Sumário Executivo

A preocupação com o meio ambiente e as consequências das acções que cada individuo possa causar tem vindo a aumentar nas últimas décadas. Os indivíduos tornaram-se pessoas mais consciencializadas relativamente a este assunto e à relação acção-ambiente. Dentro desta consciencialização inserem-se desde as acções do dia-a-dia até a um projecto de longo prazo. Calcular as suas compras, lixo que produz, como o recicla, os desperdícios, a participação em grupos activistas, causas ambientais entre outras, são apenas algumas dos possíveis comportamentos que o individuo e a respectiva sociedade podem ter. Com o crescimento desta preocupação por parte dos consumidores, surge um novo desafio para as empresas. Estas passam a ter de responder às necessidades e desejos do consumidor tendo em conta as questões ambientais. Esta resposta não passa apenas pela produção, há que ter também em consideração todos os processos envolvidos desde a desde o conceito e criação até à compra por parte do consumidor final.

Tendo em conta este contexto atribuíram-se novas designações, tanto aos consumidores como ao marketing das empresas associadas a este conceito, consumidor verde/consumidor green e green marketing, respectivamente.

Deste modo esta tese pretende abordar algumas das especificidades deste tema tão actual e relevante nos dias correntes. Neste estudo, um dos objectivos em análise é testar se os factores psicográficos são mais relevantes a explicar o ECCB (Ecologycal Conscious Consumer Behaviour). Mas, o principal objectivo é testar se os ambientalistas que tanto defendem esta doutrina têm um comportamento condicente com a mesma, nomeadamente no tipo e modo de compras que efectuam no dia-a-dia.

Para alcançar estes objectivos, inicialmente foi necessário tentar compreender acerca das características, vicissitudes e todos os factores relevantes do universo de investigação da presente temática. Para tal, primeiramente, surgiu a necessidade da explanação do contexto e significado do termo green marketing e respectivo papel no meio envolvente. De seguida, com intuito de sustentar as premissas defendidas e alcançar os objectivos pressupostos foi necessário proceder a uma breve revisão da literatura sobre o comportamento do consumidor verdes e os seus respectivos determinantes. Dentro deste capítulo dos determinantes é possível fazer uma distinção entre os factores demográficos (idade, género, rendimento, etc.), factores psicográficos

(preocupação ambiental, conhecimento ambiental, activismo, entre outros) e outros factores (personalidade e valores). É precisamente nesta distinção que surgem as hipóteses que irão sustentar os modelos explicativos. Finalizando a revisão da literatura foi desenvolvido o tema da segmentação de mercado e de alguns estudos concernentes à segmentação de consumidores verdes, a nível demográfico e psicográfico.

No capítulo respeitante à metodologia, importa referir de modo sucinto, as técnicas e métodos seleccionados para a construção e resposta do modelo. Para o estudo das variáveis supramencionadas, foi desenvolvido um questionário com base em escalas, previamente validadas/ estudadas por outros autores. Este foi distribuído e divulgado, maioritariamente pela internet, tentando atingir indivíduos de todas as idades e sexos, residentes em Portugal. Houve um esforço acrescido de tentar divulgar este questionário em fóruns e blogs ambientalistas, uma vez que o principal objectivo é baseado na caracterização destes mesmos consumidores.

Os resultados da amostra foram analisados com recurso ao programa de tratamento de dados estatísticos SPSS. No decorrer deste tratamento, foram utilizadas algumas técnicas, tais como tabelas de frequência e análise descritiva que permite obter a descrição da amostra. De modo a verificar a validação e a fiabilidade das escalas, foi utilizada a análise factorial e o alpha de Cronbach. Para responder à questão de quais são os factores mais significativos na explicação do ECCB foi efectuado um teste de regressão múltipla. Para concluir, foi desenvolvido o teste Kruskal-Wallis, que permite e, perfilar os activistas em termos demográficos.

Em suma, e após os métodos e etapas acima referidos, foi possível concluir que, tal como a revisão de literatura previa, os factores psicográficos são mais relevantes na explicação do ECCB, que os demográficos. Foi possível também, chegar à conclusão que o activismo é o factor que melhor explica o ECCB. Relativamente ao resultado do teste Kruskal-Wallis, concluiu-se que, em média, os activistas são maioritariamente do sexo feminino, que não existe uma relação linear entre os activistas e a média de idades e que maior rendimento não significa maior propensão para o activismo.

Abstract

In the last decades the concern over the environment has been increasing. People are now more worried about their purchasing behaviours, and what consequences they could bring to the environment. Managers are getting committed in responding to the individuals' needs and desires in a responsible way, taking in account the possible damages. Studies in the beginning were more concentrated in explaining this phenomenon trough demographical variables but the trend is to be explained trough psychographic and environmental variables, which has already proved that these are the most important. This study aims to establish a relationship between activists and ecological conscious consumer behavior (ECCB) by analyzing the profile of the green consumer (demographic and psychographic variables). To reach this objective an online survey was conducted in a single phase. The empirical findings revealed that activism was the higher predictor of ECCB.

Keywords: Environment, Green Consumer, Activism, ECCB

Resumo

Nas últimas décadas, a preocupação com o meio ambiente tem vindo a aumentar. As pessoas estão agora mais preocupadas com os seus comportamentos de compra, e quais as consequências que estes podem trazer ao meio ambiente. Os gerentes estão agora mais empenhados em responder às necessidades e desejos dos indivíduos de uma forma responsável, tendo em conta os possíveis malefícios. Os estudos no início estavam mais concentrados em explicar este fenómeno através das variáveis demográficas, mas a tendência é para ser explicada através de variáveis psicográficas e variáveis ambientais, tendo já sido provado que estes são mais importantes. Este estudo tem como objectivo tentar estabelecer uma relação entre activistas e o comportamento ecológico do consumidor consciente (ECCB), analisando o perfil do consumidor verde (variáveis demográficas e psicográficas). Para alcançar este objectivo um questionário online foi realizado numa única fase. Os resultados empíricos levaram o autor à conclusão de que o activismo é o maior indicador de ECCB.

Palavras-chave: Ambiente, Activismo, Consumidor Verde, ECCB

JEL Classification System: M31; Q51

Table Index

Index

1. Introduction

1.1Background

In the past decades consumers' consumption all over the world had increase, which means more deterioration and utilization of natural resources (Shahnaei, 2012). At the same time environmental issue passed from a basic question to a mainstream one due to an enormous number of factors. Ham et al. (2008) pointed that the presence of environmental groups, a more restrictive legislation in national and international levels and reported disasters are just some of them. These changes include consumers' purchasing behaviour that is based on satisfying their needs and at the same time know how products affect environment (Kheiry and Nakhaei, 2012).

Straughan and Roberts (1999) affirmed that this concern about the environment has evolved through several phases. It started in the 60s, where the concerns were about the pollution and energy conservation due to the lack of environmentally friendly products and the majority of the studies were about non-consumption of certain products, contrary to nowadays where this become a competitive advantage to the companies (Follows and Jobber, 2000). Akehurst et al. (2012) said that is important to understand that this triggered an important change in how people manage their companies and particularly in marketing area. In this context, marketers from modern companies have to become more focused and concerned in environmental issues, communicating in a clearly way these beliefs and increase the number of environmentally friendly products for green consumers (Samarasinghe, 2012; Follows and Jobber, 2000). Companies stopped to look just for the pollution and energy safe, to look to alternatives for example in packaging composition and design, alternative products formulations, etc. (Straughan and Roberts, 1999). This is why the role of green marketing is so important; to plan all the activities that satisfy the human needs and desires taking in consideration the possible damages that can occur in the environment (Polonsky, 1994).

Protecting the environment and make environmentally responsible consumption decisions had become part of consumers' lifestyle (Brown and Wahlers, 1998). The growing importance of this issue, the preservation of the environment, has modified the way people see the market, especially in the aspect of consumer behavior, where

consumer believes and their actual behaviour will now have a better match (Akehurst et al. 2012).

All this concern about the environment lead to an increase in the number of environmentally friendly products (Jansson et al. 2010).

If a consumer considers the environment probably he will take in consideration the consequences of his purchasing decisions. To clarify this, Follows and Jobber (2000) gave the example of a person that worries about the amount of garbage generated (environmental issue) possibly will be concern about the type of packaging that is used in a product (environmental consequence). Concluding if the environmental consequence is important enough to the consumer, this may result in the purchase of the environmental friendly product.

Study the purchasing behaviour of environmental consumers sometimes can be tricky due to the type of measurement. It is necessary to distinguish between the study of consumer intention to buy environmentally friendly products and the actual behaviour (Follows and Jobber 2000).

1.2 Goals

As it was mentioned before, the concern over the environment has increased leading to a change in the consumer purchasing behaviour. People are now more alerted to the consequences of their behaviour in the environment, transforming normal consumers into green consumers. The main goals of this thesis are:

- To test if psychographics variables are better predictors of green consumer than demographical ones;
- To confirm if an individual that is environmentalist and truly believes in this type of lifestyle actually buys environmentally friendly products.

1.3 Structure

To study this question it's important in first place to know what green marketing is, how green consumer acts, and that is how the literature review begins. The first chapter will be about the green marketing, followed by the behaviour adopted by this type of consumers' chapter, why they switch products, what they believe, etc. The next point will be about the green consumer determinants and here it will be pointed some factors that influence the behaviour.

There are a lot of published studies regarding the green purchasing behaviour, most of them focusing on demographical determinants (Samarasinghe, 2012; Kheiry and Nakhaei, 2012). However, according to Awad (2011) psychographic variables have proved to be more accurate and significant for segmenting and explaining different segment profiles. The results of this study indicated that psychographic measures are more accurate in explaining the different levels of environmental conscious consumer. The results confirm that individuals should be convinced that their behaviour would affect the environment, and businesses should perhaps link consumer benefit in choosing green products (Awad, 2011). Schwepker and Cornwell (1991) also concluded that these variables are more important in understanding ecological consumers than demographical ones. In the context of psychographic factors we will analyze for example the environmental concern, activism, environmental knowledge, etc.

In addition to the demographic and psychographic factors there will be also the other determinants such as values, personality, etc.

After this it's important to discuss how the process of market segmentation works and how can this be related with the green consumer. Therefore a specific section will be dedicated to the green market segmentation concept.

The literature review will lead to the research hypotheses and model formulation. The methodology and the research results are described and the implications are discussed. This study ends with the limitations and future research suggestions.

2. Literature Review

2.1 Green Marketing

The concept of green marketing had its first discussions in the 60s, but it was in the late 80s and early 90s that this concept received more importance (Akehurst et al, 2012). Polonsky (1994) affirmed that defining green marketing is not a simple task, that this concept can assume more than one name as Environmental Marketing or Ecological Marketing and that "no one definition or terminology has been universally accepted". The author tried to define green marketing by saying that this concept consists in all planned activities used to satisfy the human needs and desires that take in consideration the impact in the environment, so they are made in an attempt to cause less environmental impact possible. Green Marketing incorporates all kind of activities like product modification, changes in the production process, packaging changes and modifying advertising (Yakup and Sevil, 2011).

According to Paço (2009) the relation between the consumer behaviour, the marketing and the environment has received an increasing attention over the last years. People express this concern / attention in two ways: (1) the political consciousness has increased regarding the environmental aspects, (2) and on the other hand the environmental responsibility from companies and consumers had increase.

Some advantages of green marketing are: it helps the companies to market their products/services in an environmental way; some employees fell proud and important to be working in an environmentally responsible company; facility to enter in new markets with a positive advantage; and it ensures a sustained growth in long term with profitability (Yakup and Sevil, 2011).

According to Paço (2005) normally there are five reasons for companies to adopt a green marketing: companies see the green marketing as a way to achieve their objectives (Shearer, 1990); organizations believe that they should be more responsible relative to environment (Shearer, 1990); the governmental organs are forcing companies to be more responsible (Polonsky, 1994); the environmental activities of the competition creates some pressure in companies and so they change their marketing activities (Peattie, 1992 apud Paço, 2005); and costs associated with excessive waste

and reduction of material resources force companies to change their behaviour (Azzone and Manzini, 1994 apud Paço, 2005).

2.2 Green Behaviour

Since there are many perspectives to study consumer behaviour this issue turned into a very complex task. To Fraj and Martinez (2006) not only this is true but they also believe that is difficult to establish limits to the definition of green consumers.

In recent times, due to the rise of the environmental issue, consumers started to become more environmentally friendly and started to swap from traditionally purchases to environmentally alternatives (Akehurst et al, 2012). According to Vermillion and Peart (2010) the consumer's behaviour is changing in significant ways, and the trend is to consumers move to greener products. Shamdasani et al. (1993) claim that environmental concerned consumers have certain personality traits that the less concerned ones don't have. Straughan and Roberts (1999) argue that the individual level of environmental knowledge has an important role and will act as a diver of consumer green behaviour. Others defend that since we are in a market increasingly globalized, the attitudes towards environment issues, the behaviours and the knowledge contrast across cultures (Johnson et al., 2004 apud Mohamed M. Mostafa, 2009; Laroche et al., 2002)

According to Ham et al. (2008) green consumers are individuals who take in consideration some environmental criteria when deciding what to buy. When meeting his needs and desires, this type of consumer chooses the product that less damage the environment. Green consumers are the one who try to avoid some attitudes that can injury themselfs, the health of the environment and others, like excessive consume of energy, cause unnecessary waste, use of animals to test products and some processes of manufacturing (Elkington, 1994). To Fraj and Martinez (2006) this type of consumer worries about environmental problems and their behaviour is characterized by their attitudes and actions.

A green consumer (conscious consumer) is the one that looks to the public consequences of his/her consumption or who attempts to use his/her purchasing to bring something good to the society; the consumer buy products that not only satisfy the

needs and wants but also benefit the environment in a long run (Webster, 1975 apud Samarasinghe, 2012). The purchasing behaviour of green consumers, to some authors include reading labels, use natural/biodegradable detergents, buying products that use recycled materials, avoid products from specific companies that harm the environment, avoids aerosols and sometimes contributing with money to an environmental group, cutting down on car use, among others (Minton and Rose, 1997).

This type of consumer is basically people whose behaviour reflects a consistent and conscious concern for the environmentally friendly use, disposal and use of some products (Samarasinghe, 2012).

Fraj and Martinez concluded that green consumers are individuals characterized by their self-fulfillment felling, individuals that are always trying to reach new challenges that will allow them to improve.

2.3 Green Determinants

Normally the authors divide the consumer market segmentation in some areas (Martin, 2011).

In Geographical segmentation, Martin (2011) explains that the market is divided by location. This type of segmentation is based in the belief that these consumers, because they live in the same region, will share the same wants and needs and these will be different from other consumers of other regions.

In Demographical segmentation, Martin (2011) included factors like age, nationality, occupation, ethnicity, etc. Having these variables, it's easier for a company to target their product/service. Currently this segmentation, in this strong competition world can be a very good advantage to a company. This variables offer efficient and easy ways for marketers segment green consumers (Straughan and Roberts, 1999). On the other hand some authors (Straughan and Roberts, 1999; Mainieri and Barnet, 1997) argued that sometimes these variables show a lack of uniformity in the results.

Another area studied by Martin (2011) is the behavior segmentation. The organizations do this type of segmentation to have a better perspective of which segment best fits in their consumer behavior.

The last area that Martin (2011) included in his consumer market segmentation is the psychographic one. This type was developed to correlate personality with brands and it includes the personality, the values, the attitudes, the interests and the lifestyles. The author also said that to have a better performance and connection between consumer and products/services, organizations need to know the consumers' habits, helping the merchant to decide how he/she will act with their customers. Psychographics is an equivalent name to the concept of "culture" (Ukenna et al. 2012). Although these variables had not being studied extensively as for example the demographic ones, they can provide some interesting information about the nature of the green consumer (Straughan and Roberts, 1999). They are more accurate when explaining the different levels of environmentally friendly consumers (Awad, 2011; Schwepker and Cornwell, 1991).

To evaluate this green consumer behaviour Roberts (1996) developed the ECCB scale that was also used in other authors' studies, such as Straughan and Roberts (1999), and it includes a wide variety of behaviours. In this study it will be used the Demographic and Psychographic segmentation.

2.3.1 Demographical determinants

2.3.1.1 Age

The variable age was extensively studied by several authors (Akehurst et al, 2012; Roberts, 1996; Straughan and Roberts, 1999). Some believe that green consumer is older than average (Roberts, 1996) and others believe that younger people are more sensitive to green marketing issues (Straughan and Roberts, 1999, Akehurst et al, 2012). Straughan and Roberts (1999) justified this with the relation between the environmental concern and the time when people grown up: if a person grew up in a period where the environment issue was at a peak, they will be more sensitive to this topic and vice versa.

To study this variable, it was necessary to correlate with other variables related to green attitude and different conclusions were reached. Some authors concluded that there were no significant relationships between age and environmental behaviour (Kinnear et al., 1974 apud Straughan and Roberts, 1999), others have concluded that the correlation

was significant but negative (Zimmer et al., 1994 apud Straughan and Roberts, 1999); Roberts (1996b) concluded that the correlation existed and this was positive.

H1(a): Age has a direct and positive influence in ECCB

2.3.1.2 Gender

Roberts (1996), Stern et al. (1993), Paço (2009) are just some of the authors that analyzed the impact of gender on green consumer behaviour. Most of these authors concluded that women during their shopping have more environmentally conscious behavior than men, they buy more green products.

Mainieri and Barnett (1997) claim that women tend to be more pro-environmental than men, they buy a higher number of green products and are more active in the act of recycling. In terms of their participation in activities for the conservation of natural resources or in environmental groups the authors didn't find a significant difference between the two genders.

On the other hand Chen and Chai (2010) in their study concluded that there isn't any difference between genders regarding the purchasing of green products.

H1(b): Female has a direct and positive influence in ECCB

2.3.1.2 Income

Awad (2011) states that the variable income is positively correlated with green consumer behaviour and the author justified this saying that when a person has a higher level of income, he/she is more apt to spend money on environmental causes and purchasing green products. Straughan and Roberts (1999) are other authors that defend this idea that people with a higher income can support the marginal increase in costs that some activities related to environment can bring. This variable was studied by other authors as a predictor of ECCB, and sometimes this was relevant and sometimes not (Roberts 1996b, Akehurst et al. 2012).

H1(c): Income has a direct and positive influence in ECCB

2.3.1.4 Education

Regarding the variable education, the majority of the studies that included it, have found a positive relationship with green consumer behaviour (Roberts, 1996). Meaning that consumers with a higher education are more sensitive to the issue and act in accordance. Oh the other hand Straughan and Roberts (1999) didn't find a positive relation between education and green consumer behaviour. Thus, it is hypothesized that:

H1(d): Education has a direct and positive influence in ECCB

2.3.1.5 Marital Status and Children

To Samarasinghe (2012) it's commonly accepted that married people with children have a higher predisposition to purchase green products but in the study it was concluded that marital status have no significant effect on green purchase behaviour. Thus, it is hypothesized that:

H1(e): Single has a direct and positive influence in ECCB

H1(f): Having Children has a direct and positive influence in ECCB

2.3.2 Psychographic Determinants

2.3.2.1 Environmental Knowledge

Chan (2001) define environmental knowledge as the quantity of knowledge that a person has about the environment issues, it's the ability to recognize and evaluate the impact of ecosystem on humanity. Laroche et al. (2001) explain that environmental knowledge was developed to measure the ability of the individuals to identify or define every symbol, concept or behaviour related to environment. The environmental knowledge of a consumer was identified as a significant predictor of environmental friendly behaviour (Chan, 1999). In her study Shahnei (2012) reached to a p-value equal

to 0.00 which indicates that there is a positive relationship between the environmental knowledge and green purchasing behaviour

To other authors and studies this relation didn't occur in a positive way, as for example the study of Kheiry and Nakhaei (2012). The authors found that there wasn't a positive relation between the environmental knowledge and consumer ecological purchase decision (a way to be environmental friendly). Laroche et al. (2002) also found that environmental knowledge wasn't a good predictor of environmentally attitudes and behaviours.

H2(a): Environmental knowledge has a direct and positive influence on ECCB

2.3.2.2 Environmental Concern

Environmental Concern (EC) has more than one definition depending on the perspective and the complicated and unstable nature (Chan and Lau, 2004). Kaman (2008) defines environmental concern as the level of involvement with environmental issues. Similarly Chan and Lau (2000) define environmental concern (EC) as the individual's consciousness of the environmental issues and their disposition to be part of the problem solution. The authors also affirmed that EC is a synonymous of environmental attitude. According to Chan and Lau (2004) the best definition to EC is the ones given by Dunlap and Jones (2002). These authors define EC as an individual's awareness of environment issues and attempt to solve the problem alone or contribute to a positive change. To Bamberg (2003) studies of the past thirty years gave a good theoretical base on this variable and the author grouped the general studies of this in three groups. The first one is about the definition of the concept and the analysis in a vast number of areas; the second is to define and understand which factors construct the concept of environmental concern; the last one is dedicated to prove the relationships between environmental concern and attitude. In a first attempt to characterize this variable, Milton and Duckitt (2004) identified this as a unidimensional construct that could be classified from unconcerned to highly concerned. Today some authors assume this as a concept with sub-dimensions. This is the case of Shultz (2000) that identified three correlated factors: concern for the self (egoistic), for the others (altruistic), and for the

biosphere. There is an inconsistency regarding the results on the influence of EC on environmental behavior. Bamberg (2003) justified this saying that this relationship is low to moderate and Mainieri et al. (1997) attribute the fault to a number of factors: effects of external variables, lack of measurement reliability and validity, low correlations between environmental behaviours and different levels of specificity regarding the attitude behaviour measures. This weak relationship between attitude-behavior led some authors to add other variables as for example emotion or perceived consumer effectiveness (Lee and Holden, 1999).

Straughan and Roberts (1999) in their study found that environmental concern was positively correlated with environmental behaviour. People who are highly concerned about environmental issues have a higher probability to buy more green products than those who have a low concern about the environment (Kim and Choi, 2005). Bamberg (2003) concluded that EC has a strong and direct effect on the purchasing of environmental friendly product, on recycling and energy saving and even in the choice of travel mode.

H2(b): Environmental Concern has a direct and positive influence on ECCB

2.3.2.3 Perceived Consumer Effectiveness

There isn't a common definition of perceived consumer effectiveness. Ellen et al. (1991) define PCE as the belief a person has that his/her actions (subscribe an environmental group, purchasing environmental friendly products, etc.) will help the environment, that their actions will make the difference in protecting it as for example decrease the pollution. That kind of people that believes their actions will result in positive consequences or outcomes to environment are expected to have more environmental sensitive behaviors than others (Kim and Choi, 2005; Lee and Holden, 1999). Ellen et al. (1991) found that PCE was positively correlated with environmentally conscious behaviors and it is related with knowledge and people's experiences. Some individuals believe that their actions will have positive and evolutionary results but others have less trust in their abilities to produce any change in the environment. Kim and Choi (2005) believe that different behaviours can be observed in different situations, in other words PCE is a changing phenomenon. If an

individual believes that a specific behaviour can change an environmental problem, that belief will lead to a change in the consumer's behaviour (Albayrak et al. 2011). This way it's necessary to have a high PCE to convert the positive environmental attitudes into environmental purchases (Ellen et al., 1991; Berger and Corbin, 1992; Lee and Holden, 1999).

H2(c): Perceived Consumer Effectiveness has a direct and positive influence on ECCB

2.3.2.4 Activism

Szerényi et al. (2011) describe activists as persons that participate in environmental demonstrations, are memberships and support environmental organizations. The authors continued to describe activist saying that regarding their purchases, they are modest persons, that don't spend too much, especially in clothes, cosmetics, sports equipment and electronic devices. Jacobsen and Dulsrud (2007), define consumer activism as "ethical shopping, ethical purchase behavior, ethical consumption, political consumption, political consumerism, and critical consumerism". According to Caiazza and Barrett, 2003 women in terms of concern are more pro-environmental than men, but in terms of activism in the environmental movement the opposite occur. This is justified because women are more related to personal environmental practices, as purchasing green products or local environmental efforts which are less likely to be noticed in media, in public and environmental leaders. This means that women are less likely to participate politically than men and they practice environmentalism through non-political means (Caiazza and Barrett, 2003). The authors conclude saying that every women is a potential activist but only certain women are more likely to be politically active.

H2(d): Activism as a direct and positive effect on ECCB

2.3.3 Other Determinants

2.3.3.1 Values

In studying the psychographic determinants of green consumer behaviour some authors included the variable values justifying that it's important to include once they play a crucial role in consumption activity because many products and services are purchased with the objective of attain a value-related goal (Solomon et al., 2006). Fraj and Martinez (2006), believe that individuals use values to select and justify their actions and to value objects. The authors also affirmed that this variable is a good orientation for companies to identify the environmental consumer segment. Kim (2011) even said that personal values are crucial to define the type of commitment to the environment that he/she may have.

Two common analyzed values that influence consumer behaviour are Individualism and Collectivism. To Laroche et al. (2001) individualism represents how much a person focuses on his/her independent self. In individualism all the actions are done thinking in what they will gain, individuals compete against others for status and to remain distinct even when they are working in groups (Triandis, 1993 apud Laroche et al., 2001). In individualism, consumers search for their own success, for their achievement (Triandis et al., 1988). In their results, Laroche et al. (2001) found what they suspected before, individualism is not favorable for environmental friendliness.

Laroche et al. (2001) said that contrary collectivism is related to cooperation, mutual help and consideration of the final objectives of the group without expecting to have an individual distinction. They also concluded that collectivists are persons that care about their relationships and consequently about the others showing a predisposition to be environmentally friendly. Collectivists search for the group success and fell proud of the group achievements and success (Triandis et al., 1988).

Kaufmann et al. (2012) concluded that individualistic and collectivistic orientations can influence a variety of social behaviours, as for example the environmentally conscious behaviours. According to Schwartz, S.H., (1992) apud Follows and Jobber (2000), the individualistic values were re-named to self-enhancement. These values represent the motivators factors for the individual to improve their personal interests. The authors

concluded that this type of values (self-enhancement) was positively correlated to individual consequences but not with environmental consequences. This means that individuals who are more concern with their personal needs and success are not disposed to tolerate any kind of negative consequences when choosing a more environmental product. Follows and Jobber (2000) affirmed that a high level of individual consequence means the purchasing of the product with the lowest individual consequence, which sometimes can be the non-responsible environmental product.

Individuals that value personal gratification will have less environmentally friendly attitudes, contrary to individuals that take in consideration the others that will have tendency to have more environmentally friendly attitudes (Cheah and Phau, 2011).

In their study Laroche et al. (2001) found that collectivism and security were two aspects very important to ecologically conscious consumers, meaning that this type of consumers care about relationships with others and consequently concern about the welfare of others. This personality indicates a certain tendency to be environmental friendly.

2.3.3.2 Personality

The variable personality has been studied in many ways. Some authors studied the influence of heredity and early childhood on personality developments and others took the social way, using the social and environmental factors to explain the continuously development of each person (Schiffman and Kanuk, 2007).

In their study, Fraj and Martinez (2006) found that personality, despite being a very tricky variable to measure, influenced positively the environmental behaviour. To better understand they give two examples: (1) conscious and concerned consumers have green or switched products because of ecological reasons; (2) more extrovert and altruistic ones normally attend some environmental conferences or join in some environmental group.

This group of determinants, will not be included in this study because they do not follow the objectives of it.

2.4 Market Segmentation

Over the times, consumer diversity has been growing and for companies distinguish their products and services from competition has become increasingly a hard task, and this is where the role of market segmentation began (Martin, 2011). There are a lot of ways to segment a market and to do this in the right way, organizations will need the right strategy, which normally is more than one (Martin, 2011).

According to many textbooks, marketing segmentation is a fundamental principle of marketing (Kotler, 1997). To Solomon et al. (2010) market segmentation exists to delineate segments where members are similar another, in only one or several characteristics but are different from members of other segments. Schiffman and Kanuk (2007), defend that market segmentation is a process where market is divided in subsets of consumers that have common needs and characteristics and select one or some segments to target with a specific marketing mix. Smith (1956) defends that "market segmentation consists in viewing a heterogeneous market as a number of smaller homogenous markets in response to differing products preferences among important market segments". In their study Dibb et al. (2002) concluded that one of the most important aspects of market segmentation is that it gives the organization a better understanding of the customer.

2.5 Green Segmentation Studies

There are a lot of studies about green marketing segmentation, some study the demographical variables, and others take the psychographic way or the behavioral one.

Al-Khatib (2003) tried to segment green consumers in a multi-country base. The author included three Gulf Markets (Saudi Arabia, Oman and Kuwait). The study result in three distinct segments: "Principled Purchasers", "Suspicious Shoppers" and "Corrupt Consumers"

- Principled Purchasers (Majority in Saudi Arabia – 56.1%) – this segment tended to be less opportunistic, more trusting in others, more idealistic. This segment has a higher emphasis on ethical behaviour in their activities during the day.
- Suspicious Shoppers (Majority in Kuwait – 47.4%) – less trusting, they think people will take advantage of them but at the same time they are idealistic, they do not wish anything bad to others
- Corrupt Consumers (Majority in Oman – 31.1%) – Contrary to the other two segments, this one is less idealistic. Corrupt Consumers may take advantage of somebody else and accept that, because they are doing anything good for them.

Al-Khatib finished saying that ethical judgments and behaviors vary from region to region.

In Mauritius, it was developed an exploratory study by Juwaheer (2005) with 1000 consumers. This study had the objective of understand the perception of green products in that island. The author concluded that in that island it existed five different segments:

- Indifferent Green (19,4%) – the price is the most important aspect so these consumers are not green at all;
- Poor Green (13,4%) – As the name says this group is poorly green but they are willing to switch to green products and to pay a higher price for environmentally friendly products;
- Light Green (33,6%) – Is the largest group with high values regarding the green dimensions and with a higher green potential. But at the same time the price of green products is the most important aspect putting it ahead of green products purchasing;
- Moderate Green (22%) – the segment achieved high scores on green dimensions and price is not the main concern of them;
- Pure Green (11,6%) – is the smallest segment but is the group with the highest values regarding the environmental concerns. The most environmental conscious and "they disagree that they are ineffective in addressing ecological problems".

Mostafa (2009) in his study used some psychographic variables (altruism, concern, knowledge, skepticism, attitudes and intention) to study the green consumption in Kuwait. He concluded that green consumers could be segmented in four clusters: True

Greens (45.22%) who had high correlations in all dimensions; Reluctant Greens (20.57%) that achieved high scores on attitude but low scores for intention; Basic Browns (21.77%) that had low scores and high skepticism and finally the Potential Greens (12.44%) who had high scores in attitude and intention but at the same time in skepticism. The interest point in this study is too see that the largest segment is the True Greens, which contradicts previous studies, where the highest percentage was in the middle in terms of commitment to green selections (Mittelman, 2012).

Paço (2009) used the Portuguese population to do her study. The author wanted to segment the green consumers, and to do this she used the environmental (concern, knowledge, green behaviours, activism, green products buying behaviour, skepticism, sensitivity to price, etc.) and demographic criteria. In this study it was found three segments of green consumers:

- "The uncommitted" is the segment that had the higher percentage – 36% - and is composed by young people (age between 18 and 34) with high educational levels, sales and administrative workers and students, that have monthly incomes between 500€ and 1000€ and living in urban areas. They claim to have knowledge about the issue but their positions relatively to some environmental aspects as activism, green buying behaviour, recycling, etc. are very negative.
- "The green activists" is the second segment that Paço (2009) found and have a weight of 35%. This includes individuals with ages between 25 and 34 and between 45 and 54. The "green activists" is the only segment that groups the individuals with highest education levels, working in more qualified jobs and who earn a higher income. They are in a good position regarding the environmental aspects (perceived efficiency, environmentally friendly buying behaviour, recycling, resource saving and sensitivity to economic factor) but they are skeptical about promotions and advertisements of firms.
- "The undefined" with 29% includes the oldest individuals, those with lower educational levels and with monthly incomes lower or equal to 1000€. Paço (2009) concluded that this is a very contradictory group since they claim to be activists but at the same time have negative positions regarding environmental issues and claim to have some environmental knowledge but consider that their individual action doesn't help the improvement of the environment.

To finish Paço (2009) concluded that Portuguese consumers are aware of environmental problems even if sometimes their concern is not transformed into environmentally friendly behaviours

Awad (2011) studied the young consumers of Bahrain through the ECCB in an attempt to segment the market on green perspectives. The author reached to four segments.

- The Green segment represents 32.7% of the sample and it's the group with high commitment towards the environment. The segment has favorable characteristics regarding the preservation of environment and the individuals believe that life is to be lived in accordance with nature and they are willing to pay more to preserve the environment. It is composed by young individuals with ages between 20 and 39, with high education, with a monthly income superior to BD 1.000 and living in urban areas.
- The ambiguous segment consisted in 15.7% of the sample. The individuals that are part of this are individuals of higher ages and with moderate educational and income levels. Their knowledge in environment does not translate into environmental purchasing behaviour. Awad (2011) justify this saying that this is due to the fact of the income level and the predisposition of individuals to pay more on echo friendly products.
- The Undevoted Segment has individuals from different age's groups with low income and educational levels. Regarding the environmental knowledge, this is low which reflects in the green purchasing behaviour. They represent 35,1% of the sample.
- The last segment that Awad (2011) found is the Explorers. With a weight of 16.5%, this segment is composed by young individuals with a moderate-income and with a high level of knowledge. At the same time this segment showed a high level of environmental concern and willingness to pay more to preserve the environment but they have a negative view about the government intervention in the business environment.

3. Methodology

3.1 Research objectives

This study aims at identifying the main drivers of ECCB. The main goal is to test if environmentalists that truly believe in this type of lifestyle actually buy environmentally friendly products. This research will also explore and try to confirm if psychographic variables are better predictors of ECCB than demographical variables. So, the objectives of this research are:

- To identify which type of variables, demographical or psychographic are the most important predictors of ECCB;
- See the differences between demographical and psychographic variables when explaining ECCB;
- To confirm if environmentalists have the same behaviour during their purchases.

To explain the model a set of hypothesis was developed:

- **H1(a)**: Age has a direct and positive influence in ECCB
- **H1(b)**: Female has a more direct and positive influence in ECCB
- **H1(c)**: Income has a direct and positive influence in ECCB
- **H1(d)**: Education has a direct and positive influence in ECCB
- **H1(e)**: Single has a more direct and positive influence in ECCB
- **H1(f)**: Having Children has a direct and positive influence in ECCB
- **H2(a)**: Environmental knowledge has a direct and positive influence on ECCB
- **H2(b)**: Environmental Concern has a direct and positive influence on ECCB
- **H2(c)**: Perceived Consumer Effectiveness has a direct and positive influence on ECCB
- **H2(d)**: Activism as a direct and positive effect on ECCB

3.2 Data collection Methods

3.2.1 Questionnaire Design

This survey started with a definition of green products in order to clarify some doubts that the respondents may had. Sought further that the issues were more uniform and clear as possible, so as to prevent its alteration of sense that could create some confusion among respondents and this way yielding fewer correct answers. It was created a restriction that if people didn't answer all the questions they couldn't finish the survey thus limiting the problem of non-responses.

The questionnaire was divided in four main sections. The first section had the objective of introduce the respondents to the theme. In this section the respondents were asked to write three green products that they know and three green behaviours they adopt during the day. The general responses relatively to the knowledge of green products were the light bulbs, the recycled paper and the recycled bags (usually those that the supermarkets give us). Regarding the green behaviours, the most common answers were recycle, save energy (switch off the jacks, don't leave on standby, use the domestic appliances only at night, etc.) and save water (short showers, turn off the water while brushing your teeth).

The second section of the questionnaire was about consumer environmental behaviour where three variables were included: the activism, the environmental knowledge and the environmental concern. The activism (Paço, 2009) was measured by 4 items in a Likert-format, anchored by "Always" (5) and "Never" (1). The environmental knowledge (Paço, 2009) and the environmental concern (Paço, 2009) were measured in a Likert-format, anchored by "Totally Agree" (5) and "Totally Disagree" (1). Environmental knowledge was measured by 5 items and environmental concern was measured by 4 items.

To measure the consumer environmental purchase, in the third section of the questionnaire two variables were included: the perceived consumer effectiveness (Straughan and Roberts, 1999) measured in a Likert-format, anchored by "Totally Agree" (5) and "Totally Disagree" (1) and the ECCB - ecologically conscious consumer behaviour (Roberts, 1996; Paço, 2009) measured in a Likert-format, anchored

by “Always” (5) and “Never” (1). The first variable used 4 items and the second used 33 items.

Variable	#item	Reference
Activism	4	Paço, (2009)
Environmental Knowledge	5	Paço, (2009)
Environmental Concern	4	Paço, (2009)
Perceived Consumer Effectiveness	4	Straughan and Roberts, (1999)
ECCB	33	Roberts,(1996)

Table I - Constructs and sources - self realization

The last section, ask respondents to provide socio-demographic data: age, sex, marital status, dependent sons, education and income.

3.2.2 Questionnaire Distribution

The data collection occurred in only one stage through an online survey. With the aim of reaching the target group - the environmentalists - this survey was also distributed in some forums and blogs dedicated to the environment.

Data was collected between December 2012 and March 2013.

The first draft of the questionnaires was subjected to a pre-test To ascertain its credibility and to check if there was any problem. This pre-test was made by means of personal interviews with consumers and a green consultancy worker.

3.3 Sample design

The target population of this research is composed of individuals living in Portugal of both sexes and all ages.

The issue target in this research is the purchasing of green products. The information required most be from people that either buys or not this kind of products. At the same time the main goal is to confirm if activism is a major predictor of environmentally friendly purchases, so it is crucial to reach activists and environmentalists. The minimum size of the sample was defined as 200 (Malhotra, 2007). The questionnaires were distributed in the internet, forums and blogs of environmental issues, reaching consumers of different ages from all over the country (Portugal). It was used a convenience sample once the principal data that should be collected were the activist, justifying why the questionnaires were distributed in forums and blogs about the environment.

3.4 Statistical methods

The elaboration of the questionnaire and the selection of the constructs were based on the literature review mentioned in the first chapter. Subsequent responses to this will be analyzed using the software program of statistical analysis SPSS, except for the first two questions: "Name three green products that you know", "Indicate three practices of your day-to-day basis that take into account the well-being of the environment". These questions are open-response and they were placed in order to understand the knowledge of respondents about the theme.

Different analyses were used in order to reach the objectives. Frequency tables and descriptive statistics were used in order to provide a sample description. In order to check the factorial validity and the reliability of the scales both factor analysis and Cronbach's alpha coefficients were performed. After, to test which were the best predictors of ECCB, a multiple regression analysis was conducted. Finally a Kruskal-Wallis test was conduct in order to identify the activist's profiles in terms of demographical variables.

4. Analysis

4.1 Sample Description

4.1.1 Demographical Description

The target population of this research is composed of individuals living in Portugal of both sexes and all ages.

The sample was composed by 326 respondents where 55.8 per cent were females and 44.2 per cent were males. The majority of the respondents were equal or above the 38 years (67.3 per cent), remaining the others 32.7 per cent for respondents above the 38 years. Over 55.8 per cent of the respondents were single, 34.1 per cent were married or live with and only 10.1 per cent were divorced or widowed. 23.2 per cent of the population had at least one son and 76.8 per cent didn't have. Relatively to education, 20.1 per cent of respondents were undergraduate and 79.9 per cent were graduated.

Finally, the majority (52.1 per cent) of the respondents had a monthly income equal or lower than 1000€, 34.5 had between 1001€ and 2000€ and 13.4 per cent received equal or more than 2001€ (see Table II).

		N	%
Gender	M	145	44.2%
	F	183	55.8%
Age	≤ 19	1	0.3%
	19 to 28	153	46.6%
	29 to 38	67	20.4%
	39 to 48	46	14.0%
	49 to 58	49	14.9%
	59 to 68	11	3.4%
	≥ 69	1	0.3%
Marital Status	Single	183	55.8%
	Married/	112	34.1%
	Divorced/	33	10.1%
Children	Yes	76	23,20%
	No	252	76,80%
Education	Elementary	2	0.6%
	Primary	3	0.9%
	High School	61	18.6%
	Bachelor	162	49.4%
	Marster	89	27.1%
	PhD	11	3.4%
Income	≤1000€	171	52.1%
	1001€ a 2000€	113	34.5%
	2001€ a 3000€	21	6.4%
	3001€ a 4000€	11	3.4%
	4001€ a 5000€	9	2.7%
	≥ 5000€	3	0.9%

Table II – Sample Profile

4.1.2 Environmental Behaviour

Regarding the activism the items that obtained a higher mean were the interest for reading articles and reports (2.61) and the collaboration with environmental groups (2.13). The donation to the environmental group had a mean of 1.72 and the participations in protests and manifestations had 1.55. See Table III

		Mean	Std
Act1	I'm interested in reading reports / articles about activist groups (eg Quercus)	2,61	1,08
Act2	I collaborate with a group whose goal is the preservation and environmental protection	2,13	1,32
Act3	I make donations to a cause or environmental group	1,72	1,05
Act4	I participate in protests and demonstrations in favor of environmental causes	1,55	0,98

Table III – Activism Items

Concerning the environmental knowledge, the items that achieve a higher mean score were the issue of plastic bags (4.73) and the ozone layer (4.57). But in general all the values were approximate being the knowledge of how not to injury the environment the one with the lowest mean (4.26) (see Table IV).

		Mean	Std
Ek1	Generally I know how not to harm the environment	4,26	0,69
Ek2	Know what "greenhouse effect"	4,55	0,57
Ek3	Know what are the "acid rain"	4,45	0,68
Ek4	I have knowledge of what is the "hole" in the ozone layer	4,57	0,54
Ek5	I know that plastic bags take many years to decompose and cause pollution	4,43	0,78

Table IV – Environmental Knowledge Items

About the environmental concern, the first two items were the ones with higher means 4.42 and 4.32 that correspondents to worries with the pollution in general and worries with the air health and ozone layer (see Table V).

		Mean	Std
Ec1	I'm concerned with the problem of pollution in general	4,42	0,66
Ec2	The state of air pollution and the destruction of the ozone layer is a problem that worries me	4,32	0,75
Ec3	I get angry when I think of how much pollution can harm plant and animal life	4,04	0,9
Ec4	when I think of how industries pollute, I get frustrated and angry	4,1	0,84

Table V – Environmental Concern Items

4.1.3 Environmental Purchasing Behaviour

Analyzing the perceived consumer effectiveness the item with a higher mean is the consciousness that a green purchase of an individual can have a positive effect on society (see Table VI).

		Mean	Std
Pce1	When I buy products, I try to consider how my use of them will affect the environment and other consumers	3,57	0,94
Pce2	Since one person cannot have any affect upon pollution and natural resource problems, it doesn't make any difference what I do	1,55	0,84
Pce3	Each consumer's behaviour can have a positive effect on society by purchasing products sold by socially responsible companies	4,29	0,82
Pce4	It is worthless for the individual consumer to do anything about pollution	1,51	0,94

Table VI – Perceived Consumer Effectiveness Items

Regarding the ECCB, the items with higher mean are “I have purchased a household appliance because it uses less electricity than other brands (eg. Light bulbs)” with 4.34 and “I try to use electrical appliances (eg, dishwasher, washing machine and dryer) depending on the rate that I have (rate bi-tri-TIME)” with 4.29 (see Table VII).

		Mean	Std
Eccb1	I read the labels to see if the products are not harmful to the environment	2,92	1,18
Eccb2	Whenever possible I buy biodegradable products	3,34	1,09
Eccb3	I avoid buying products that I know that are tested on animals	3,23	1,36
Eccb4	I avoid buying sprays / aerosols, but if you have no alternative opto those who are "ozone-friendly" (spray deodorants, air fresheners, etc.).	3,84	1,17
Eccb5	I prefer to buy durable products rather than disposable	4,07	0,86
Eccb6	To save energy, I use public transport as much as I can	3,24	1,43
Eccb7	I try to buy energy efficient household appliances	4,28	0,9
Eccb8	I buy products with the least possible waste of packaging	3,61	1
Eccb9	when there is a choice, I opt for the product that is less polluter	3,91	1,01
Eccb10	I understand the potential damage to the environment that some products can cause; I do not purchase these products	3,53	1,03
Eccb11	I already switched brands and products for ecological reasons	3,01	1,31
Eccb12	I have purchased a household appliance because it uses less electricity than other brands (eg. Light bulbs)	4,34	0,82
Eccb13	I have convinced members of my family or friends not to buy some products, which are harmful to the environment	3,26	1,17

Eccb14	I have replaced light bulbs in my home with those of smaller wattage so that I will conserve on the electricity I use	4,15	0,98
Eccb15	I have purchased products because they cause less pollution	3,35	1,12
Eccb16	Whenever possible, I buy products packaged in reusable materials	3,59	1,03
Eccb17	When I purchase products, I always make a conscious effort to buy those products that are low in pollutants	3,39	1,11
Eccb18	When I have a choice between two equal products, I always purchase the one, which is less harmful to other people and the environment	3,74	1,07
Eccb19	I will not buy a products if the company that sells it's ecologically irresponsible	3,25	1,2
Eccb20	I have purchased light bulbs that were more expensive but saved energy	4,21	0,96
Eccb21	I try only to buy products that can be recycled	3,32	1,07
Eccb22	To reduce our reliance on oil, I drive my car as little as possible	3,15	1,32
Eccb23	I usually purchase the lowest priced product, regardless of its impact on society	2,79	1,03
Eccb24	I do not buy household products that harm the environment	3,05	1,03
Eccb25	I buy high efficiency light bulbs to save energy	4,13	1,01
Eccb26	I try to use electrical appliances (eg, dishwasher, washing machine and dryer) depending on the rate that I have (rate bi-tri-TIME)	3,81	1,28
Eccb27	I make the separation of household waste and recycle	4,29	1,12
Eccb28	I make every effort to buy paper products made from recycled paper.	3,55	1,16
Eccb29	In washing my clothes I use bio detergents (at home, laundry, etc.).	3,13	1,26
Eccb30	I buy toilet paper made from recycled paper	3,09	1,41
Eccb31	I buy Kleenex made from recycled paper	2,89	1,38
Eccb32	I buy paper towels made from recycled paper.	2,7	1,41
Eccb33	I try to only buy products that can be recycled.	3,29	1,13

Table VII – Environmental conscious consumer behaviour items

4.2 Exploratory Factor Analysis

In order to select the final items to include into the regression analysis two different techniques were used. The first one is the exploratory factorial analysis that is concluded with all items of each construct too see if there is enough correlation between the observed variables. The second one is the reliability analysis with the Cronbach's Alpha that analyses the reliability of the items. Table VIII presents the results of each analysis. To proceed with the factorial analysis and too prove the quality of the correlations it was used the Kaiser-Meyer-Olkin (KMO) statistic which compares the correlation between the principal components and the Bartlett's test (Malhotra 2007).

There is a KMO value for each individual variable and their sum is the KMO overall statistic. According to Malhotra (2007) an appropriate factor analysis requires KMO to be between 0.5 and 1.0 and a value lower than 0.5 implies that the factor analysis maybe not appropriate.

All the constructs have between good and very good qualifications according to the Cronbach's Alpha, being the higher one the variable Environmental Concern. The PCE construct is the only one that reached a lower value that is 0,531, so it is consider weak. This variable resulted in two factors, a more individual one and a more social. These factors were named as Perceived Consumer Individual and Perceived Consumer Social. Being the factor 1 the perceived consumer individual and factor 2 the perceived consumer social.

In Table VIII there is all the constructs expect the ECCB that was treated as single scale as Akehurst et al. (2012) did. The Cronbach's Alpha of this variable is considered excellent (α=0,974).

Construct	Item	Loading	KMO & Bartlett's	% variance	Cronbach's Alpha
Activism	Act1	0,807	KMO = 0,809 x^2 = 521,647	67,995	0,84
	Act2	0,876			
	Act3	0,81			
	Act4	0,804			
Environmental Knowledge	Ek1	0,603	KMO = 0,818 x^2 = 728,582	61,571	0,828
	Ek2	0,85			
	Ek3	0,821			
	Ek4	0,911			
	Ek5	0,698			
Environmental Concern	Ec1	0,828	KMO = 0,778 x^2 = 671,352	71,865	0,865
	Ec2	0,87			
	Ec3	0,868			
	Ec4	0,824			
Perceived Consumer Effectiveness	Pce1	0,877	KMO = 0,531 x^2 = 283,854	Factor 1: 48,094 Factor 2: 29,069	0,617
	Pce2	0,763			
	Pce3	0,923			
	Pce4	0,879			

Table VIII – Factor analysis results and Cronbach's Alpha

The explained variance varies from 61,571% (Environmental Knowledge) and 77,163% (Perceived Consumer Effectiveness).

Factor loadings also meet the recommended cut-off values.

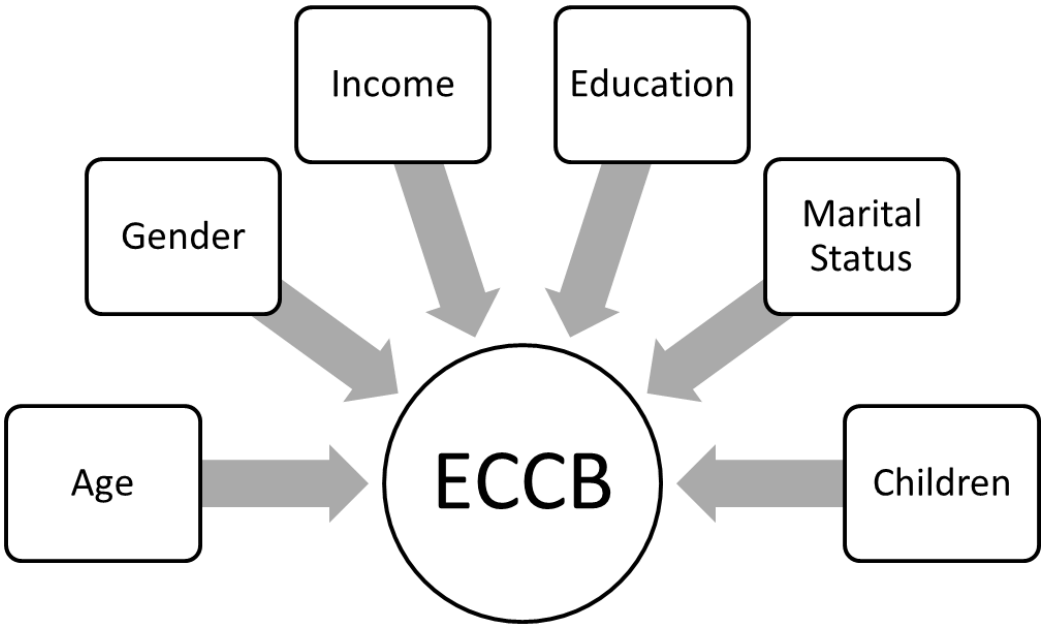
4.3 Regression Analysis

4.3.1 Recoding

It was also necessary to create dummy variables for the demographic data. The variables gender and children were transformed into binary variables: gender (Male; Female)=(1;0) and Children(Yes;No)=(1;0). Regarding the variable age, two categories (≤19 and ≥69) were eliminated because they didn't have any relevance to the model (few individuals) and at the same time incorporate that category in the other groups could skew the results. The variable education that initially was divided in six categories now is in three, grouping the first three in one (basic) and the last two in another (postgraduate). The last variable that suffers some collations was the income, where the original variable had six categories and now has 4, grouping the last three into one. So from this, the resulted variables were age2, age3, age4, age5, gender, income2, income3, income4, higher, postgraduate, children, married and divorced.

4.3.2 Testing Hypotheses

Two separated regression models were developed. In the first one, to test H1, it was done a multiple linear regression where ECCB was the dependent variable and the demographic variables (age, gender, income, education, children, marital status) were the predictors.



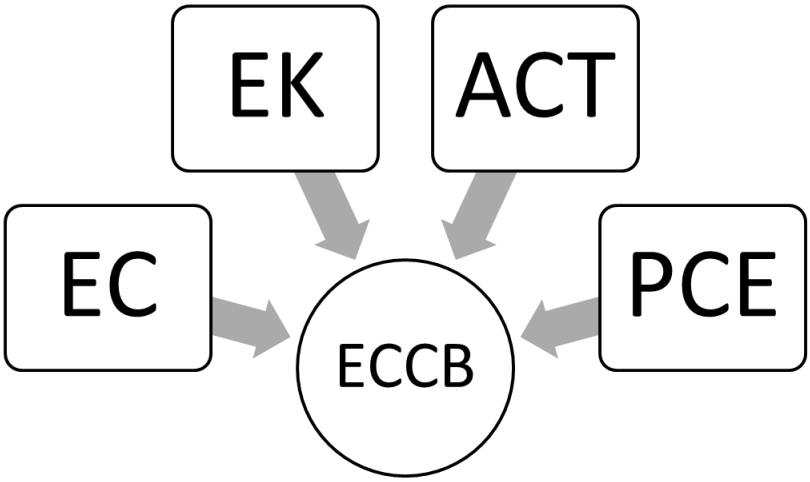
Model I – Demographic Variables

These predictors were the ones that result from the grouping and were based in the minimum of each one. The assumptions of the multiple linear regression were analyzed and confirmed. The model explains 12.9 per cent (R^2) of the total variance and is significant F= 3.545 p=0.000. The variables that are significant in explaining the ECCB are Age and Gender and in the majority significant for $p<0.01$, being the variable Age5 the only one significant for $p<0.1$(see Table I). These conclusions go in accordance with previous literature review. So there is partial support for H1.

	β	Beta	t
Constant	3.338		27.464***
Gender	-0.294	-0.182	-3.353***
Children	-0.01	-0.005	-0.069
Age2	0.458	0.231	3.695***
Age3	0.468	0.203	2.72***
Age4	0.498	0.222	2.774***
Age5	0.512	0.115	1.881*
Married	-0.051	-0.03	-0.39
Divorced	0.039	0.015	0.208
Higher	0.083	0.052	0.721
Postgraduate	-0.011	-0.006	-0.085
Income2	0.12	0.071	1.134
Income3	-0.22	-0.067	-1.072
Income4	-0.035	-0.011	-0.171
R^2		0.129	
Adjusted R^2		0.092	
F		3.545***	

Table IX – Regression Coefficients (H2) *** Statistically significant at 1%; ** at 5%; *at 10%

The second regression model was developed to study and test the hypothesis H2. This hypothesis included the psychographic variables (Activism, Environmental Concern, Environmental Knowledge, Perceived Consumer Individual, and Perceived Consumer Social) as predictors of the ECCB variable. The assumptions of the multiple linear regression were analyzed and confirmed. The model explains 41.2 per cent (R^2) of the total variance and the model is globally significant F=45.144 p=0.000 (see Table II). The variables that explain the variance of the ECCB are ACT, EC and PSI all significant for $p<0.01$ (see Table II). So there is partial support for H2.



Model II – Psychographic Variables

	β	**Beta**	**t**
Constant	0,468		1,207
ACT	0,337	0,414	8,37***
EK	0,079	0,051	1,154
EC	0,235	0,202	4,168***
PCI	0,193	0,178	3,209***
PCS	0,029	0,025	0,498
R^2		0,412	
Adjusted R^2		0,403	
F		45,144***	

Table X – Regression Coefficients (H2) *** Statistically significant at 1%; ** at 5%; * at 10%

4.3.3 Activism

Being activism the most relevant variable, the one that explains more the dependent variable ECCB, it is important to understand and classify this. To determine where the profile of the variable in question exhibits major differences it was run a non-parametric test, the Kruskal Wallis test. This test was run only to the demographical variables.

Kruskal-Wallis test use the rank value of each case and is a test that allows seeing the differences in means (Malhotra, 2007).

Looking to the table the conclusions are that the only variables that are significant for activism are: Gender, Age and Income being the first two significant at 1% and income significant in 5%. The variables children and education seem to do not cause any differences between the activism.

For this study it is notorious that female are more activist than male. Female has a higher mean then male, despite this difference being small. The previous literature review said that women are less political activist, that women are more concern with environmental personal achievements. Caiazza and Barrett (2003) said that women are more centered in local efforts, like being part of a group and help locally. At this point there is no agreement between the two founding's, but this can be justified looking to the type of items that construct the variable activism. The items are more related to personal issues, like read articles and reports about environment, do some donations, collaboration with an environmental group and the only one that could be more related with politic is the participation in protests and manifestations. Knowing this it is possible to make a connection between the literature review and the obtained results. Women are more concerned with environment but their manifestations are more at home, in their lives.

The next variable, Age is a variable with a significance level of 1% and it's the variable with the higher value of Chi-Squared. The results show that this is nonlinear, because it is impossible to say that people with age are more activist. There is an increase in the first two groups (from 19 till 38), after in the third and fourth group the mean decreases, being the fourth group the one with the lowest mean (2.00). The last group, people with age from 59 to 68, is the one with higher mean. In the literature review the opinions and conclusions from other studies gave the two options. Some argue that younger people are more environmental concern (Akehurst et al., 2012) and others concluded that environmentalists are older than average (Roberts, 1996). The conclusion that can be taken from here is that, age is significant to cause changes in the activism and the groups that are more activist are from 29 to 38 and from 59 to 68. This aspect could be justified with the year of birth of each group, but this would be a matter to be studied in future.

The last variable that causes some differences in the activism is the variable income and the curiosity is that people with medium-low income are more activist than people that receive a higher income. Once again in the literature review the opinions were divided. Straughan and Roberts, 1999 affirmed that people with a higher income can practice with more easily a green behaviour, but Akehurst et al. (2012) disagree. Activism is not only buying green products it is also participate in groups and help the community around, things that people don't need to spend money and normally younger people are more aware of these type of initiatives than older ones.

Variables	Categories	Mean	K-W test
Gender	M	1.96	x^2= 7,126***
	F	2.20	
Age	1	1.86	x^2= 23,834***
	2	2.39	
	3	2.37	
	4	2.00	
	5	2.82	
Children	0	2.09	x^2= 0,005
	1	2.12	
Education	1	2.27	x^2=4,579
	2	2.09	
	3	1.98	
Income	1	2.02	x^2= 7,945**
	2	2.27	
	3	1.95	
	4	1.91	

Table XI Kruskal Wallis test*** Statistically significant at 1%; ** at 5%;* at 10%

5. Discussions, Conclusions and Implications

5.1 Discussions

The results allow us to conclude that the psychographic variables are more effective explaining the ECCB (ecologically conscious consumer behaviour) than the demographic variables, the R^2 in the psychographic model is 41.2 per cent and in the demographic model is only 12.9 per cent. This could also be supported with result of the Adjusted R^2, where the discrepancy is even higher, in psychographic model the value is 40.3 per cent and in the demographic model is 9.2 per cent. This finding matches with the previous literature review, where studies had shown this trend, including Roberts (1996) and Straughan and Roberts (1999).

The demographics variables that had significance in explaining ECCB were gender and age. Regarding the gender and since the regression was made relative to the base category (female), the conclusion is that being male reduces the estimated ECCB compared to being female. Looking at the β's of the other group it's possible to conclude that people with more age influences more positively the ECCB. The other dummy variables children, married, divorced, higher, postgraduate, income2, income3 and income4 unlike some studies (Junaedi, 2012; Awad, 2011) are not significant predictors of ECCB.

In the psychographics models the variables with significant influence in explaining ECCB were ACT (activism), EC (environmental concern) and PCI (perceived consumer individual). Contrary to the study of Shahnei (2012), EK (environmental knowledge) didn't have a significant influence in explaining ECCB.

Taking in consideration the main objective of this study (analyze if the activists actually buy environmentally friendly products) and taking the results that the model gave we can assume that this research has achieved its goals. Activism is the variable that most explains ECCB and contribute to a positive influence. Exploring more this variable and how it's related to other variables, in this case demographic variables, it was done another test, the Kruskal Wallis test (K – W). The K-W test tells the differences in this variable. The results revealed that gender, age and income were the variables that show

more differences between activists. Females are more activists than male. Age has a nonlinear relation with Activism. Therefore it's not possible to conclude that younger or older people are more activist. The only thing that can be said is that there are some picks in peoples' age which could turn individuals in more activist person. This may be due to the year of birth and the information and importance gave to the theme. The last significant variable, income, show that people with a medium-low income are more activist than people with higher income.

The results for EC are in accordance to other studies like Bamberg (2003), and it's the second most important variable in explaining ECCB. Individuals that have some concern with the environment issues or try to solve some environmental problems alone are more willing to buy environmentally friendly products.

The third and final variable that explains ECCB is PSI and this may be related with the previous variable EC due to the fact that in both there is an intention and a belief that an individual may cause a difference in an environmental issue.

The verified hypotheses regarding the demographic variables were the age and the gender (H1(a);H1(b) . These variables were significant in explaining ECCB. Relatively to psychographic variables, Activism, Environmental Concern and Perceived consumer effectiveness (individual) were the ones that showed to be significant in explaining ECCB (H2(b); H2(c);H2(d))

H1(a)	Age has a direct and positive influence in ECCB	Supported
H1(b)	Female has a more direct and positive influence in ECCB	Supported
H1(c)	Income has a direct and positive influence in ECCB	Unsupported
H1(d)	Education has a direct and positive influence in ECCB	Unsupported
H1(e)	Single has a more direct and positive influence in ECCB	Unsupported
H1(f)	Having Children has a direct and positive influence in ECCB	Unsupported
H2(a)	Environmental Knowledge has a direct and positive influence on ECCB	Unsupported
H2(b)	Environmental Concern has a direct and positive influence on ECCB	Supported
H2(c)	Perceived Consumer Effectiveness has a direct and positive influence on ECCB	Supported
H2(d)	Activism as a direct and positive effect on ECCB	Supported

Table XII Supported/Unsupported Hypotheses

5.2 Conclusions

The need to save the environment cause several changes in the markets, especially in relation to consumer behaviour. It's crucial to understand that these changes had some repercussions in companies' management and marketing particularly.

This research contributes to the knowledge about the green consumer behaviour. The results of this investigation reinforce the idea that psychographics are more important in explaining ECCB than demographics. The study confirms the importance of EC and PCI. But the study went further when correlated the ECCB with ACT, concluding that people that truly believes in these environmental ideas and "speak in the name of nature" actually buys environmentally friendly products.

Managers are now more informed and can do better positioning strategies and adjust marketing programs. Joining the regular benefits, managers should give emphasis to the environmental and social benefits in order to motivate the consumers to buy. To be successful in green marketing, managers need to have a green thinking and to include the economic, financial, social and ecological components in their decisions regarding marketing plans and activities.

Based on the literature review and the studied models it's possible to conclude that a new era is coming. Managers now have a greater perception of the relationship between what consumers think and what they actually do. The marketers now have a new challenge, the challenge of incorporate this "new" thinking and concern about the environment in product, especially in how they will communicate it. In this communication it must be present some aspects as the environmental problem, the advantages and benefits of the product and what is its real impact on the environment preservation.

5.3 Limitations and Suggestions

There are some limitations to take into account in this investigation. One of the limitations relates to the fact that the survey was conducted over the internet, meaning that the individuals that do not have access to the internet could not answer the questionnaire. Other limitation is the fact that the variables are latent, which implies that they are not directly observable.

There might be a bias in the sample once the questionnaire questions may lead to socially desirable answers. As the questionnaire is done on the internet there is no way to prove that all answers are true, the only chance is to believe that respondents are being truthful. On the other hand, this bias is reduced by the fact that people on the Internet are most accurate and self-reported problems are smaller than if the questionnaire was performed personally.

It is also suggested that this study be adapted and applied in other countries in order to ascertain whether there are significant differences in the results obtained.

As a final suggestion, it was good to find out what type of products are more "desirable" for these consumers and this way establish a connection with the products that consumers find truly green and truly irreplaceable, and turn them more functional and cheaper.

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7. Annex

Questionnaire

Green products and Consumers

"Green products are those that have less impact on the environment or that are less harmful to human health than the traditional counterparts. A green product can normally be developed from recycled components, be manufactured in a more conservative power or supplied to the market with less packaging (or all three of these characteristics)"

1. Name three green products
2. List three practices of your day-to-day that into account the welfare of the environment
3. How often do you practice these activities related to activist groups?

	Never	Rarely	Sometimes	Frequently	Always
I am interested in reading reports / articles on activist groups (eg Quercus)					
collaboration with a group whose goal is the preservation and environmental protection					
make donations to a cause or environmental group					
participation in protests and demonstrations in favor of environmental causes					

4. In relation to your environmental knowledge, how do you characterize these statements?

	Totally Disagree	Disagree	Indifferent	Agree	Totally Agree
Generally I know how not to harm the environment					
Know what "greenhouse effect"					
Know what are the "acid rain"					
I have knowledge of what is the "hole" in the ozone layer					

I know that plastic bags take many years to decompose and cause pollution	

5. According to the following statements, how would you rate your environmental concerns?

	Totally Disagree	Disagree	Indifferent	Agree	Totally Agree
I'm concerned with the problem of pollution in general					
The state of air pollution and the destruction of the ozone layer is a problem that worries me					
I get angry when I think of how much pollution can harm plant and animal life					
when I think of how industries pollute, I get frustrated and angry					

6. The individual can have positive / negative impacts on society and environment. How would you rate the following statements?

	Totally Disagree	Disagree	Indifferent	Agree	Totally Agree
When I buy products, I try to consider how my use of them will affect the environment and other consumers					
Since one person cannot have any affect upon pollution and natural resource problems, it doesn't make any difference what I do					
Each consumer's behaviour can have a positive effect on society by purchasing products sold by socially responsible companies					
It is worthless for the individual consumer to do anything about pollution					

7. Indicate how often do you performs these activities related to the consumption of products that may affect the environment or not.

	Never	Rarely	Sometimes	Frequently	Always
I read the labels to see if the products are not harmful to the environment					
Whenever possible I buy biodegradable products					
I avoid buying products that I know that are tested on animals					
I avoid buying sprays / aerosols, but if you have no alternative opto those who are "ozone-friendly" (spray deodorants, air fresheners, etc.).					
I prefer to buy durable products rather than disposable					
To save energy, I use public transport as much as I can					
I try to buy energy efficient household appliances					
I buy products with the least possible waste of packaging					
when there is a choice, I opt for the product that is less polluter					
I understand the potential damage to the environment that some products can cause; I do not purchase these products					
I already switched brands and products for ecological reasons					
I have purchased a household appliance because it uses less electricity than other brands (eg. Light bulbs)					
I have convinced members of my family or friends not to buy some products, which are harmful to the environment					

I have replaced light bulbs in my home with those of smaller wattage so that I will conserve on the electricity I use

I have purchased products because they cause less pollution

Whenever possible, I buy products packaged in reusable materials

When I purchase products, I always make a conscious effort to buy those products that are low in pollutants

When I have a choice between two equal products, I always purchase the one, which is less harmful to other people and the environment

I will not buy a products if the company that sells ir is ecologically irresponsable

I have purchased light bulbs that were more expensive but saved energy

I try only to buy products that can be recycled

To reduce our reliance on oil, I drive my car as little as possible

I usually purchase the lowest priced product, regardless of its impact on society

I do not buy household products that harm the environment

I buy high efficiency light bulbs to save energy

I try to use electrical appliances (eg, dishwasher, washing machine and dryer) depending on the rate that I have (rate bi-tri-TIME)

I make the separation of household waste and recycle

I make every effort to buy paper products made from recycled paper.

In washing my clothes I use bio detergents (at home, laundry, etc.).

I buy toilet paper made from recycled paper

I buy Kleenex made from recycled paper

I buy paper towels made from recycled paper.

I try to only buy products that can be recycled.

8. Gender

   Male

   Female

9. Age

   ≤ 19

   19 to 28

   29 to 38

   39 to 48

   49 to 58

59 to 68

≥ 69

10. Marital Status

Married/ Committed

Single

Divorced/Widower

11. Education

Primary

Elementary School

High School

Bachelor

Master

Phd

12. Income

≤ 1000€

1001€ to 2000€

2001€ to 3000€

3001€ to 4000€

4001€ to 5000€

≥ 5001€