

# **Master Dissertation Thesis**

Greek consumer's attitude towards environment friendly products.

**MSc Management** 

**Student: Lazopoulou Osia** 

ID No: 1102100008

Supervisor: Dr. Katsaliaki

Korina

September 2010

#### **Abstract**

The dissertation examines the attitudes of Greek consumers towards environment friendly products. The literature review examines various concepts such as the characteristics of the green consumer, green marketing and how consumers behave towards those products. The survey revealed groups such as women and younger consumers have a favorable attitude towards Green products.

## Acknowledgements

First of all, I would like to thank my family for their support during the entire master program, as it was a difficult period for me as I was combining working and studying.

Also, I would like to thank Dr. Katsaliaki Korina for the co-operation and the guidance that gave to me in order to be this dissertation improved.

Finally, I would like to thank all those that completed the questionnaire that I distributed to them and helped in order to be this research fulfilled.

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#### 1. Introduction

#### 1.1 Introduction to the dissertation

Green issues have become the latest business trend. A number of businesses are trying to show that they have adopted Green policies. On some cases they are doing this because they want to show their commitment to the environment, on some other cases because they have to comply with the environmental regulations.

In Greece a number of firms have adopted those policies. However there is a lack of sufficient research on the public awareness and on the views and perceptions of the public towards Green products. As a matter of fact, during the past years there has been an increase in the number of consumers who show interest on issues of environmental protection and social responsibility from firms producing and marketing consumer products. They expect from firms to show their interest on the environment's protection and to provide their consumers with solid evidence regarding their commitment to the environment.

According to Jimenez and Lorente (2001) the deterioration of the environment has created a great concern not only among the scientific community that tries to increase public awareness on environmental issues but also among consumers. On the other hand a number of firms has understood the value of been committed to the creation of a sustainable environment and they have invested on environment-friendly products and policies, which are often taken as an important strategic asset, even though on some cases there is a conflict between corporate interests and the protection of the environment. (Kurani & Turrentine, 2002).

Kolk (2003) writes that firms need to develop green policies. In this way they do not only show their commitment to the society but there is a chance to gain several benefits, such as greater return on investment, improvements on the brand and corporate image, product differentiation, creation of new markets and many other attributes that can bring sustainability to the firm.

Green business is a global trend. A number of enterprises all over the world have invested into environment friendly products. Between those firms we can find a number of Greek corporations who have produced environment friendly products. Firms such as

Titan and Coco-Mat have gained prizes for their environment policies but also for sponsoring various activities that promote sustainability.

Nevertheless, it is important to note that on many cases firms that have pioneered Green policies and products are those who have been criticized in the past as being "dirty firms" such as firms from the oil, chemical and automotive industry. Menon and Menon (1997) claim that on many cases firms that had a bad environment record have promoted a number of initiatives towards the protection of the environment as part of their PR campaign but without having a real commitment to the protection of the environment. Often green marketing is compartementlised within the PR function so that to have little effect on production decisions and procedures. (Peattie and Crane, 2005).

The dissertation will analyze the Greek consumers' perceptions towards environmental friendly products. It will investigate whether Greek consumers believe that environmental friendly products are a myth or a reality and what are their buying attitude towards those products.

The first part introduces us to the concept of environment friendly products, while the second chapter shows the research questions of the dissertation. The third chapter of this dissertation will analyze some of the most important researches and surveys regarding Green marketing and the behavior of consumers towards Green products. The fourth chapter includes the methodology where the research approach of this study will be presented, while the fifth chapter is about the findings of the primary research. Finally the sixth chapter discusses the results of the survey and makes recommendations for future research.

#### 1.2 A brief introduction to environment friendly products

For the purpose of this dissertation is important to provide some brief definitions of some of the topics that this dissertation will examine. Issues such as environmental friendly products, green marketing and green consumer are some of the issues examined in the dissertation.

Pickett-Baker and Ozaki (2008) claim that defining environment friendly products is a complex procedure. According to Cooper (2000) there is no such thing as truly green product, since all of the products that we are consuming somehow have a negative impact on the environment. Nevertheless, it is important to measure the impact that each product has on the environment and to classify them according to their impact. According to Pickett-Baker and Ozaki (2008:283) "If a product has a low environmental impact, it is regarded as an environmentally sustainable product" Another definition from the same authors is that "environmentally sustainable product are that products should be readily available for purchase and include those supplied by companies with a reputation for reducing environmental impacts from their manufacturing processes" Pickett-Baker and Ozaki (2008:283). From this we understand that there is not a truly environment product, however we can categorize a product as an "environment friendly" according to the impact that it has on the environment and the reputation of the firm of having production processes that reduce the environmental impact of its operations.

Another aspect that we have to define is the concept of Green marketing. According to Prakash (2002:285) Green marketing "refers to the strategies to promote products by employing environmental claims either about their attributes or about the systems, policies and processes of the firms that manufacture or sells them". Green marketing is part of the corporate strategy (Menon and Menon, 1997) and it can have important implications on the reputation of the firm and its relationship with the stakeholders and the public (Peattie, 1999). The recent example of BP's accident in the Mexican Gulf is an indication how a negligence towards the environment can be destructive for a firm.

Another issue is the green consumer. Pickett-Baker and Ozaki (2008) claim that there is a market niche made from consumers who would prefer to buy mostly eco-products even if they are rare or they will have to pay something extra in order to purchase them. The concept of "green consumer" has arisen during the past 10-15 years.

#### 2. Research questions

According to Saunders et al (2003:488) research question is defined as "one of a number of key questions that the research will address". Research questions are the core of the dissertation. Based on those the author will develop the literature review and then the primary research.

For this dissertation we have the following research questions:

- What are the Greek consumers' attitudes towards environment friendly products?
- Is the buying decision of Greek consumers affected from the firm's stance towards the environment?
- Are Greeks environmental consciousness consumers?

All of the above research questions concern the views and beliefs of Greek consumers towards environment friendly products. We will examine their attitudes and then whether their buying decision is affected from the firm's stance towards the environment and if Greek consumers are in general environment consciousness consumers, like Green consumers are.

Those questions will be answered from the findings of the primary research that we will discuss on the conclusions of the dissertation.

#### 3. Literature review

#### 3.1 The climate change and how it affects consumers buying behavior

According to Lash and Wellington (2007:126)"whether you are in a traditional smokestack industry or a 'clean' business like investment banking, your company will increasingly feel the effects of climate change". As a matter of fact consumers are taking account a company's environmental record when it is time to make a purchasing decision (Lash and Wellington, 2007:127).

The aim of firms is to meet and satisfy the consumers' demands and wants. Understanding how consumers are behaving towards an issue can be an important issue for every firm. According to the marketing theory, consumers have wants and needs and according to those the firm shall create products that will match those wants and needs (Kotler, 2003). If the consumer feels that those products fit with his/her needs and wants he/she will be satisfied. However it seems that the buyer's behavior is connected with non-personal issues but also with issues that affect in the societal values and their quality of living such as the environment. (Peattie, 1992).

Alston and Roberts (1999) have made a survey about new product development of environment friendly products in USA in a sample of consumers. They have identified that there is an increased number of consumers willing to pay more to purchase an environment friendly product. Their survey indicated that there is a growing concern among consumers for the impact of their activities in the environment while the firms that develop new products based on green policies, must make sure that those products are of the same quality with the non-environment friendly products. After 2005 the media have focused on climate change. The changes on the environment are obvious and Al Gore's campaign had a significant contribution to this, along with other initiatives. The fact that the media have turned their light on the environment has alerted consumers but also the firms. Isaak (2002) made a survey among entrepreneurs willing to invest into green businesses in Britain. He says that the consumers have started moving from a "selfish" attitude where the ego and the personal satisfaction were their primary concern to a new style of buying behavior where personal satisfaction is mixed with the impact of the purchase on the society and the environment. Prakash (2002) is

examining the current literature on Green marketing. He has used a number of surveys that occurred during the 90's that indicate this change. Consumers are becoming more and more aware of the environment and of the impact of their activities on the environment and they have decided to take actions and change their behavior in order to become environment consciousness. Of course there is the other side, such as Ottman (1998) whose survey, that occurred in Illinois USA, has found out that the 41% of consumers do not want to buy green products since they are receiving them as inferior, which is of course in contrast with other papers, such as Prakash's (2002) research on the existing literature. Ottman (1998) revealed also that a number of consumers (80%) have noticed that protecting the environment can bring also changes on their lifestyle. A possible change on the lifestyle will affect the buying behavior, though a number of consumers may hesitate to change the lifestyle in order to protect the environment.

The climate change surely affects buyer's behavior and in the future we will see more changes. Having in mind that we are in a transition from mass consumption to ecoconsumption, surely we will need more surveys in the future. Also it is important to note the lack of surveys in Greece. Most of the surveys that we examined occurred in the USA and Britain, nevertheless there has not been much research regarding the Greek Consumers. The dissertation will try to fill-in this gap.

#### 3.2 Consumers' attitudes towards environment friendly products

Kotler (2003) refers on the values and beliefs that shape the attitudes that influence the buying decision. Having an environmental attitude and behavior means that the consumer will show his/her preference for environmental friendly products. Reser and Bentrupperbaumer (2005) have examined green consumers' values and have identified a number of differences from the average consumers. Green consumers are quite politicalised persons, most of them have graduated from a university and a high number of those consumers are classified as Middle and Upper Class. They tend to purchase only environment friendly products. However Prakash (2002) has identified a key problem with the environmental products and green consumers, which is the lack of a mass green market. The creation of a "critical mass" of consumers surely would alert conglomerates and would force them to produce environment friendly products. However during the past years there is a large number of consumers who shown their preference for environmental friendly products (Peattie, and Crane, 2005).

A survey from Kollmuss and Agyeman (2002) examined the factors that influence the attitude of consumers towards environment friendly products. The results were quite contradicted since there is not a definitive model on which factors affect consumers in terms with environment-friendly products. The survey found several market niches; there are consumers who believe in environmentalism as a political and social movement and they are expressing their support on this movement by purchasing only environment friendly products, while there are consumers who are buying environmental friendly products due of their quality. Kollmuss and Agyeman (2002) noticed that a number of consumers who purchase those products do not have necessarily to be pro-environmentally. This is explained from the reactive process; when people around the consumer are recycling, the consumer will recycle as well.

Another factor that affects consumers' attitudes towards environment friendly products is the alignment of pro-environmentalist behavior with personal interests. For many years the personal interests of the consumers, that affect their attitudes towards objects, were different from the aims of pro-environmentalists. Nevertheless, recent changes on the environment and the fact that issues such as global warming have been mentioned from the media, have brought in alignment the personal interests of the consumers with environmentalists interests, making a number of consumers to have a pro-environmentalist behavior (Pickett-Baker and Ozaki, 2008)

Picket-Baker and Ozaki (2008) have stated that the exposure of environmental issues on mass media has played a key role on the increase of the consumers' awareness for environmental issues. Besides the consumers, the exposure of the environmental issues has affected the governments and organizations such as EU. Kammerer (2009) has emphasized the regulation on many markets where governments have enforced regulations regarding the protection of the environment. He has studied the market of appliance manufacturers in Germany and found out that that both the German government and EU have created a number of regulations regarding the performance of the products but also on other issues such as waste management and recycling of used products. Kammerer (2009) noticed that the environmental regulations are on the benefit of the consumers. For example, the certificates on the energy consumption of various products, benefits the consumers who can save money from the reduction of the power spent to use those products. This contributed on the creation of positive attitude from the consumers towards firms using environment friendly products.

In order to create a positive attitude towards environmental friendly products the consumers will have to alignment their wants and needs with the benefits that they will acquire from those products. As consumers are becoming more and more aware of the value of environmental products and that they are affecting their quality of living, they tend to have a positive stance towards those products.

#### 3.3 Characteristics of Green consumers

This subchapter will try to evaluate the characteristics of the green consumers. It is important for the firms to understand those characteristics in order to understand their attitudes but also to know what they need to do in order to convince the rest of the consumers to turn into green products.

Surprisingly, research in the demographic and psychographic characteristics of green consumers starts from the early 70's with Fisk (1973) making one of the first surveys among environmentally concerned buyers and identifying several behavioral elements such as that they were vegetarians and many of them have developed a lifestyle which dropped the value of the conservative America of that time. During the 80's the environmentalist movement started to expand its influence and this affected the consumers' perception for the environment and how it was affected from corporations and their products. Along with the increasing number of consumers who were aware of the environmental friendly products, Sheth and Parvatiyar (1995) started the equivalent research on this field indicated that there was a number of changes on legislation and greater intervention from governments on environmental issues as a result of the pressure from consumers who demanded products that would not hurt the environment. Nevertheless there was a debate on what criteria would be used to distinguish green consumers from the rest (Jain and Kaur, 2006). One attribute was the age and how it affected consumers' attitudes towards green products. There were surveys that indicated a negative correlation (Zimmer et al, 1994), or a positive correlation (Roberts 1996) but also that there was no correlation at all (Kinnear et al, 1974).

Another demographic factor is the gender. Prakash (2002) indicates that female consumers tend to be more environment consciences than males. Mainieri and Barnett (1997) agree with Prakash (2002), but they indicated that there were not any significant differences on issues such as their participation on environmental activities and groups. They found out that female tend to be more interested on household activities related with the environment such as recycling of household garbage.

Another aspect is the education of the consumers. Graduates tend to have more concerns about the environment along with individuals who have a constant access on the Internet in order to seek for information (Ohtomo and Hirose, 2007). Mainieri and

Barnet (1997) indicated that there was not any significant relation between education and preference on green products.

Next variable is the income. González-Benito and González-Benito (2008) state the consumers are aware that they will have to pay something extra in order to purchase an environment-friendly product. On many occasions those products are more expensive than the average products and their focus group are consumers coming from the middle and upper class. Olsen (2008) believes that there is a correlation between income and positive attitudes towards environment friendly product, since those products are given on higher prices.

Besides the demographic characteristics there are several non-demographic variables which also need examination such as the psychographical variables. Roberts (1996) has studied the significance between political orientation and pro-environment behavior. He argued that consumers, who are loyal on environment-friendly activities, including products, tend to have a liberal/left political background. Another characteristic is altruism. Stern et al, (1993) indicate that values such as social-altruism and the welfare of others are found on environmental friendly buying behavior, while consumers who are selfish will not develop an environmental friendly behavior.

A key factor affecting the consumers' attitude is the knowledge on environmental issues that affects the perceived behavioral control (PBC). Authors like Straughan and Roberts (1999) indicate that consumers who believe that their action will contribute on the protection of the environment and they driven from their good knowledge on environmental issues. Laroch et al (2001) indicate that knowledge on environmental issues will affect the whole buying procedure. Firms shall seek to ways to inform the consumers about the benefits of their products in relation with the protection of the environment. That is one of the key scopes of green marketing, as I explain in the following subchapter.

To sum up, it seems that there are a number of consumers' characteristics that affect their attitudes towards environment friendly products. Factors such as their political ideology, education, income, gender, age and knowledge on environmental issues can become critical issues for the determination of the consumers' attitude towards the environment friendly products.

De Paco and Raposo (2009) has summarized all those factors and created the next table which is the outcome of a research in terms of surveys that have occurred for the examined topic

Criteria	Variables	
Demographic	Age, gender, family dimension, religion,	
	subsuclture, education, job or occupation,	
	income, social class, habitation type	
Psychographic	Lifestyle, personality, motivation, values	
Behavioral	Knowledge, attitude, product usage,	
	purchase behavior, brand loyalty, benefits	
Environmental	Concern, PBC, knowledge, affect,	
	commitment, ecological consciousness,	
	subjective norms, activism,	
	environmentally friendly behavior, green	
	products buying behavior, information	
	search, willingness to pay, recycling,	
	skepticism towards environmental claims	

Source: De Paco and Raposo (2009)

#### 3.4 Green marketing

Green marketing can play a determinant role for the shape of the attitude of the consumers towards green products. Green marketing is useful for firms who want to promote environment friendly products, since the green consumers – those who are fully dedicated on pro-environment products – are making only small market niches. A firm needs to approach not only Green consumers but also the general public in order to increase its market share. On many occasions the green consumers is a segment which will purchase green products but still it is a small niche. Firms need to create sustainable marketing strategies in order to reach the greater audience.

According to Kilourne (1998) Green marketing is a wide concept that affects the whole marketing mix. For example, the products must be made from raw materials which are friendly with the environment. On many occasions the firms are certifying their products with ISO 14000 so to guarantee that their products do not hurt the environment. Another example is the distribution of the product. Firms will have to find ways so that the distribution of the product will not increase its environmental footprint. In Northern Europe firms are using riverboats and the railway to transfer the final products in the end-consumers instead of trucks. This is cost effective but also reduces the pollution caused from their logistic operations.

In order to have a successful green marketing strategy, a firm must have also a green culture. This will affect the employees' commitment on green practices. An example is recycling which is not a new trend. According to Ackerman (1997) there has been a number of recycling programs since the late 70's in the US. For many consumers recycling is synonymous with the environment's protection and efficient waste management. As a matter of fact there are consumers willing to pay something extra in order to acquire the services or products from firms who are using waste management systems (Menon et al, 1999). Bei and Simpson (2004) claim that there are various factors that affect the consumers decision to purchase recycled products such as their commitment on firms that prove their willingness to protect the environment. For some consumers this is "political stand"; i.e. to buy only from firms that their operations do not harm the environment. A firm that wants to have an integrated green marketing

strategy will have not only to create green products, but also to implement green policies on most of its functions. It will be absurd to have firms that promote green products but not recycle or have a waste management program.

Behind each successful marketing practice there is a successful strategy. Firms do not have to produce green products but also to set up an effective strategy. Olson (2008) states that firms must create a clear vision and commitment to green policies. It is important to create environmental consciousness among the employees but also among the partners. Olson (2008) claims that a green strategy means that the firm must create a corporate culture that will encourage its employees to take initiatives that will protect the environment and at the same time will create value for the firm. There are examples of firms that do not only sale green products, but they show their commitment by using hybrid cars, promoting the use of bicycles for their employees, having solar power panels, rainwater collection and waste management systems. In this point we can note that all those actions are increasing the costs of production. Olson (2008) states that although those activities are increasing costs, they are also increasing the value of the firm while their costs will be reduce in the following years as more and more companies will adopt such practices.

Miles and Covin (2000) write that having green products and the appropriate culture is not enough. The firms will have to carry this message to their stakeholders, including their suppliers and shareholders, while they will have to work hard in order to gain the consumers' trust. Actually the firm will have to convince its stakeholders for the value of green marketing and to gain the consumers' trust using green marketing practices. This is a very delicate issue. It is very easy to lose the consumers' trust. A firm may work hard to develop a corporate image that will reflect its commitment to the protection of the environment but it may not work out because one of its suppliers has not complied with the environmental regulations.

Laroche et al (2001) wrote that consumers are affected from the knowledge that they have for the protection of the environment but also for the product that they are going to purchase. Thus, a key determinant of a green marketing plan is to inform the potential buyers about how this particular product contributes on the protection of the environment. By labeling a product with the name "green" does not guarantee that the

consumers will perceive it as an environmental friendly product. The firm will have to prove why this product is green and to send this message to the audience.

The marketers of a firm that wants to build its value around its commitment to the protection of the environment must be aware of the "green spinning" phenomenon (Menon and Menon, 1997). This is a pitfall for firms that want to create a "green" corporate image. It occurs when the firm's green policies are not part of a strategic plan not it had become part of its culture, but it is just a part of its PR policies. A firm may try to create a social responsibility image with sponsoring on social and environmental events. However this does not guarantee that all parties will do the same. There have been many cases where firms have promoted their social responsibility and green policies but those efforts failed because one of their partners or suppliers did not do the same. For example, a firm may promote its environment friendly products, however if one of its suppliers hurts the environment, this will have an impact also to the firm that cooperates with this particular supplier. Hence, green marketing is not an easy job for firms. They will have to look after not only for the production of environment friendly products, but also for the creation of a green culture among all partners and stakeholders of the firm.

#### 4. Methodology

#### 4.1 The methodology

The survey will focus on Greek consumers. The researcher will approach, based on random selection, a number of Greek consumers in order to measure their perception towards environment friendly products. In order to choose whether the research will be qualitative or quantitative, the author had used two criteria. The first was to see which approach some similar papers used and secondly to examine the nature of this survey with the appropriate methodological literature.

The vast majority of the papers in the topic, such as Roberts (1996), Olson (2008), Peattie and Crane (2005) and many others conducted quantitative surveys aiming at consumers. Researches that aim at the views of members of corporations, like González-Benito and González-Benito (2008) have relied on qualitative research and secondary data, along with case studies.

This is a survey aiming at the viewpoint of Greek consumers. It measures their views towards environment friendly products. According to Saunders et al (2003) such surveys must reach a wide audience in order to have a large number of questionnaires answered. This is one of the key advantages of quantitative research. Bryman (2004) states that qualitative research can help the researcher to have an in-depth analysis but the limited number of respondents and reasons of objectivity are some key limitations. Saunders et al (2003) add that when researchers are about consumers, on most of the times the ideal method is the quantitative research.

Hence the author has decided to rely in a quantitative survey with the use of a questionnaire.

#### 4.2 The questionnaire

The questionnaire will have to correspond with the three research questions of the dissertation which are:

- What are the Greek consumers' attitudes towards environment friendly products?
- Is the buying decision of Greek consumers affected from the firm's stance towards the environment?
- Are Greeks environmental consciousness consumers?

The questionnaire is made of closed questions. The first part of the questionnaire incorporate question regarding the demographic data of the sample. The remaining questions arose from within the findings of the literature review in order to provide answers on the research questions. Each of the questions is linked with a part of the literature review in order to compare the results of the primary research with the findings of the literature review.

The first part of the questionnaire contains some demographic variables which were found on the literature review, such as age, gender, income and education. Those variables and their relation with the consumer's attitude towards environmental friendly products as discussed on other chapter. . On those variables we added the occupation in order to see if there is a significant relation. The second part of the questionnaire is about the attitudes. Some questions are linked with the thesis general research questions. For example, the second research question is related with the 8<sup>th</sup> question, while the 9<sup>th</sup> question derives from Straughan and Roberts (1999) who stated that having a good knowledge on what constitutes an environmental friendly product is a key element that affects the consumer's attitude and it is related with the third research question.

More precisely the questions are linked with the three research questions. The following table presents the research questions and the questions linked with each research question.

Research Question	Questions linked
RQ 1	6,10,12,13,14,16
RQ 2	7,11, 15, 17
RQ 3	1,2,3,4,5,8,9

#### 4.3 Sampling

There was a random sampling, while the author used also the snowball method in order to reach the ideal number, which were 100 respondents. According to Bryman (2004) snowball can be a suitable method of distributing questionnaires as long as it reaches the target sample.

The population of the survey are all potential Greek consumers, which are those who are over 18 years old and they have the purchasing power to buy products. The sample size was made from 100 random picked respondents in Athens and Thessaloniki. One questionnaire was considered as missing value, since it was not answered so the 101 st questionnaire was regarded as missing and the researcher picked up an additional questionnaire in order to have 100 fulfilled questionnaires.

## 5. Analysis of the findings

This chapter will analyze the results of the survey that occurred on 100 consumers in Athens and Thessaloniki in a random picked sample. The author has made a survey based on evidence from the quantitative survey. Descriptive statistics with frequencies and cross-tabulations were used to show the relationship or not between some of the variables and significance tests are reported at the Appendix 2.

The first part of the questionnaire includes the demographic characteristics of the sample.

The first question is about the gender of the sample. The results are the following:

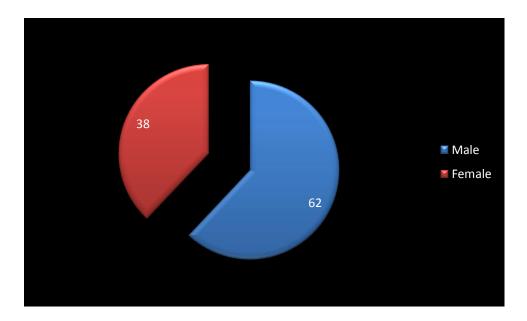


Figure 1: Gender distribution of the sample

The majority of the sample is male respondents, making the 62% of the sample size, while the 38% of the sample size are female respondents.

The second question is about the age of the sample.

Table 1: Demographic Question 2- Age

Age	Respondents/ Percent
18-25	31
26-35	19
36-45	44
46-55	3
55+	3
Total	100
	100

The majority of the respondents are between 36 and 45 years old which is deemed as the most productive age. The second larger group is made from individuals who are from 18 up to 25, who are the future consumers and it will be interesting to see their views on environmental friendly products. Then it is the group made from individuals from 26 to 35, and the two last groups have individuals older than 46 years old.

Next question is about the monthly income.

Table 2: Demographic Question 3- Income

	Respondents/
Income in euros	Percent
0-500	24
501-1000	22
1001-1500	36
1500+	18
Total	100

The vast majority of the sample is made from consumers with a monthly personal income from 1001 up to 1500 €. The rest of them are quite close with 0-500 group having 24 respondents, the 501-1000 group having 22 respondents and the 1500+ group having 18 respondents.

The fourth of the demographic questions was about the education of the sample.

Table 3: Demographic Question 4- Education

	Respondents/ Percent
Secondary	6
Undergraduate	49
Technical (IEK)	23
Private College	18
Postgraduate	4
Total	100

Most of the respondents have gained a university or college degree. Only a small number of the respondents have secondary education. This might be a limitation of the survey, however on the areas where the author distributed the questionnaire there were mostly graduates coming from middle and upper classes.

Finally we asked the respondents about their occupation.

**Table 4: Question 5- Occupation** 

		Respondents/ Percent
	Unemployed	10
	Pensioner	4
	Employee on the	39
	Private Sector	39
	Public Servant	19
	Entrepreneur	19
	Total	91
Total		100

The majority of the respondents are employees on the private sector. There is a significant number of public servants and entrepreneurs, while there are ten unemployed and four pensioners.

After we finished the presentation of the demographic data, we will go on with the rest of the questions that the main part of the questionnaire is consisted of.

# 5.1 Answers given on the Research question 1

This chapter is broken into various subchapters. Each subchapter corresponds to a Research Question. This method was chosen so to have not a random analysis of the questions, but an analysis which will have relation with the Research questions. This will help the reader to have a better understanding of the Research Questions examined.

The  $6^{th}$  question was about the comparison among some statements.

Table 5: Question 6 - Reasons for using environment friendly products

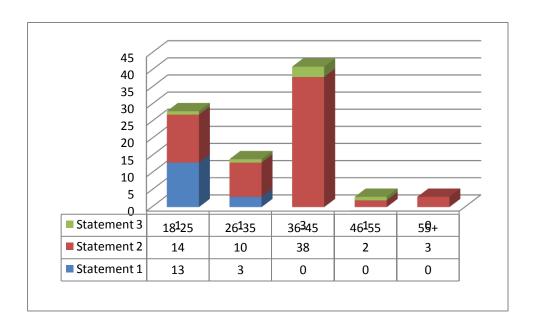
	Respondents/ Percent
Statement 1	21
Statement 2	73
Statement 3	6
Total	100

#### The statements were:

- 1) Producing environment friendly products from firms indicates their interest for the environment
- 2) Producing environment friendly products is a PR activity. Firms care only for their public image and to make profit
- 3) Firms are using recycling and green management policies in order to receive government funds

It seems that a larger number of consumers agree with the second statement, which claims that firms care mostly for their public image and they tend to produce environment friendly products not because they care for the environment but to

maintain their corporate image. Twenty one respondents answered that producing environment friendly products from firms indicates their interest for the environment and only six claims that firms are developing an environment friendly image only to receive government funds. On the appendix 2 the reader can find the results of the cross-tabulation and chi-square tests for question seven and age.



**Figure 2:** Cross tabulation between question 6 and age

From the answers given, it seems that almost half of the younger consumers have a trust on the firm's statements about their commitment on the environment, while other consumers do not trust so much the firm's environmental initiatives. The consumers found in the group 36 to 45 to have more than 90% chances to agree with statement 1. There is also a 100% expected count on the 55+ group; however the sample size of this group is too small to make any remarks. The chi square indicates that there is not any significant dependence relationship between the two variables. Hence, there is not any a statistical relationship between the variables, though there is tendency in the consumers from 36 to 45 to have more chance to agree with statement 1 than any other age group.

The 10<sup>th</sup> question concerns the willingness of Greek consumers to shift from a well-known brand to an environment friendly brand.

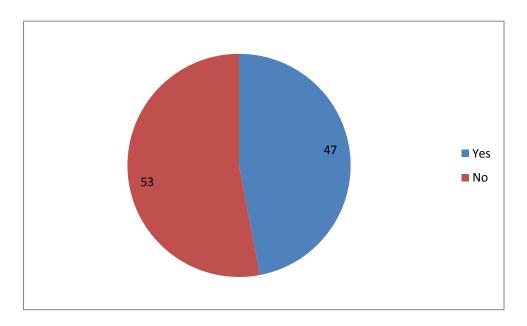


Figure 3: Question 10 – Willingness of Greek consumers to shift brand

Consumers may have a positive view for environment friendly products but they are not so willing to shift from their favorite brand to an environment friendly product. A cross tabulation with the age will bring us an interesting finding (see also Appendix 2)

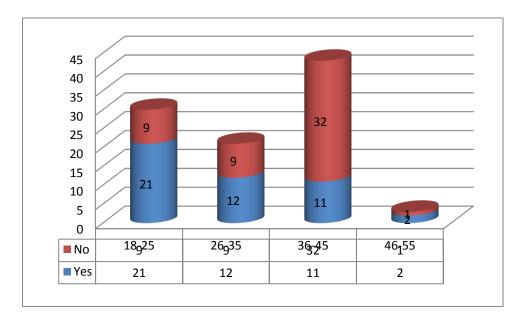


Figure 4: Cross tabulation between question 10 and age

Though in general there is a slight majority that would not shift to an environment friendly brand, it seems that there is a variation among ages. Younger consumers are

more likely to change brands than the older ones. Those who are from 36 to 45, making also the larger group of the sample are those who will not change, while all other segments show a tendency to shift for a brand that is friendly to the environment. Chi square test indicates a significance dependence between the variables; hence shift from a traditional brand to a environment friendly brand depends on the age of the consumer; younger consumers have a tendency to shift easier than the older consumers.

On the 12<sup>th</sup> question we have to judge two statements that were identified on the literature review.

The first one state: "I would prefer to buy an environment friendly product, even if it is more expensive from its competitors"

Table 6: Question 12 - Willingness of the consumers to pay extra to buy a green product

	Respondents/
Statement:	Percent
True	55
False	45
Total	100

It seems that 55% of the sample is willing to pay something extra in order to acquire an environment friendly product.

From the cross tab with the age (see Appendix 2), we noticed that young people tend to think more than anyone else that those products are quite expensive. The same applies in the 55+ group though the sample size is statistically too small to make any remarks. The significance test indicates that there is relationship between age and perceptions about the price of the products.

Also, the cross tabulation between this statement and income (see Appendix -2) indicated that those who have an income less than 1000 Euros seem to believe that environment friendly products are expensive more than those who earn more than 1000 Euros per month. The significance test also indicated that there is a correlation, hence incomes plays a role on the perception about the income.

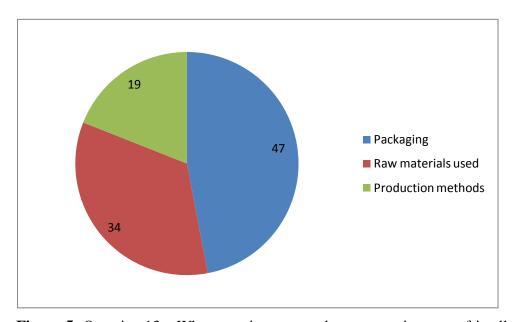
The second statement quoted that "I have a positive view for firms producing environment friendly products"

Table 7: Question 12 - B View for firms producing Green products

	Respondents/ Percent
True	91
False	9
Total	100

The 90,1% of the respondents have a positive view for firms producing environmental friendly products and this can have a great impact on firms that want to invest into those products.

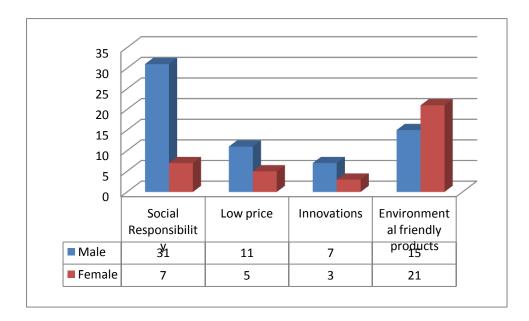
The 13<sup>th</sup> question is on how the consumers are recognizing whether a product is environment friendly or not and what weight each variable has for those products.



**Figure 5:** Question 13 – What constitutes a product as a environment friendly

It seems that packaging plays a key role. Consumers would like to see the eco-label and all other characteristics that refer on green products while the rest of them claim that they will characterize a product as an "environment friendly" from the raw materials used and the 19% from the production methods.

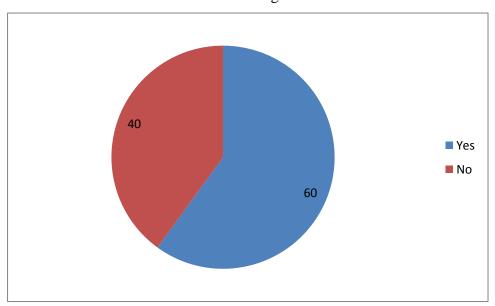
The 14th question deals with the perception that the consumers have for the brands



**Figure 6:** Question 14 – Perceptions that the consumers have for the brands

It seems that the female consumers give greater weight on producing environmental friendly products, while male consumers tend to give greater weight on social responsibility. The chi- square indicates also that there is significant dependence between the two variables; this means that gender affects the perception that they have for the brands. Females believe that having an environmental friendly product has a great weight, while male consumers give emphasis on the other factors.

The 16<sup>th</sup> question wonders whether firms can rely on environment friendly products for their success. The results are the following:



**Figure 7:** Question 16 – Relation of producing environment friendly products and success

The majority of the respondents believes that a firm can rely its success on investing on environment friendly products.

## 5.2 Answers given on the research question 2

The 7<sup>th</sup> question was about the knowledge that consumers have on environmental protection.

Table 8: Question 7 – Knowledge about the products

	Respondents/
	Percent
Yes	36
No	64
Total	100

It seems that the 64% of the sample does not feel that he/she has sufficient knowledge on this issue.

This is explained in the 11<sup>th</sup> question.

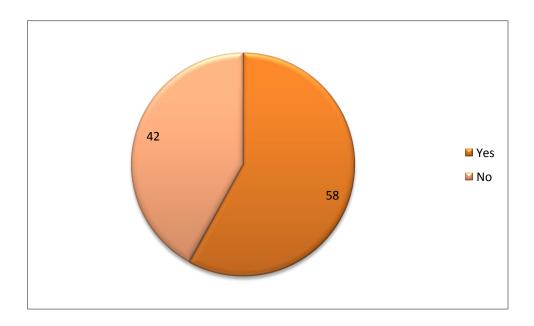


Figure 8: Question 11 - Hype

From this result is obvious that there is a slight majority that agrees with the view that environmental products are mostly hype. It is interesting to have a look on a cross-tabulation (see also Appendix 2)

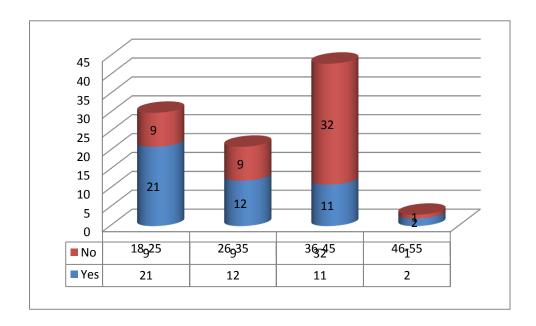
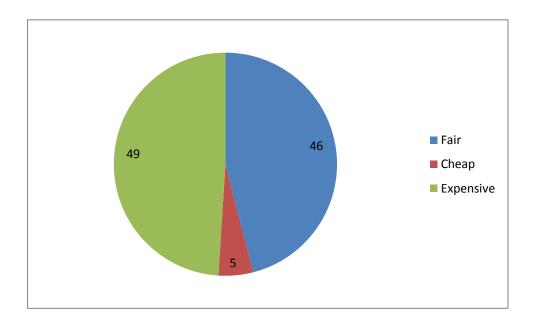


Figure 9: Cross tabulation between Question 11 and Age

It seems, like the previous result, that the segments of 26 up to 35 and of 36 to 45 – who are on their peak of productivity – believe that environment friendly products are hype, while the majority of younger consumers have the opposite opinion. The significance

test indicates a significant dependency so the hype depends on the age of the respondent.

The 15<sup>th</sup> question is about the prices. From the literature review we have noted that environment friendly products seem to be more expensive than the regular products and that some consumers seem to have the will to spend something extra in order to purchase those products.



**Figure 10:** Question 15 – Perception regarding the price

There are consumers who believe that environment friendly products are expensive but also those who believe that the price on those products is fair. For more details, we will have a look on a cross-tabulation between the income and the answers given in this question (see Appendix 2).

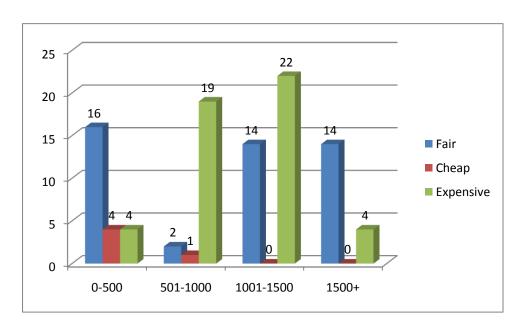


Figure 11: Cross tabulation between Question 15 and income

Those earning more than 1500€ seem to believe that the prices are fair, while those earning 501 with 1000 € believe that those products are sold expensive. Surprisingly those earning from 0 to 500€ state that the prices are fair. Hence though there is an indication that the more someone earns the more he will believe that price is fair on environment friendly products, it comes those earning less than 500 Euros that have respondent that the price is fair. Maybe this is an evidence that a large number of Greek consumers, coming from all classes, accepts the fact those products do worth of paying something extra. The chi square shows a statistical dependence which means that the perception for the price depends on the age of the consumer, except some parts.

The 17<sup>th</sup> question was about whether consumers are willing to change their lifestyle in order to protect the environment.

Table 9: Question 17 - Lifestyle

	Respondents/ Percent
Yes	75
No	25
Total	100

It is widely accepted that consumers are willing to change their lifestyle and to contribute on the preservation of the environment. The crosstab between age and lifestyle (see Appendix 2) indicates that most of groups, with the exception of the 46-55, claim that they would change their lifestyle in order to protect the environment. All groups of income are presenting some good results; hence it is not easy to claim that a particular group has a greater impact than another group.

### 5.3 Answers given on the research question 3

We may start with the first question which is about whether the consumers are recycling or not

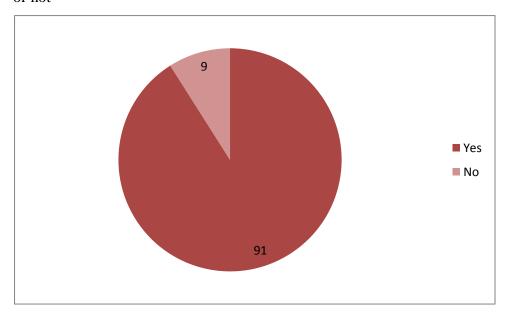


Figure 12: Question 1 - Recycling

The 90,1% of the respondents is recycling, while only the 8,9% of the respondents claims that he/she does not recycle. This is a quite encouraging result and shows that the majority of the consumers are recycling. However we need to see what type of recycling they do. The following table shows the ways that the consumers recycle products that they use as provided from the answers in the second question.

Table 10: Question 2 - Ways of recycling

		Respondents/
	Frequency	Percent
Paper	22	21,8
Plastic and Rubber	24	23,8
Organic or vegetables	6	5,9
Glass and ceramic	5	5,0
Ferrous metal	6	5,9
Aluminium	2	2,0
Wood	1	1,0
Textile	1	1,0
Garden Waste	3	3,0
All of them	21	20,8
Total	91	90,1
Total	100	100,0

The majority is recycling plastic and rubber, paper or all of them. Commodities such as paper and plastic and rubber according to Ackerman (1997) are the most common used from consumers when they recycle since they are the products that they use most.

The third question was whether the consumers are using waste items.

Table 11: Question 3 – Reusing of waste items

		Respondents/ Percent
	Yes	79
	No	21
	Total	100
Total		101

About the 79% of the respondents are using waste items such as recycled paper, etc. This is another positive result that shows that a large number of consumers have developed an environment-friendly conscience.

The fourth question is about commuting. The result is the following

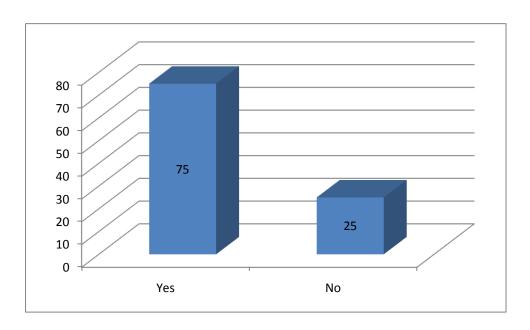


Figure 13:- Question 4 - Commuting

There is a great number of consumers who are commuting by bus, metro, bicycle or on foot. At this point it is important to have a look on a cross-tabulation with the age of the respondents (see also Appendix 2).

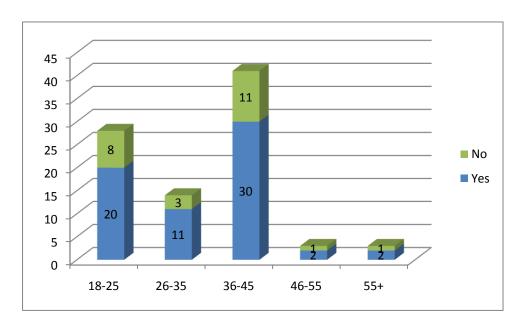
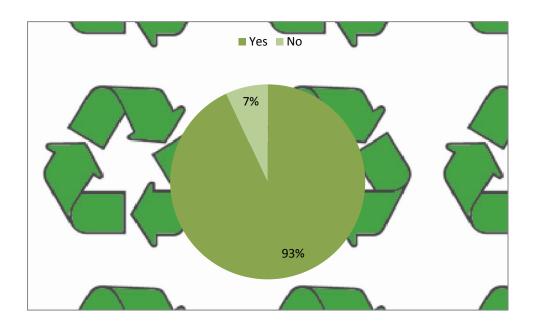


Figure 14: – Cross tabulation between question 4 and age

From the cross tabulation we can see that mostly those who are from 36 to 45 seem to have the most of the negative answers along with some young respondents from 18 to 25. From a critical point of view those who are from 36 to 45 belong to the most productive segment and often they have to use their car in order to catch up with their tight work schedules and appointments. Furthermore someone who is from 26 to 35 has

more chances (84,2%) than any other group to commute in a city. Nevertheless, the chi square score indicates that there is not any serious statistical significance, this means that commuting does not depend on the age.

The fifth question was about whether consumers are purchasing environment-friendly products.



**Figure 15:** Question 5 – Purchasing behavior

As we see, the 93% of the consumers would like to purchase an environment-friendly product. Though the 93% shows that the vast majority of the consumers would prefer this kind of products, we will try to make a cross tabulation with the income and the gender of the respondents to see if there is a significant result.

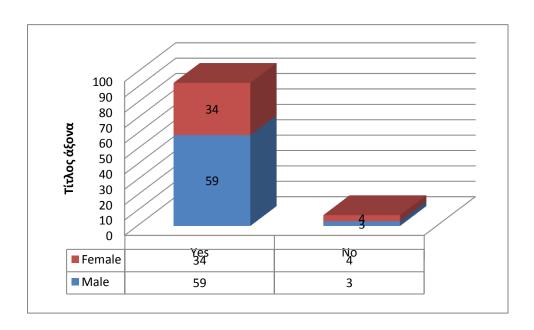


Figure 16: Cross tabulation between question 5 and gender

From this result we cannot find any significant result. There is statistically an almost 10% of women who would not purchase environment friendly products comparing to a 5% of men. However those results are quite random and surely they cannot make an important conclusion. There is a need for a larger sample size in order to make to claim if there is a statistical significance or not.

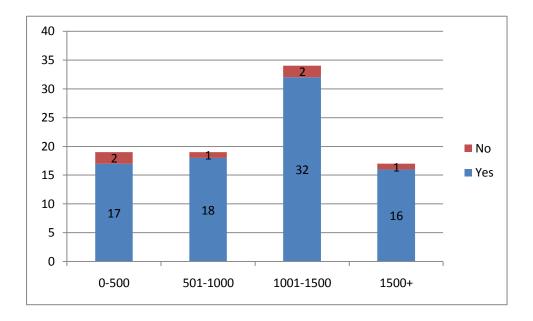


Figure 17: Cross tabulation between question 5 and income

Again for the income, it seems that there is not any significant conclusion. Hence we can claim that there is a total acceptance of the value of environment-friendly products and there has not been any significant variance among the various demographic groups.

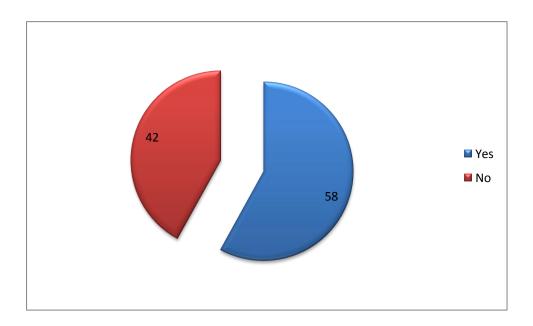
What is important for firms is not only the stance of the consumers, which is positive, but also their behavior in terms of how frequent they are willing to purchase such products. The results of the sixth question are quite useful on this.

Table 12: Question 6 - Frequency

	Respondents/ Percent
Everyday	2
Twice in a week	20
Once in a week	17
Once in 15 days	55
Total	94

We see that only few would like to purchase such products everyday or even twice a week. There are 17 consumers who would like to purchase those products once in a week and a majority of 55 respondents who would like to purchase those products once in 15 days. What is positive is that none answered that he/she would purchase environment friendly products almost never.

The 8<sup>th</sup> question was about the participation on environmental outdoor activities. There have been a number of such events in Greece, mostly on forests and parks.



**Figure 18:** Question 8 – Participation on Events

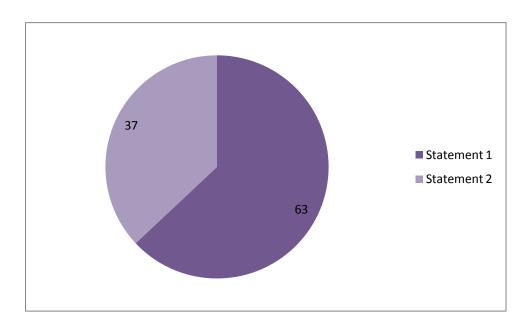
From this result we notice that a large number of consumers is willing to spend some of his/her leisure time for activities related with the protection of the environment.

We have made a cross tabulation test between the participation and education and occupation of the sample (see Appendix 2)

Regarding the education of the sample, it seems that those who have graduated from technical schools have a high level of attendance, while those who have graduated from a university seem to be more positive than those who have not graduated from a university. The chi-square test revealed a significant relationship, this means that education does affect the participation of individuals on such events. Nevertheless, the fact that we do not have any uneducated individuals on the sample size is a limitation and a more accurate conclusion can be made only in a sample that will include a number of uneducated participants.

Regarding the occupation and participation (see appendix 2); there is a significant relationship as shown from the chi square test. It seems also that an unemployed and a public servant may have more free time and they are more willing to participate on such activities.

The 9<sup>th</sup> question is about the information needed to call a product as an environment friendly.



**Figure 19:** Question 9 – Information needed to call a product as an environment friendly

The first statement was "It is enough to be named "environmental –friendly product" and the second "Labeling the product as "green" is not enough for me, I would seek for more information". We see that for Greek consumers using the label "eco" or "environment friendly" surely is not enough. They will seek for more information such as on how it is produced, the quality of the raw materials and the profile of the firm in order to verify that the product is friendly for the environment.

#### 6. Discussion and Conclusions

The mankind has to face a dilemma; whether to continue with the increase pace of mass consumption or to find ways to sustain the natural resources without hurting the economies. A proposed solution is the so-called green business and the development of new markets based on environment friendly products.

The development of the green products market is relatively new market segment and marketers are quite unaware of the attitudes of the consumers towards those products but also about the behavior of the consumers identifying themselves as "green consumers". The dissertation comes to clarify a number of issues concerning the attitudes of consumers towards environment friendly products.

In order to support this dissertation, a survey took place in a sample of 100 persons in Athens and Thessaloniki. The survey has few limitations including limited sample, not representative sample of all educated levels and limited time and financial resources.

From the findings of the data analysis we have the following conclusions:

- Authors like De Paco and Raposo (2009) have claimed that in order to build a commitment and awareness of the consumers towards environment friendly products, there must be some indication of pro-environmental behavior. From the results of questions 1 to 6, which are linked with the 3<sup>rd</sup> Research Question, we have a solid evidence that consumers are becoming pro-environmentalists since the majority of those consumers is recycling, commuting without a car to go to work and purchasing environment friendly product and other environment friendly activities
- Surveys have indicated that between age and preference for environment friendly products there is a negative correlation older people are more font of environmental products (Zimmer et al, 1994), a positive correlation (Roberts 1996) but also that there was no correlation at all (Kinnear et al, 1974). In our survey, for the purpose of the 1<sup>st</sup> Research Question, we found that younger consumers tend to have a positive stance concerning environment friendly

products. Though that consumer who are older than 35 years old shown that they are less likely to switch from a well known brand to a new brand just because the new brand is environment friendly and they claim that firms producing environment friendly products they are doing it for PR reasons rather because they really want to protect the environment.

- Another variable examined was the gender issue and how it affects the individual's attitude and buying behavior towards environment friendly products. Prakash (2002) wrote that women tend to be environment consciences than men. There is some evidence in the survey that confirms Prakash (2002) statement, which is linked with the 2<sup>nd</sup> Research Question. Actually it seems that Greek women are giving greater value on firms that promote their responsibility towards the protection of the environment while they believe that having a company image that promotes products friendly for the environment can become a key success factor. Hence, it seems that female consumers may be more favorable on green products than male consumers.
- Another variable is education. It seems that there is not a significant finding to show evidence that education plays an important role. Mainieri and Barnett (1997) and Prakash (2002) state that education plays a key role. However, during the survey it was found a key limitation which was the lack of respondents who only had secondary education. The vast majority of the sample has post-secondary education and this constitutes a limitation for the research. A future research may include a quota sample in order to compare those with secondary education with those with post-secondary education.
- Prakash (2002) writes that younger consumers tend to be closer to what we call "green consumer". Actually the findings of this survey agree with Prakash (2002). Younger consumers seem to trust corporations promoting green products and they are more likely to shift from a traditional brand to a green brand, unlike the older ones who believe that this could be PR trick and they seem to agree with Menon and Menon, (1997)'s green spinning theory.

Besides the demographic characteristics there are many other elements that have been examined in the dissertation, such as changes on lifestyle. Ottman (1998) revealed that consumers (80%) have noticed that protecting the environment means also change on their lifestyle. From the findings of the survey, the 75% of the respondents agreed that

becoming a "green consumer" may have an impact on their lifestyle with substantial changes.

In general there is the view the consumers have a positive view for green products. However this does not mean that they fully trust the companies producing green products. Lot of consumers, especially the older ones, believe that a number of companies tries to implement green marketing policies but without any change on their culture and without a real commitment to protect the environment.

The survey found out also that a number of consumers, especially the older ones, believe that green products are nothing than a hype. Another fact is that consumers are aware of the high prices of green products like González-Benito and González-Benito (2008) found on their survey.

For firms that want to implement a green marketing strategy, what we learnt from this survey is that consumers, especially female and the younger ones tend to have a positive attitude towards green products. However the firm would have to convince the consumers for its scope and that it does not only produces green products but it has also a "green culture" embedded on its organizational structures and on its personnel. Furthermore, it is suggested on firms to try to reduce their prices. Though that consumer understands that the green products have higher prices, it would be interesting to see some firms manufacturing green products on lower price, which will help them to attract large market shares and create loyal customers.

Another recommendation that we can make on those firms is on how to approach the customers who consider themselves as 'green consumers'. The firm shall think carefully about the nature of the product and to make sure that it is an environment friendly product. For example, a 4 wheel car that has slightly reduced its emissions cannot be considered as an environment friendly vehicle comparing to a bicycle or a hybrid car. It seems that consumers are willing to pay something extra to purchase those products, however the firms must take in consideration the economic recession as well. Consumers seem willing to change their lifestyle and to switch brands in favor of a green product. This means that branding can play a key role in the process of acquiring new customers.

For future studies, it is recommended to make a survey in a wider sample that will include much more demographic groups such as individuals with low or no education. A survey can occur in a number of countries; it will compare results from different countries of regions. Finally there is a need for an additional survey which will include managers and executives in order to analyze their view.

To conclude, green products have a great future. Customers seem to have a positive view on those products and in general in anything that has to do with the protection of the environment. However, firms that operate in this industry need also to focus on several other elements such as to prove for their intentions and to lower the prices. In this way they will manage to gain the market share and the corporate reputation needed to have sustainability on their operations.

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# Appendix 1 - The questionnaire

Gender	Male □ Female □		
Age	18- 25 ☐ 26- 35 ☐ 36 - 45 ☐ 46 - 55 ☐ 55+ ☐		
Monthly personal income (in €)	0-500	О	
	501-1000 1001 - 1500 1500 +	_ _ _	
Education	Secondary	□	
	Undergradua Technical (IE Private Colle Postgraduate	EK) □ ge □	
Occupation	Unemployed		□
	Pensioner Employee on Public servan Entrepreneur		o o o
Please indicate if you have adopted the follo	owing environ	ment friendly activ	vities:
1) Recycling			
Yes □ No □			

2) If you recycle	, which one of the following products do you recycle?
Paper Plastic and rubber Organic or vegeta Glass and ceramic Ferrous metal Aluminum Wood Textile Garden waste Other All of them	bles 🗖
3) Do you reuse	waste items?
Yes □ No □	
4) Commuting w	vith public transportation
Yes □ No □	
5) Purchasing en	vironment friendly products
Yes□ No □	
If Yes, how freq	uent?
Everyday	o
Twice in a week	П
Once in a week	
Once in 15 days	
Rarely	О

6) Please tick appropriately one of the following statements that you think that is true
Producing environment friendly products from firms indicates their interest for the environment
Producing environment friendly products is a PR activity. Firms care only for their public image and to make profit $\Box$
Firms are using recycling and green management policies in order to receive government funds
7) Do you believe that you have sufficient knowledge on environmental protection?  Yes□ No □
8) Do you participate on environmental outdoor activities? Yes□ No □
9) Do you think that it is enough for a product to be name as "environmental-friendly" or you seek to find more information about how this product was manufactured? Please tick appropriately.
It is enough to be named "environmental –friendly product" □
Labeling the product as "green" is not enough for me, I would seek for more information
10) Would you shift from a regular brand that you are loyal to an environmental friendly brand?
Yes□ No □

11) Do you believe that environment	ent friendly products are only a hype?
Yes □ No □	
12) Please indicate if the following	g statements are true or not:
I would prefer to buy an environment from its competitors.	ent friendly product, even if it is more expensive
True □ False □	
I have a positive view for firms pr	oducing environment friendly products
True □ False □	
13) How do you recognize an env	ironment friendly product?
From its packaging	
From the raw materials used $\Box$	
From the production methods $\Box$	
14) Which one of the following va a positive stance towards its brand	ariables has a greater weight for a firm in order to have s?
Social responsible	
Low price	ם
Innovations	
Environmental friendly Products	

15) Do you	believe that prices on environmental friendly products are:
Fair	σ
Cheap	o o
Expensive	
number of fi environmen	
17) Are you	willing to change your lifestyle in order to protect the environment?
Yes 🗖 No [	<b>_</b>

# **Appendix 2 - Cross tabulations**

# **Question 6**

#### Age \* Statements Crosstabulation

		Statements	Statements				
		Statement 1	Statement 2	Statement 3			
Age	18-25	13	14	1	28		
	26-35	3	10	1	14		
	36-45	0	38	3	41		
	46-55	0	2	1	3		
	55+	0	3	0	3		
Total		16	67	6	89		

Statements \* Age Crosstabulation

			Age				Total	
			18-25	26-35	36-45	46-55	55+	
Statements	Statement 1	Count	13	7	1	0	0	21
		Expected Count	6,5	4,0	9,2	,6	,6	21,0
		% within Age	41,9%	36,8%	2,3%	,0%	,0%	21,0%
		Residual	6,5	3,0	-8,2	-,6	-,6	
		Adjusted Residual	3,4	1,9	-4,1	-,9	-,9	
	Statement 2	Count	17	11	40	2	3	73
		Expected Count	22,6	13,9	32,1	2,2	2,2	73,0
		% within Age	54,8%	57,9%	90,9%	66,7%	100,0%	73,0%
		Residual	-5,6	-2,9	7,9	-,2	,8	
		Adjusted Residual	-2,7	-1,6	3,6	-,3	1,1	
	Statement 3	Count	1	1	3	1	0	6
		Expected Count	1,9	1,1	2,6	,2	,2	6,0
		% within Age	3,2%	5,3%	6,8%	33,3%	,0%	6,0%
		Residual	-,9	-,1	,4	,8	-,2	
		Adjusted Residual	-,8	-,2	,3	2,0	-,4	
Total		Count	31	19	44	3	3	100
		Expected Count	31,0	19,0	44,0	3,0	3,0	100,0
		% within Age	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

**Chi-Square Tests** 

			Asymp. Sig.
	Value	df	(2-sided)
Pearson Chi-Square	25,972(a)	8	,001
Likelihood Ratio	28,349	8	,000
Linear-by-Linear	45.075	4	000
Association	15,375	1	,000
N of Valid Cases	100		

a 10 cells (66,7%) have expected count less than 5. The minimum expected count is ,18.

# **Question 10**

### Shift \* Age Crosstabulation

		Age	Age					
		18-25	26-35	36-45	46-55	55+		
Shift	Yes	21	12	11	2	1	47	
	No	9	9	32	1	2	53	
Total		30	21	43	3	3	100	

Shift \* Age Crosstabulation

			Age					Total
			18-25	26-35	36-45	46-55	55+	
Shift	Yes	Count	22	10	11	2	1	46
		Expected Count	14,3	8,7	20,2	1,4	1,4	46,0
		% within Age	71,0%	52,6%	25,0%	66,7%	33,3%	46,0%
		Residual	7,7	1,3	-9,2	,6	-,4	
		Adjusted Residual	3,4	,6	-3,7	,7	-,4	
	No	Count	9	9	33	1	2	54
		Expected Count	16,7	10,3	23,8	1,6	1,6	54,0
		% within Age	29,0%	47,4%	75,0%	33,3%	66,7%	54,0%
		Residual	-7,7	-1,3	9,2	-,6	,4	
		Adjusted Residual	-3,4	-,6	3,7	-,7	,4	
Total		Count	31	19	44	3	3	100
		Expected Count	31,0	19,0	44,0	3,0	3,0	100,0
		% within Age	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

# **Chi-Square Tests**

			Asymp. Sig.
	Value	df	(2-sided)
Pearson Chi-Square	16,637(a)	4	,002
Likelihood Ratio	17,227	4	,002
Linear-by-Linear	10 607	1	001
Association	10,697	1	,001
N of Valid Cases	100		

a 4 cells (40,0%) have expected count less than 5. The minimum expected count is 1,38.

# **Question 12-A**

#### Crosstab

			Age					Total
			18-25	26-35	36-45	46-55	55+	
Expensive	True	Count	24	8	19	1	3	55
		Expected Count	17,1	10,5	24,2	1,7	1,7	55,0
		% within Age	77,4%	42,1%	43,2%	33,3%	100,0%	55,0%
		Residual	7,0	-2,5	-5,2	-,7	1,4	
		Adjusted Residual	3,0	-1,3	-2,1	-,8	1,6	
	False	Count	7	11	25	2	0	45
		Expected Count	14,0	8,6	19,8	1,4	1,4	45,0
		% within Age	22,6%	57,9%	56,8%	66,7%	,0%	45,0%
		Residual	-7,0	2,5	5,2	,7	-1,4	
		Adjusted Residual	-3,0	1,3	2,1	,8	-1,6	
Total		Count	31	19	44	3	3	100
		Expected Count	31,0	19,0	44,0	3,0	3,0	100,0
		% within Age	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

### **Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13,079(a)	4	,011
Likelihood Ratio	14,651	4	,005
Linear-by-Linear Association	3,329	1	,068
N of Valid Cases	100		

a 4 cells (40,0%) have expected count less than 5. The minimum expected count is 1,35.

### Crosstab

			Income				Total
			0-500	501-1000	1001-1500	1500+	
Expensive	True	Count	16	18	13	8	55
		Expected Count	13,2	12,1	19,8	9,9	55,0
		% within Income	66,7%	81,8%	36,1%	44,4%	55,0%
		Residual	2,8	5,9	-6,8	-1,9	
		Adjusted Residual	1,3	2,9	-2,8	-1,0	
	False	Count	8	4	23	10	45
		Expected Count	10,8	9,9	16,2	8,1	45,0
		% within Income	33,3%	18,2%	63,9%	55,6%	45,0%
		Residual	-2,8	-5,9	6,8	1,9	
		Adjusted Residual	-1,3	-2,9	2,8	1,0	
Total		Count	24	22	36	18	100
		Expected Count	24,0	22,0	36,0	18,0	100,0
		% within Income	100,0%	100,0%	100,0%	100,0%	100,0%

# **Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13,713(a)	3	,003
Likelihood Ratio	14,390	3	,002
Linear-by-Linear Association	6,592	1	,010
N of Valid Cases	100		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 8,10.

# Question 14

**Gender \* Recognize Crosstabulation** 

		Recognize	Total		
		Packaging	Raw materials used	Production methods	
Gender	Male	28	23	13	64
	Female	19	11	6	36
Total		47	34	19	100

Recognize \* Gender Crosstabulation

			Gender		Total
			Male	Female	
Recognize	Packaging	Count	28	19	47
		Expected Count	30,1	16,9	47,0
		% within Gender	43,8%	52,8%	47,0%
		Residual	-2,1	2,1	
		Adjusted Residual	-,9	,9	
	Raw materials used	Count	23	11	34
		Expected Count	21,8	12,2	34,0
		% within Gender	35,9%	30,6%	34,0%
		Residual	1,2	-1,2	
		Adjusted Residual	,5	-,5	
	Production methods	Count	13	6	19
		Expected Count	12,2	6,8	19,0
		% within Gender	20,3%	16,7%	19,0%
		Residual	,8	-,8	
		Adjusted Residual	,4	-,4	
Total		Count	64	36	100
		Expected Count	64,0	36,0	100,0
		% within Gender	100,0%	100,0%	100,0%

# **Chi-Square Tests**

			Asymp. Sig.
	Value	df	(2-sided)
Pearson Chi-Square	,757(a)	2	,685
Likelihood Ratio	,757	2	,685
Linear-by-Linear	620	1	427
Association	,630	I	,427
N of Valid Cases	100		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 6,84.

# **Question 11**

Hype \* Age Crosstabulation

		Age	ge						
		18-25	26-35	36-45	46-55	55+			
Нуре	Yes	8	14	31	2	3	58		
	No	22	7	12	1	0	42		
Total		30	21	43	3	3	100		

Hype \* Age Crosstabulation

			Age					Total
			18-25	26-35	36-45	46-55	55+	
Нуре	Yes	Count	8	13	32	2	3	58
		Expected Count	18,0	11,0	25,5	1,7	1,7	58,0
		% within Age	25,8%	68,4%	72,7%	66,7%	100,0%	58,0%
		Residual	-10,0	2,0	6,5	,3	1,3	
		Adjusted Residual	-4,4	1,0	2,6	,3	1,5	
	No	Count	23	6	12	1	0	42
		Expected Count	13,0	8,0	18,5	1,3	1,3	42,0
		% within Age	74,2%	31,6%	27,3%	33,3%	,0%	42,0%
		Residual	10,0	-2,0	-6,5	-,3	-1,3	
		Adjusted Residual	4,4	-1,0	-2,6	-,3	-1,5	
Total		Count	31	19	44	3	3	100
		Expected Count	31,0	19,0	44,0	3,0	3,0	100,0
		% within Age	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

# **Chi-Square Tests**

			Asymp. Sig.
	Value	df	(2-sided)
Pearson Chi-Square	20,219(a)	4	,000
Likelihood Ratio	21,573	4	,000
Linear-by-Linear	16,499	1	000
Association	10,499	I	,000
N of Valid Cases	100		

a 4 cells (40,0%) have expected count less than 5. The minimum expected count is 1,26.

# **Question 15**

**Income \* Prices Crosstabulation** 

		Prices	Prices				
		Fair	Cheap	Expensive			
Income	0-500	16	4	4	24		
	501-1000	2	1	19	22		
	1001-1500	14	0	22	36		
	1500+	14	0	4	18		
Total		46	5	49	100		

**Prices \* Income Crosstabulation** 

			Income				Total
			0-500	501-1000	1001-1500	1500+	
Prices	Fair	Count	16	2	14	14	46
		Expected Count	11,0	10,1	16,6	8,3	46,0
		% within Income	66,7%	9,1%	38,9%	77,8%	46,0%
		Residual	5,0	-8,1	-2,6	5,7	
		Adjusted Residual	2,3	-3,9	-1,1	3,0	
	Cheap	Count	4	1	0	0	5
		Expected Count	1,2	1,1	1,8	,9	5,0
		% within Income	16,7%	4,5%	,0%	,0%	5,0%
		Residual	2,8	-,1	-1,8	-,9	
		Adjusted Residual	3,0	-,1	-1,7	-1,1	
	Expensive	Count	4	19	22	4	49
		Expected Count	11,8	10,8	17,6	8,8	49,0
		% within Income	16,7%	86,4%	61,1%	22,2%	49,0%
		Residual	-7,8	8,2	4,4	-4,8	
		Adjusted Residual	-3,6	4,0	1,8	-2,5	
Total		Count	24	22	36	18	100
		Expected Count	24,0	22,0	36,0	18,0	100,0
		% within Income	100,0%	100,0%	100,0%	100,0%	100,0%

**Chi-Square Tests** 

			Asymp. Sig.
	Value	df	(2-sided)
Pearson Chi-Square	37,434(a)	6	,000
Likelihood Ratio	41,135	6	,000
Linear-by-Linear	.020	1	.888
Association	,020	'	,000
N of Valid Cases	100		

a 4 cells (33,3%) have expected count less than 5. The minimum expected count is ,90.

# **Question 17**

### Crosstab

			Age					Total
			18-25	26-35	36-45	46-55	55+	
Lifestyle	Yes	Count	22	16	33	1	3	75
		Expected Count	23,3	14,3	33,0	2,3	2,3	75,0
		% within Age	71,0%	84,2%	75,0%	33,3%	100,0%	75,0%
		Residual	-1,3	1,8	,0	-1,3	,8	
		Adjusted Residual	-,6	1,0	,0	-1,7	1,0	
	No	Count	9	3	11	2	0	25
		Expected Count	7,8	4,8	11,0	,8	,8	25,0
		% within Age	29,0%	15,8%	25,0%	66,7%	,0%	25,0%
		Residual	1,3	-1,8	,0	1,3	-,8	
		Adjusted Residual	,6	-1,0	,0	1,7	-1,0	
Total		Count	31	19	44	3	3	100
		Expected Count	31,0	19,0	44,0	3,0	3,0	100,0
		% within Age	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

### Crosstab

			Income				Total
			0-500	501-1000	1001-1500	1500+	
Lifestyle	Yes	Count	18	17	25	15	75
		Expected Count	18,0	16,5	27,0	13,5	75,0
		% within Income	75,0%	77,3%	69,4%	83,3%	75,0%
		Residual	,0	,5	-2,0	1,5	
		Adjusted Residual	,0	,3	-1,0	,9	
	No	Count	6	5	11	3	25
		Expected Count	6,0	5,5	9,0	4,5	25,0
		% within Income	25,0%	22,7%	30,6%	16,7%	25,0%
		Residual	,0	-,5	2,0	-1,5	
		Adjusted Residual	,0	-,3	1,0	-,9	
Total		Count	24	22	36	18	100
		Expected Count	24,0	22,0	36,0	18,0	100,0
		% within Income	100,0%	100,0%	100,0%	100,0%	100,0%

# **Question 4**

### Age \* Commuting Crosstabulation

Count

		Commuting	Total	
		Yes	No	
Age	18-25	20	8	28
	26-35	11	3	14
	36-45	30	11	41
	46-55	2	1	3
	55+	2	1	3
Total		65	24	89

# Commuting \* Age Crosstabulation

			Age					Total
			18-25	26-35	36-45	46-55	55+	
Com	Yes	Count						
muti			23	16	33	2	2	76
ng								
		Expected Count	23,6	14,4	33,4	2,3	2,3	76,0
		% within Age	74,2%	84,2%	75,0%	66,7%	66,7%	76,0%
		Residual	-,6	1,6	-,4	-,3	-,3	
		Adjusted Residual	-,3	,9	-,2	-,4	-,4	
	No	Count	8	3	11	1	1	24
		Expected Count	7,4	4,6	10,6	,7	,7	24,0
		% within Age	25,8%	15,8%	25,0%	33,3%	33,3%	24,0%
		Residual	,6	-1,6	,4	,3	,3	
		Adjusted Residual	,3	-,9	,2	,4	,4	
Total		Count	31	19	44	3	3	100
		Expected Count	31,0	19,0	44,0	3,0	3,0	100,0
		% within Age	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

# **Chi-Square Tests**

			Asymp. Sig.
	Value	df	(2-sided)
Pearson Chi-Square	1,068(a)	4	,899
Likelihood Ratio	1,115	4	,892
Linear-by-Linear	004	1	770
Association	,084	1	,772
N of Valid Cases	100		

a 5 cells (50,0%) have expected count less than 5. The minimum expected count is ,72.

# **Question 8**

### Crosstab

			Education					Total
				Undergrad	Technical	Private		
			Secondary	uate	(IEK)	College	Postgraduate	
Participation	Yes	Count	3	23	20	8	2	56
		Expected Count	3,4	27,4	12,9	10,1	2,2	56,0
		% within Education	50,0%	46,9%	87,0%	44,4%	50,0%	56,0%
		Residual	-,4	-4,4	7,1	-2,1	-,2	
		Adjusted Residual	-,3	-1,8	3,4	-1,1	-,2	
	No	Count	3	26	3	10	2	44
		Expected Count	2,6	21,6	10,1	7,9	1,8	44,0
		% within Education	50,0%	53,1%	13,0%	55,6%	50,0%	44,0%
		Residual	,4	4,4	-7,1	2,1	,2	
		Adjusted Residual	,3	1,8	-3,4	1,1	,2	
Total		Count	6	49	23	18	4	100
		Expected Count	6,0	49,0	23,0	18,0	4,0	100,0
		% within Education	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

# **Chi-Square Tests**

			Asymp. Sig.
	Value	df	(2-sided)
Pearson Chi-Square	11,700(a)	4	,020
Likelihood Ratio	13,036	4	,011
Linear-by-Linear	207	4	502
Association	,287	1	,592
N of Valid Cases	100		

a 4 cells (40,0%) have expected count less than 5. The minimum expected count is 1,76.

# Crosstab

			Occupation					Total
			Unemployed	Pensioner	Employee on the Private Sector	Public Servant	Entrepreneur	
Participation	Yes	Count	8	2	22	14	10	56
		Expected Count	7,3	2,2	24,1	11,8	10,6	56,0
		% within Occupation	61,5%	50,0%	51,2%	66,7%	52,6%	56,0%
		Residual	,7	-,2	-2,1	2,2	-,6	
		Adjusted Residual	,4	-,2	-,8	1,1	-,3	
	No	Count	5	2	21	7	9	44
		Expected Count	5,7	1,8	18,9	9,2	8,4	44,0
		% within Occupation	38,5%	50,0%	48,8%	33,3%	47,4%	44,0%
		Residual	-,7	,2	2,1	-2,2	,6	
		Adjusted Residual	-,4	,2	,8	-1,1	,3	
Total		Count	13	4	43	21	19	100
		Expected Count	13,0	4,0	43,0	21,0	19,0	100,0
		% within Occupation	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

# **Chi-Square Tests**

			Asymp. Sig.
	Value	df	(2-sided)
Pearson Chi-Square	1,686(a)	4	,793
Likelihood Ratio	1,710	4	,789
Linear-by-Linear	000		000
Association	,002	1	,968
N of Valid Cases	100		

a 2 cells (20,0%) have expected count less than 5. The minimum expected count is 1,76.