND HOW DETERMINE THE CONSUMER'S ENVIRONMENTAL BEHAVIOR

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ABSTRACT

Everyday the following question is posed: *Are businesses more successful when they adapt green strategies in producing and marketing their products?*. To address this issue, we should investigate to what determines the buyers' decisions in relation to the environmental characteristics of the product. The existence of environmental consciousness is related firstly to the research of demographic characteristics and secondly to personal values of life.

The format of this electronic survey was as follows: First, we would ask their opinion about the degradation of the environment. Upon receiving an answer stating that the environment was indeed being degraded then we would ask about their values in life. Those who thought otherwise, were asked to state their opinions. We took into account opinions regarding the environmental degradation as well as to demographic characteristics when we evaluated their opinion about values of life.

This paper investigates how important is the environmental protection in a consumer's value in life. This study is unique because it was carried out via e-mail using a questionnaire, and the answers were recorded automatically in a database which was created for this purpose. The sample was random and the participants were notified by e-mails. The recipients of the e-mails were urged to forward the questionnaire to others. The total number of questionnaires under investigation reached 800.

Keywords: environmental behavior, consumer behavior, green marketing

1. Short Overview

The existence of environmental consciousness in relation to the demographic characteristics and the personal values of consumers were researched. Although the demographic characteristics provide easy segmentation of the market, values of life are those that make deeper understanding of the characteristics of the consumer. For this reason it was considered appropriate for the study of demographic characteristics to be combined with the study of values of life to give a fuller picture of environmentally sound consumer.

The usefulness of the study data is based on the assumption that the existence of ecological awareness and willingness to enable access to tackle the problems can be a precursor of specific consumer behaviours. More specifically, believing that the ecologically aware

consumer would prefer to purchase products bearing "green" features against those who do not possess such characteristics.

2. Methodology

2.1. Purpose of research

The study focuses on evaluating the answers of a questionnaire that was posted on a website¹. The sample of the respondents was random and they were prompted to participate in the survey via e-mails, also a large number of recipients forwarded the surveys to third parties. In conclusion we evaluated 800 fully

¹ <http://oikonomou.homeftp.net/statistics/GreenMarketing>

completed questionnaires. Table 1 shows the demographic characteristics of the sample.

Table 1. Quality characteristics of sample.

AGE	Frequency	Percent
to 25 years	219	27.4
from 26 to 40 years	490	61.2
from 41 to 55 years	91	11.4
over 55 years	0	0.0
Sum	800	100
SEX	Frequency	Percent
Female	439	54.9
Male	361	45.1
Sum	800	100
FAMILY STATUS	Frequency	Percent
Single	604	75.5
Married	196	24.5
Sum	800	100
CHILDREN	Frequency	Percent
No child	656	82.0
One child	57	7.1
Two children	78	9.8
Three children	7	0.9
More than 3	2	0.2
Sum	800	100
EDUCATION	Frequency	Percent
Primary education	0	0.0
Secondary education	173	21.6
University education	264	33.0
Post Studies	363	45.4
Sum	800	100
OCCUPATION	Frequency	Percent
Civil servant	143	17.9
Private staff	267	33.4
Student	184	23.0
Freelancer	165	20.6
Unemployed	36	4.5
Household	2	0.2
Retired	3	0.4
Sum	800	100
AVERAGE SALARY	Frequency	Percent
Less than 800 €	296	37.0
801-1200 €	219	27.4
1201-1400 €	134	16.8
>1401 €	151	18.9
Sum	800	100

2.2. The questionnaire

Several questionnaires have been used occasionally to draw up similar surveys around the world. Perhaps the most important aspect of this study is the use of

different methodologies to identify the responsible consumer.

These range from classifying as a socially responsible consumer depending on whether or not purchase certain types of environmentally friendly products by using composite scales of attitudes. It is therefore not surprising that the results often provide conflicting conclusions about the characteristics of this type of consumer (Fischer R.J. and Katz J.E., 2001, Kahle L.R. and Kennedy Patricia, 1988).

This survey used the “*range of responsible consumer behaviour*” (*Socially Responsible Consumption Behavior scale - SRCB*) built by J. Antil and Bennet (1979). The use of scale was dictated by the fact that this has significant advantages (Oikonomou et al., 2008). Initially, a list of 50 questions expressed the views of consumers about the environmental degradation.

Some of the respondents were asked to answer to what extent they agree or disagree, on a scale Likert 7 degrees. Among the statements were reverse statements that are scored in reverse to the processing of data.

The purpose of this survey is to correlate the behaviour of an environmentally conscious consumer versus their values in life. Useful tool for identifying the values espoused by consumers is the “*list of values*” (LOV) of Kahle and Kennedy (1988). Although less well known among researchers in relation to scales such as VALS and the scale of Rocheach (Rocheach Value Survey - RVS), the LOV methodology has considerable utility. The scale VALS, although it has proved useful, too based on demographic variables and is not related to consumer behavior as closely as the LOV. Many of the questions in the VALS are culturally biased or concern only the United States (e.g. questions about the Bible or questions on public policy).

In advertising, an important advantage of LOV against VALS, is that a phrase from the survey can be used in such an advertisement, for example, the phrase “*pleasure in life*”. Compared with the RVS, the LOV is associated closely with people’s daily lives. In addition, LOV is easier to use, after asking respondents to assess fewer elements. Finally, the LOV avoid weakening or even other methodological problems associated with the RVS, as the tendency to respond to information with anyone socially desirable manner rather than spontaneous (Kahle LR. and Kennedy Patricia, 1988).

The Fischer and Katz (2001) disagree with this view and argue that the LOV affected by “*socially desirable answer*”. They, however, the fact that as an advantage rather than a disadvantage, and consider that this characteristic enhances the validity of the scale. The questionnaire also included a questionnaire of Traylor K. and W. Benoy (1984) which measures the degree of loyalty of consumers of organic products. These values, derived from the hierarchy of values of Maslow, the scale of Rocheach scales and other modern research values are: “*The feeling that I belong somewhere*”, “*Intense emotions*”, “*Good relations*

with others”, “Self-fulfillment”, “Respect”, “Pleasure and enjoyment of life”, “Security”, “The self-esteem”, sense of achievement (Table 2).

The respondents were asked to answer to what extent they agree or disagree, on a scale Likert 5 degrees.

Table 2. Values in life.

Values in life	
B1	“The feeling that I belong somewhere”
B2	“Intense emotions”
B3	“Good relations with others”
B4	“Self-fulfillment”
B5	“Respect”
B6	“Pleasure and enjoyment of life”
B7	“Security”
B8	“The self-esteem”
B9	“The sense of achievement”

Then in C choose which of these life values (Table 2) consider important.

3. Statistical treatment of data

The data was processed with SPSS using the factorial analysis. The aim was to simplify the large and complex data set by analysis of correlations between them. Given the exploratory nature of research, the analysis was limited to identifying the key elements that explain the term possibly not existent probably correlation matrix. Our sample satisfies the conditions of the method, since the respondents are beyond 100 and this number is more than twice the number of questions. The analysis was done by rotating the factors (factor rotation) and using the rotation method Varimax.

The analysis revealed 7 groups of questions related to each other and explain the 54.97% of the total variance. Analysing the content of the questions of each group we determined the characteristic of each of these concerns. Based on these data we created the following variables: “personal sacrifices”, “willingness to pay”, “concern for the environment”, “corporate responsibility”, “willingness to protest”, “non-personal sacrifices” and “individual awareness”.

Whose value is equal to average of marks given by each respondent in each category of proposals represents. The reliability of these variables, determined according to the method of Cronbach, is satisfactory (Table 3).

The dummy variables were created to represent each category of variables relative to the base category. For example, the variable “sex” category basis as deemed category “woman”, and this was the value of 1, while the category “man” was the value 0.

Table 4 presents the evaluation of life values, in five-point scale. It is very important, the “The self-esteem” and “Pleasure and enjoyment of life” and to a lesser extent the value of “Safety” and “Respect”. As less

important, the values of “Self-fulfillment”, “The sense of achievement” and “Good relations with others”. “The feeling that I belong somewhere” and “Intense emotions” are the latest positions of importance of life values.

Table 3. Cronbach coefficients for the aggregated categories.

Grouped categories	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of questions
G1 “Willingness payment”	0.843	0.840	6
G2 “Corporate responsibility”	0.747	0.757	7
G3 “Personal sacrifices”	0.773	0.781	5
G4 “Willingness to protest”	0.698	0.702	4
G5 “Concern for the environment”	0.696	0.705	7
G6 “Non-personal sacrifices”	0.564	0.613	5
G7 “Individual awareness”	0.521	0.539	4

Table 4. Rates of assessment of the values in life.

Value in life	Very unimportant	Shortly insignificant	Neutral	Little Important	Very Important
B1	5.5%	6.8%	16.2%	28.9%	42.6%
B2	3.1%	5.0%	16.4%	35.0%	40.5%
B3	2.2%	2.9%	5.4%	21.6%	67.9%
B4	1.9%	2.6%	8.4%	24.4%	62.7%
B5	2.1%	1.5%	4.2%	19.0%	73.2%
B6	2.6%	1.0%	2.1%	12.5%	81.8%
B7	2.8%	2.4%	5.8%	18.2%	70.8%
B8	2.1%	1.1%	2.2%	9.8%	84.8%
B9	2.0%	2.8%	4.8%	31.0%	59.4%

Table 5 presents the percentage choice of the most important value of life from above. In agreement with Table 4, the pleasure and enjoyment of life is the most important value of life. The “self” and expect to hold a very important position, is very low as most important value.

In Tables 6 and 7 below shows the correlation of data with the greatest interest.

Table 5. The most important value in life.

The most important value in life (C)	Frequency	Percent
B1	22	2.8
B2	10	1.2
B3	98	12.2
B4	64	8.0
B5	66	8.2
B6	281	35.1
B7	63	7.9
B8	132	16.5
B9	64	8.0
Sum	800	100

Table 6. Correlations of variables.

	G1	G2	G3
B1	.122**	.108**	.113**
B2	.074*	.113**	.067
B3	.133**	.138**	.152**
B4	.012	.058	.005
B5	.077*	.131**	.084*
B6	.008	.119**	.032
B7	.077*	.131**	.086*
B8	.124**	.165**	.140**
B9	.076*	.058	.007
C	.069	.053	.050
Female	.030	.138**	.104**
To 24 years	.000	-.119**	-.158**
From 25 to 40 years	-.060	.066	.046
From 41 to 55 years	.092**	.065	.152**
Married	.088*	.138**	.150**
With children	.078*	.101**	.142**
Secondary education	.000	.000	-.014
Bachelor deagre	.008	.004	.006
Master deagre	-.009	-.005	.005
up 801 to 1200 €/month	-.017	.045	.074*
up 1201 to 1400 €/month	.020	.093**	.039
Over 1400 €/month	.038	.021	.059
Civil servant	.069	.078*	.110**
Private staff	-.044	.080*	.049
University student	-.035	-.104**	-.146**
Freelancer	.026	-.049	-.023

Household	.002	-.003	.033
Unemployed	-.011	-.001	.008

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 7. Correlations of variables.

	G4	G5	G6	G7
B1	.078*	.057	.035	.081*
B2	.079*	-.022	.042	.061
B3	.104**	.069*	.107**	.111**
B4	.108**	.055	.055	.055
B5	.070*	.097**	.027	.058
B6	.104**	.028	.075*	.116**
B7	.116**	.060	.029	.066
B8	.157**	.170**	.139**	.125**
B9	.067	-.006	.057	.080*
C	.081*	.022	.049	.091*
Female	.051	.079*	.046	.095**
To 24years	-.100**	-.144**	-.088*	-.118**
From 25 to 40 years	.027	.107**	.021	.064
From 41 to 55 years	.100**	.039	.092**	.067
Married	.121**	.067	.075*	.063
With children	.104**	.043	.077*	.051
Secondary education	-.036	-.083*	-.016	-.034
Bachelor deagre	-.018	-.033	-.037	-.022
Master deagre	.050	.108**	.053	.053
Up 801 to 1200 €/month	-.024	.089*	-.014	.047
Up 1201 to 1400 €/month	.081*	.070*	.033	.019
Over 1400 €/month	.024	-.016	.018	-.001
Civil servant	.050	.057	.063	-.003
Private staff	-.039	.094**	-.032	.029
University student	-.048	-.131**	-.052	-.085*
Freelancer	.036	-.002	.017	.045
Household	.046	-.006	.045	.046
Unemploy ed	.006	-.029	.031	.017

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 8. Correlations of variables.

	B1	B2	B3	B4	B5
Female	.223**	.118**	.163**	.110**	.199**
To 24 years	.093**	.087*	.068	-.034	.024
From 25 to 40 years	-.028	-.013	-.019	-.014	.012
From 41 to 55 years	-.088*	-.101**	-.066	.070*	-.052
Master deagre	-.103**	-.067	-.072*	.069*	-.027
Up 801 to 1200 €/month	.072*	.045	.071*	.011	.023
Up 1201 to 1400 €/month	-.009	-.033	-.026	.049	-.002
Over 1400 €/month	-.113**	-.055	-.124**	.009	-.114**
Civil servant	-.024	-.060	-.064	.019	-.017
Private staff	.060	.100**	.035	.008	.037
University student	-.001	.012	.047	-.037	-.025
Freelancer	-.037	-.057	-.026	.019	-.038
Household	-.081*	-.052	-.028	-.023	-.021
Unemployed	-.003	-.019	.002	-.012	.081*

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 9. Correlations of variables.

	B6	B7	B8	B9	C
Female	.123**	.225**	.153**	.023	-.006
To 24 years	-.030	.016	-.093**	.057	-.065
From 25 to 40 years	.037	.021	.051	-.051	-.001
From 41 to 55 years	-.014	-.055	.053	-.001	.092**
Master deagre	-.022	-.082*	.003	.008	.027
Up 801 to 1200 €/month	.066	.047	.035	-.044	-.083*
Up 1201 to 1400 €/month	-.018	-.001	.051	-.043	.056
Over 1400 €/month	-.051	-.054	-.026	.031	.107**
Civil servant	.006	-.028	.033	-.051	.017
Private staff	.029	.093**	.074*	-.034	-.009
University student	-.034	-.039	-.127**	.051	-.074*
Freelancer	-.031	-.078*	-.012	.012	.086*
Household	-.047	.032	.021	-.068	.030
Unemployed	.055	.053	.040	.047	-.033

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

4. Restrictions

To interpret the results one should take into account the following limitations of the investigation: For the survey we used a sample of convenience and not sample whose demographic characteristics are comparable to the general population. An example is the education level, where the university graduates reached 33%, while those who have completed post-graduate studies, reached 45.4%. If one considers the situation in the general population he understands that the apportionment of the education levels of the sample is a major limiting factor of the investigation analysis. The same holds true for age, where people over 55 are not represented. Finally, we note the relatively small number of observations for pensioners and those engaged in household. Given the composition of this sample, it would be risky at least trying to generalize the conclusions arising from this survey in the total population (Oikonomou S., 2008).

The nature and means of limiting our research to a large extent the problem of bias, since the respondent does not indicate their identity, but it is necessary to ensure the anonymity of the Internet. Usually, most studies of socially desirable behaviour, suffer from the bias of "socially desirable" response, known as "halo effect". Respondents know what is expected of them by the community and respond accordingly.

Consumers can claim that they are buying green products while in reality they do not, either because they feel guilty, or because they do not make green purchasing choices. Besides they believe that they want to hear the questioner (Oikonomou S., 2008).

This does not mean, however, that these researches are without any utility. In general, revealing the public feeling on the issue. Subject followed the correct procedures for research; the results can be used to focus marketing efforts on more attractive terms of demographic, market segments (Bentham P., 1998).

5. Results

Of the nine values examined, the only one who seemed most important in predicting ~~able to predict~~ the interest in ecological issues was ~~the~~ self-esteem. This finding contradicts the results of other investigations, given that "the selfish not related to the occurrence and the ecological behavior is eminently self-esteem individual value" (Laroche M. et al., 2001).

Also, the B3 value in life is highly correlated with environmental awareness. To a lesser extent, the values B1, B5 and B7 are also related to environmental awareness.

Gender successfully provides (provides τ πράγμα) most of the items examined, leading us to conclude that women in Greece are more environmentally aware than men and are much more willing to translate this positive disposition towards the protection of ecological balance specific actions and particular to specific consumer behaviors.

This point is of particular importance for Greece, where women, in the vast majority of households, choose and purchase more products of everyday use. Perhaps this attitude of the women is because their role in society makes them more familiar with the assessment of the needs of others; and this gives them a further incentive to demonstrate socially responsible behavior.

This also may explain the greater conscientiousness of married versus unmarried interviewees, which is another key factor. People who have created a family are more likely to consider the consequences of their actions to the people of their family environment and for future generations.

The level of education does not provide sufficient predictability of responsible environmental behavior. Some researchers relate the ecological behavior of young people, while others believe it is likely to occur in old age. In our case we observed a greater correlation with age, from 41 to 55 years.

The findings may prove useful for the purposes of public policy in that regard (Antil J., 1984):

- Creating infrastructure such as the approval of funding for waste– management projects.
- Research such as the use of soft forms of energy.
- Education as the teaching of environmental education in schools.
- Regulations, tougher penalties for businesses that pollute.
- Desired ecological characteristics of the product and pricing.

For businesses the benefits of this research are that the positive environmental attitude showed by many can lead to a further investment into a “Greener production/consumption” market. Can be translated in the future, with the maturation of “green” market in our country in specific purchasing behavior. This perspective is quite possible, at least in terms of the food, judging from similar studies (Fotopoulos Ch., 2000).

The possibility of this can create great opportunities for developing competitive advantage. This advantage can be exploited to the maximum extent those companies that differentiate first, because of lack of competition, at least in principle. You should, in any case to forget that the primary role of maintaining high quality. Greek enterprises should learn from the experience of foreign and particularly American companies, which has shown that the existence of ecological characteristics can act positive only when the quality of the product. is at least comparable competing conventional products.

Moreover, should not obscure the maturation of the market, which occurred after the superficial approach of “green” many marketing firms and the consequent mistrust of consumers. The implementation of the “green” marketing must be essential and can not be achieved without the application of the principles of “green” management in all functions of the company.

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