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Waste Management and Sustainable Development in the Retail Sector: The case of super markets.

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I hereby declare that the work submitted is mine and that where I have made use of another's work, I have attributed the source(s) according to the Regulations set in the Student's Handbook.

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ABSTRACT

This dissertation was written as part of the MSc in Environmental Management and Sustainability at the International Hellenic University.

This research aimed at investigating consumers' perspectives over environmental practices applied by supermarkets, mainly in relation to packaging and expired food products. For the purpose of the research, a survey was conducted, through the use of a questionnaire, which was distributed among Greek consumers. The findings of the study, which were in accordance to previous similar researches, suggested that Greek consumers consider both packaging and expired food products a major environmental problem. They think that their supermarkets are somewhat environmentally friendly but they do not handle neither of these problems in an efficient way. In addition, consumers pay attention to ethical considerations when purchasing goods from a supermarket, they are willing to change their local supermarket with another, which is more environmentally friendly or to buy more from a «green» supermarket, nevertheless, they are not ready to pay higher prices, in order to reward the environmental procedures of their local supermarket.

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Keywords: supermarkets, waste management, sustainability, environmental management

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1. INTRODUCTION

1.1 Background

This paper aims at exploring the issue of waste management in the retail sector and more specifically in the super markets' sector. Super markets across the globe generate and accumulate tons of solid waste per week, which may consist of the following:

- Expired food products
- Meat and vegetable trimmings
- Cardboard boxes
- Empty wooden produce boxes
- Other types of secondary packaging

There is no doubt that these wastes have to be handled efficiently so as to minimize adverse impact on the environment. As a result, the adoption of appropriate waste management approaches, in the context of corporate social responsibility and sustainable development practices of super markets, seems to be of major importance.

As Kuhlman and Farrington (2010) explain, sustainability, as a term, became popular in policy-oriented research, expressing mainly what public policies should achieve. Although many authors tend to believe that the interpretation of this term along with the term of sustainable development is a rather intriguing task, their majority seems to accept the definition provided in 1987, by the World Commission on Environment and Development. According to it, sustainable development can be defined as *"the development that meets the needs of the present without compromising the ability of future generations to meet their own needs"* (Bac Dorin, 2008).

Since then, the concept of sustainable development has been heavily discussed and used by various authors, who recognize three main aspects of sustainable development, the economic, the environmental and the social one (Harris, 2003). The economic aspect refers to the ability of an economically sustainable system to produce goods and services on a continuing basis, maintaining, at the same time, manageable levels of government and external debt and avoiding extreme sectoral imbalances that may damage agricultural and /or industrial production. The environmental aspect refers to the ability of an environmentally sustainable system to maintain a stable resource base, to avoid over-exploitation of renewable resource systems or environmental sink functions and to deplete

non-renewable resources only to the extent that investment is made in adequate substitutes, including functions, which may not ordinarily be classed as economic resources, such as maintenance of biodiversity, atmospheric stability and other ecosystem functions. Finally, the social aspect refers to the ability of a socially sustainable system to achieve fairness in distribution and opportunity as well as adequate provision of social services, gender equity and political accountability and participation.

Nowadays, sustainable business models still incorporate a triple bottom line approach, considering a wide range of stakeholder interests, as well as environmental and social issues. As Bocken et al. (2014) explain, these models are important in three ways, which include the driving and implementation of corporate innovation for sustainability, the incorporation of sustainability into business purpose and processes and their serving as a key driver of competitive advantage.

In the above mentioned context, waste management practices and corporate social responsibility practices, applied by companies of both the retail sector and other industries take into consideration the interests of environment and society. As far as waste management is concerned, El-Haggar (2007) explains that the fact that environmental protection and sustainable initiatives must come at the expense of economic development is a common misconception, which is particularly true for managing wastes. As he states, waste management can be rather costly in terms of time and resources, thus it is crucial to understand the options available for managing waste in an effective, safe and sustainable manner (El-Haggar, 2007). His view is further supported by the Chartered Institute of Purchasing and Supply (CIPS, 2007), which states that the true cost of waste includes both the cost of discarded materials and the insufficient use of raw materials, the unnecessary use of energy and water, the faulty products, the waste disposal of by-products, the waste treatment and waste labour.

The waste streams that may arise are various and depend on the facilities, activities or locations where wastes are generated as well as on the types of solid wastes. More specifically, in case of commercial and institutional firms, waste is typically produced as a result of conducting trade and business (Smith and Scott, 2005), while in case of industrial firms (manufacturing, repair, production), waste streams are characterized as liquid wastes, solid wastes or air pollutants (Woodard and Curran Inc., 2006). In more details, Tchobanoglous and Kreith (2002) have classified waste streams into eight categories, depending on their sources. These categories include residential, commercial, institutional,

industrial (non-process wastes), municipal solid waste, construction and demolition, industrial and agricultural.

In order for a waste management system to be effective, it is important for it to remain flexible in the context of changing economic, environmental and social conditions (McDougall et al., 2001; Scharfe, 2010) and to be designed under a holistic approach rather than under alternative and competing options (Staniskis, 2005). As a consequence, a waste management framework should provide the following (Davidson, 2011):

- Flexibility, so as to frame and analyze quantitative and qualitative information across different scales
- Structure, so as to clearly identify key goals and values
- Logic, so as to take into consideration the potential probability and consequences of a particular option
- Communicability, so as to clearly communicate important ideas to the main stakeholders.

The above mentioned information further underlines the fact that the establishment of affordable, effective and truly sustainable waste management practices is the cornerstone of sustainable development (Bogner et al., 2007). Indeed, according to Jones et al. (2005), environmental issues are the earliest and most commonly reported corporate social responsibility agendas among top retailers. In this context, retailers, including super markets, incorporate the dimension of environmental responsibility, along with the dimensions of human and product responsibility, in the corporate social responsibility positioning (Anselmsson, Johansson, 2007). This means that they are perceived to trade environmental-friendly, ecological and non-harmful products and they apply environmental policies and use recyclable product packaging.

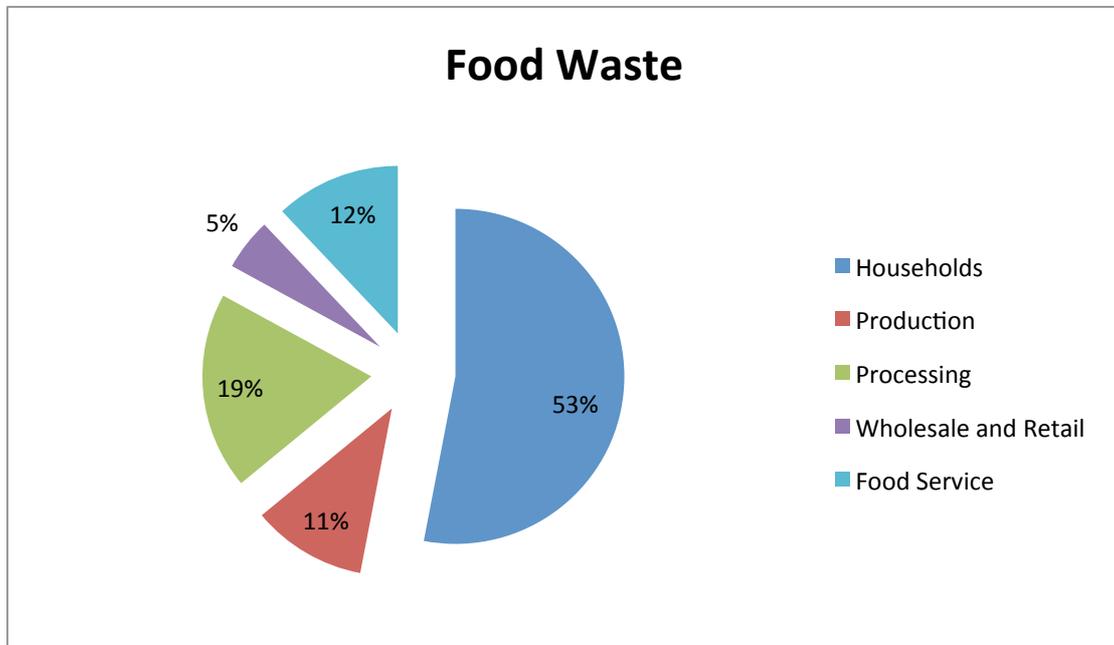
1.2 Facts about Waste Management

The importance of the adoption of effective waste management practices, by the retail sector and especially supermarkets, is further highlighted by facts regarding the annual quantity of food and packaging waste and the cost, related to this waste.

More specifically, according to the European Commission (2016), about 88 million tons of food is waste annually in the EU, while the associated cost is estimated at about 143 billion

euros. Wholesale and retail sectors account for only 5% of this waste, while households contribute the most, accounting for about 53%. The figure that follows, presents the contribution of each sector to food waste.

Figure 1.1 – Contribution of Each Sector to Food Waste



(Source: <http://ec.europa.eu/>)

Although the percentage of retail sector's contribution is the smallest of all sectors, the actual quantity of waste is still important. In more details, the total food waste, for the combined wholesale, retail and markets sector, amounted to 4,6 million tons in 2012, which is equivalent to 9kgs per person per year. At the same time, this quantity of food waste is associated to a cost of 20 billion of euros, on an annual basis (<http://ec.europa.eu/>).

According to the same source (<http://ec.europa.eu/>), packaging waste is, also, raising serious concerns, as almost 157 kg of packaging waste, per inhabitant, were generated in 2013. As far as paper and cardboard are concerned, which, along with wood, constitute the main packaging materials mostly used by the retail sector and supermarkets, they account for 41% of total packaging waste, representing the biggest share of packaging waste, while wood accounts for about 15% of total packaging waste.

Based on the above figures, it becomes obvious that both food and packaging waste have serious environmental and economic impacts. As a consequence, the efficient use of valuable resources, the prevention as well as better and effective management of waste should be one of the top priorities of supermarkets and retail sector in general.

1.3 The Supermarket Sector in Greece

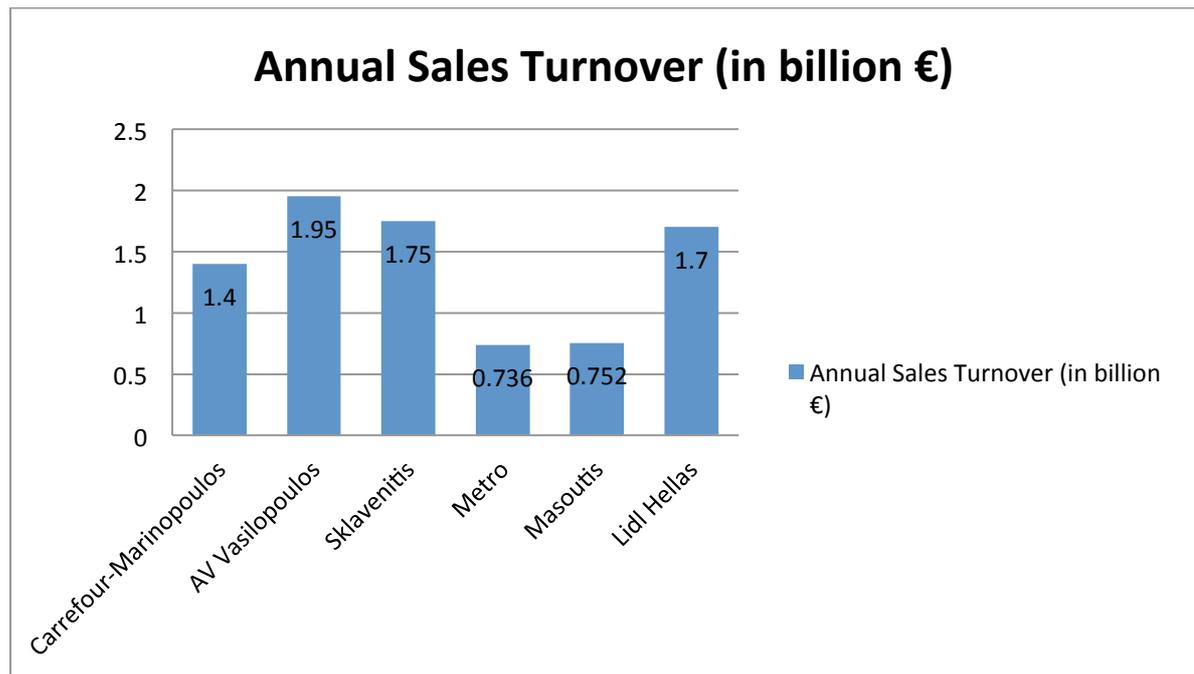
The Greek supermarket sector is characterized by high levels of competition, as, apart from local retailers, food retailers from other countries have also entered the market. The concentration level is also high, mainly due to the fact that some companies have been acquired, while others have left the market.

The Greek super market sector constitutes one of the most productive sectors of the Greek economy, however, its landscape has changed significantly, due to the global financial crisis, which greatly affected the Greek economy. More specifically, the number of super market chains presented a reduction of about 34,4%, by decreasing from 96, in 2008, to 63, in 2014, while in 2015 and 2016, some, mostly local chains, have been handed on to bigger ones (www.kathimerini.gr). Some retailers, such as Marinopoulos and Veropoulos, were obliged to leave the market, under the burden of financial debts, while others managed to strengthen their position in the market, by changing their profile and adjusting it to the current needs of Greek consumers, whose income has been decreased.

As a result of the above mentioned changes, the market shares have also been changed significantly. In more details, in 2008, Carrefour-Marinopoulos was undoubtedly the market leader, counting 507 stores in total and a yearly sales turnover of almost 2 billion €. Carrefour-Marinopoulos was followed by AV Vasilopoulos, which had an annual sales turnover of 1,33 billion € and 157 stores in Greece. Nevertheless, one year later, Delhaize, the Belgian group of companies, which owns AV Vasilopoulos, decided to adjust its strategy to the difficult financial situations of the European market, resulting in its becoming the leader of the Greek super market sector.

Based on data provided by other researches (www.kathimerini.gr; www.ethnos.gr), the figure that follows, provides an overview of the current situation of the Greek super markets sector, presenting the annual sales turnover of major firms, for 2015. Veropoulos company is not included in the figure as it has been acquired by Metro company. Atlantic company is not included either as it has gone under bankruptcy.

Figure 1.2 - Annual Sales Turnover of Major Firms of the Greek Super Market Sector



Lidl Hellas has managed to increase its sales during the last years, taking advantage of Marinopoulos' loss of customers. Actually, during the first five months of 2016, Lidl Hellas has increased its sales per 9,4%, while the total sales of the Greek super market sector decreased per 7,3%.

In any case, new challenges are expected within the Greek super market sector within the next months. Market structure is going to be greatly affected by the final decision regarding the future of Marinopoulos, which is going to be acquired by Sklavenitis company. In addition, the recent merger of Delhaize with Ahold is, also, expected to affect AV Vasilopoulos operation.

The information provided above indicates that there are, still, strong opportunities for future development within the Greek supermarket sector. As a result of this and taking into consideration that foreign supermarket chains are entering the Greek market, it can be deducted that modernization initiatives will be undertaken and considerable investments will take place. In this context, it is expected that firms will focus on issues of major importance, such as the sustainability and waste management practices adopted.

1.4 Objectives and Problem Definition

The broad aim of this paper is to research the sustainable development practices, the waste management practices and the corporate social responsibility practices that are applied in the retail sector. The main objective of the paper is to identify the waste management practices that are applied by super markets, regarding both expired products and products' secondary packaging. Expecting that the waste management practices, which are applied by the firms that will be researched (super markets of the Greek market), are not in full accordance with the best waste management practices and can be further improved, the author will also try to suggest solutions.

What follows the presentation of theories related to the main research problem, is the formulation of the main research question of this thesis, which is the above:

Which are the waste management practices applied by super markets regarding expired products and products' secondary packaging?

Nevertheless, in order to answer the main research question, an answer must be seek for the following sub-questions:

- How can the terms of Corporate Social Responsibility and Sustainable Development be defined in the case of super markets?
- Which are the Sustainable Development practices followed by companies in the retail sector?
- Which are the Waste Management practices followed by companies in the retail sector?

1.5 Structure

The first chapter of this paper describes the main problem which will be addressed, while, at the same time, it explains basic terms and presents academic theories, which are relevant to the topic.

Next, in the second chapter, a more in depth presentation and analysis of theory regarding the concepts of Sustainable Development and Waste Management will take place. Initially, the reader will be presented with the concepts of Corporate Social Responsibility and

Sustainable Development as well as with its three dimensions. Then, there will be an analysis of the relationship between sustainable development and retail sector, with emphasis on super markets, with references to relevant prior literature and empirical researches. Similar to the above, the last unit of the chapter will try to analyze the relationship between waste management and retail sector, focusing again on super markets and consulting relevant prior literature and empirical researches.

Next, in the third chapter, the reader will be introduced to the research methodology that will be employed, according to the topic of this research, while chapter 4 will provide a presentation of the sector of interest and of all research data and in chapter 5 a detailed presentation of the results of the research.

Finally, the last chapter of this thesis will include a short discussion of the results and will provide an answer to main research question, taking into consideration the limitations of the research. In addition, solutions, in relation to the main research problem will be proposed as well as areas for future research.

2. LITERATURE REVIEW

2.1 Definition and Context of Sustainable Development

The idea of development, in its current form, barely existed prior to the second half of the twentieth century. Actually, it evolved by the end of the Second World War, when both the perceptions and the policy changed dramatically, with economic and social improvement for the majority becoming the main focus of governments. In addition, economic development, along with all its social and institutional correlates, occupied an essential place in theory, policy and in the Cold War competition between capitalism and communism (Harris, 2000).

Having attracted the interest of both practitioners and the academic society, the term of sustainable development has been defined by various authors. In more details, Tolba (1984) describes that sustainable development is often used interchangeably with the concepts of ecologically sustainable or environmentally sound development, while O’Riordan (1985) calls it a “contradiction in terms” and Redclift (1987) considers it to be “another development truism”. Besides the differences among their definitions, the majority of researchers seem to agree on the definition provided by the World Commission on Environment and Development, in 1987, according to which *“sustainable development is development which meets the needs of the present without compromising the ability of future generations to meet their own needs”*.

Since then, the concept of sustainable development has been heavily discussed and used (Holmberg, 1992; Reed, 1997; Harris et al., 2001), while three of its essential aspects have been recognized, the economic, the environmental and the social perspective. Of course, not all studies discussed all of the three lines. Actually, some of them (Bibri, 2008; Yan et al., 2008) focused on one line only, being either the social or the environmental one, others combined the two of them (Frame and Newton, 2007; Dewangaa et al., 2008), while some of them included the economic line as well (Collins et al., 2007).

According to Elkington (1997), the ***economic perspective*** refers to the impact of an organization’s business practices on the economic system. In more details, Harris (2003) explains that *an economically sustainable system must be able to produce goods and services on a continuing basis, to maintain manageable levels of government and external debt and to avoid extreme sectoral imbalances which damage agricultural or industrial production.*

The economic perspective recognizes the economy as one of the subsystems of sustainability and refers to its capability not only to survive but also to evolve in the future so as to support future generations (Spangenberg, 2005). In other words, it relates the growth of an organization with the growth of the economy, by focusing on the economic value that an organization may provide to its surrounding system in such a way that it prospers and supports future generations.

The **social perspective** of sustainable development refers to the business practices adopted by an organization, as far as labor, human capital and society are concerned and to the extent of their being beneficial and fair (Elkington, 1997). According to Harris (2003), *“a socially sustainable system must achieve fairness in distribution and opportunity, adequate provision of social services, including health and education, gender equity and political accountability and participation”*. In general, it is a dimension connected to human aspirations such as income distribution, employment, life expectancy or access to medical services. The implementation of such practices by an organization introduces two aspects. The first is the moral aspect of the organization being good to the society by providing value to it. The second aspect refers to the effects that social responsibility may have on the performance and sustainability of the business. In any case, as Goel (2010) points out, *“the social performance focuses on the interaction between the community and the organization and addresses issues that are related to community involvement, employee relations and fair wages”*.

Finally, the **environmental or ecological perspective** of sustainable development refers to the efficient use of energy resources, to the reduction of greenhouse gas emissions, to the minimization of the ecological footprints etc so that environmental resources are not compromised for future generations (Goel, 2010). According to Harris (2003), *“an environmentally sustainable system must maintain a stable resource base, avoiding over-exploitation of renewable resource systems or environmental sink functions and depleting non-renewable resources only to the extent that investment is made in adequate substitutes”*. As in the case of social perspective, the environmental practices adopted by an organization have a direct impact not only on the environment but also on its performance and its business sustainability. As Kearney (2009) explains, this is due to the fact that the reduction of operational costs occurring by the reduction of energy or water usage etc and the increase of revenues thanks to the development of innovative green products both result in strong financial advantages for the organization.

The above mentioned aspects of sustainable development may raise questions regarding the way balance between the different objectives can be achieved, since, as Norgaard (1994) underlines, only one objective can be maximized at a time. Nevertheless, sustainable development should have an interdisciplinary nature, as elements of all three perspectives are necessary so as to understand what sustainability requires (Harris, 2003).

2.2 Definition and Context of Corporate Social Responsibility

Corporate social responsibility was first defined by Bowen (1953), according to whom, it represents *“the social obligation to pursue those policies, to make those decisions or to follow those lines of action, which are desirable into terms of the objectives and values of our society”*. A few years later, Heald (1957) gave another definition, describing corporate social responsibility as *“recognition on the part of management of an obligation to the society it serves not only for maximum economic performance but for human and constructive social policies as well”*. Since then, the term has evolved, attracting the interest of both the academics and practitioners. Having researched a number of studies on the topic, such as the work of Carroll (1999), Nicolau (2008), Tsoutsoura (2004) and others, Pour et al. (2014) suggest a broader definition of corporate social responsibility. According to them, it can be defined as *“the activities making companies good citizens, who contribute to society’s welfare beyond their own self-interests”*. However, a more widely accepted definition was introduced by the World Business Council for Sustainable Development (2008), who described corporate social responsibility as *“the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large”*.

Following Bowen’s work, Carroll (1979) described the pyramid of corporate social responsibility, which consists of four stages of CSR development. The first stage refers to the economic responsibility of the company, which is supposed to provide, at a profit, products and services that the society needs. The second stage refers to the legal responsibility of the company, which is obliged to always obey at the laws and regulations of the society. The next stage represents the ethical responsibility of the company, which refers to the expectations that a society has from the company, apart from its legal obligations. Finally, the last stage refers to the philanthropic responsibility of the company, which according to

Carroll (1979) indicates “a company’s decision to assume purely voluntary roles, guided by its desire to engage in social roles that are not mandated, not required by law and not even generally expected of businesses in an ethical sense”. As Carroll (1979) explains, all of the above four mentioned stages are not mutually exclusive, neither intended to portray a continuum with economic concerns on one end and social concerns on the other.

Based on the pyramid of corporate social responsibility, developed by Carroll (1979) as well as on the corporate social responsibility framework, developed by Marrewijk (2003), Miles and Munilla (2005) describe the motives for a company’s participation in corporate social responsibility activities.

Table 2.1 - Interrelationship of CSR Framework and Pyramid of CSR

CSR Ambition Level	Motives (Marrewijk, 2003)	CSR Category (Carroll, 1991)
Compliance Driven	CSR is perceived as a duty to society, thus as a social obligation of the company. Its expenditures are considered to be simply costs and the resulting economic responsibility is viewed as paramount.	Legal
Profit Driven	CSR is perceived as a strategic initiative and it is used for the creation of competitive advantage along with superior financial performance. Its expenditures are considered to be an investment, which will result in an enhanced stream of future profit.	Economic
Caring	CSR is perceived as the tool for balance between profits, people and planet. The company cares both for the wealth of stakeholders and the social welfare and the economic responsibility is paramount.	Ethical and Philanthropic
Synergetic	CSR is perceived as a tool for the creation of a sustainable corporation. Social and environmental responsibility is viewed as a way to create competitive advantage and meet with company’s economic responsibilities.	Economic, Legal, Ethical and Philanthropic
Holistic	CSR is perceived as a corporate culture, while social and environmental responsibility is viewed as a way to create competitive advantage and meet with company’s economic responsibilities.	Economic, Legal, Ethical and Philanthropic

(Source: Miles and Munilla, 2005)

Finally, as far as the benefits that a company gains from being socially responsible are concerned, the relevant literature offers a number of different views, nevertheless the main theories are expressed by Kotler and Lee (2005) and by Kramer and Porter (2006). More specifically, Kotler and Lee (2005) explain that companies decide to implement practices of corporate social responsibility in order to improve their “image” in front of potential customers, business colleagues, investors, the media and others. On the other hand, according to Kramer and Porter (2006), companies participate in corporate social responsibility activities due to reasons such as moral obligation, sustainability, license to operate and reputation.

The table that follows summarizes the reasons for participating and the benefits of participating to corporate social responsibilities, as presented by Kotler and Lee (2005) and by Kramer and Porter (2006).

Table 2.2 - Reasons and Benefits of Participating to CSR Activities

Kramer and Porter (2006)	Kotler and Lee (2005)
Moral obligation	Increased sales and market share
Sustainability	Improved brand positioning
License to operate	Improved image and clout
Reputation	Increased ability to attract, motivate and retain employees
	Decreased operation costs
	Increased interest for investors and financial analysts

2.3 Previous Research on Sustainable Development and Retail Sector

The sustainable development strategies, which have been developed and implemented by companies of the retail sector, especially by food retailers, constitute a topic of major interest for the academic society. As a result, numbers of researches have been dedicated to either one of the three perspectives of sustainable development, the economic, social or environmental one.

In more details, Lee et al. (2009) tried to investigate the context, in which corporate social responsibility is being addressed by the top 100 retail organizations. In order to achieve that, they reviewed the corporate web page of the companies, which participated in the researched, by using a content analysis procedure. Their results indicated that social programs applied by the US retailers are followed by environmental programs and then by educational programs and include community support, in the form of either sponsorship of local charities or projects and environmental aspects that revolve around health. In addition, they suggested that more retailers should be involved in communicating their beliefs about social responsibility on their corporate website.

A similar research was also conducted four years earlier by Jones et al. (2005), who tried to provide a preliminary exploration of the corporate social responsibility issues that are being addressed by the UK's top ten retailers. Their methodology was also based on the collection of empirical information which has been either posted on the companies' worldwide websites or in their published annual corporate social responsibility reports. Their findings suggest that each retailer has its own approach as far as corporate social responsibility is concerned and follows a reporting process, which varies among them as per its nature and extent. Moreover, their results reveal that some of the top ten retailers employee key performance indicators so as to measure and benchmark their corporate social responsibility achievements. Retailers also seem to recognize ethics in business and urban regeneration as predominant incentives in conducting their business, while long-term growth and financial safety of stakeholders are both assured via operational business imperatives, economic viability and corporate social responsibility.

The conclusions of Jones et al. (2005) were further supported by a research conducted by Hughes et al. (2007), who attempted to evaluate the distinct roles played by multi-stakeholder initiatives for ethical trade in the UK and the USA. According to their findings, the UK's core multi-stakeholder initiative represents retailers from multiple sectors and adopts a developmental and continuous learning approach to ethical trade. On the other hand, initiatives developed by US multi-stakeholder emphasize mainly on corporate accountability, based on compliance monitoring only in the clothing sector. They, also, support that retailers' ethical trading approaches are shaped by national-institutional contexts, in a rather fluid and mutable way.

On the other hand, Wagner et al., (2008), tried to address the issue of corporate social irresponsibility, by finding out which retail business practices lead mass media and

customers to such perceptions. Their research was conducted based on quantitative data from both a paper-based and an online survey. Then, a higher-order, multi-group confirmatory factor analysis was applied. Their findings suggested 14 factors, which represent perceptions of corporate social irresponsibility in the retail sector and which include, among others, the natural environment, the local businesses, the societal rules, the employee benefits and wages and the sales practices. Their results, also, revealed demographic differences among consumers' perceptions of corporate social irresponsibility.

Another study was conducted by Jones et al. (2011), who aimed at providing a general review of the reporting process adopted by some of the world's leading retailers along with the sustainability agendas, which they have publicly reported. They, also, tried to provide a wider exploration of the ways these retailers are currently addressing and pursuing sustainability agendas. In order to achieve this, they reviewed the most recent sustainability reports as well as information, which have been posted on the webpages of the eight out of ten retailers. Their findings suggested that the structure of the sustainability reports vary considerably among the retailers, while three broad sets of schemes can be identified, the environmental, the social and the economical. In general, the authors argue that the world's leading retailers are, at best, adopting weak models of sustainability. In addition, they point out that during the pursuing of consumption and continuing growth, retailers are ignoring the fact that the present patterns of consumption are unsustainable in the long term.

In their own research, Cacho-Elizondo and Loussaief (2010) explored the perceptions of young consumers about the sustainable development initiatives of French food retailers and evaluated their impact on the brand image of retailers and their relationships with their consumers. Their methodology included the review of the corporate websites of the retailers and a press review as well as eight in-depth interviews and one face-to-face survey. Their results suggested that young consumers seem to relate sustainable development more to ecology and less to social and economic issues. In addition, they report the five dimensions that seem to best describe brand image in relation to sustainable development, which include sympathy, innovativeness, human touch, responsibility and opportunistic behavior.

Finally, Guercini and Runfola (2009) focused their research on the concept of traceability, by offering some evidence of the adoption of different traceability approaches by actors along the supply chain and by illustrating the relevance of the traceability issue and how it can be exploited. Authors describe two different approaches to traceability. According to the first, a

company uses traceability as a tool for strengthening organizational control and is not willing to share information with its customers. In the second approach, traceability is used as a market tool, which helps customers to acquire knowledge about the origin of the products and the conditions of their manufacturing. Authors also explain that the traceability process has intra-organizational consequences in terms of contents, technologies and the parties involved in its implementation.

2.4 Previous Research on Waste Management and Retail Sector

Waste management, along with energy consumption, land use, transportation etc, constitutes one of the main environmental issues in the retail sector. Consequently, it has been heavily researched by various authors so far.

More specifically, Eriksson et al. (2012), arguing that the prevention of retail food wastage requires the better understanding of waste patterns, researched the food losses in six Swedish retail stores. Their methodology was based on the analysis of flows of fruit and vegetables, through both the analysis of recorded data and the performance of physical measurements. According to their results, total wasted fresh fruit and vegetables accounted for 4.3% of delivered quantity and were categorized into either pre-store waste, in-store waste or unrecorded in-store waste. The findings of the research also indicated a positive relationship between unrecorded in-store waste and total waste, suggesting that a thorough recording of waste could be an appropriate way to reduce the retail waste of fresh fruits and vegetables.

In the same context, Mena et al. (2011) tried to address the problem of food and drink waste, by identifying the main root cause of waste in the supplier-retailer interface. In more details, they conducted an exploratory research, collecting data through 43 interviews with managers in food manufacturing, wholesaling and retailing in both the UK and Spain. Apart from the interviews' data, they also analyzed supplementary documentation, using causal maps. Their findings indicated three main categories of root causes of waste, including the mega-trends in the marketplace, the natural causes, which are related to the products and processed and the management root causes on which practitioners have a direct impact.

The work provided by Fernie and Hart (2001) was based on an EU packaging waste directive, which was incorporated into the UK law in 1997. According to this directive, members across the whole supply chain are responsible for incorporating the waste packaging recovery, with retailers, as the last member of the chain, to assume the greater share of 47% of waste recovery target. Based on the above, Fernie and Hart's paper examines and compares the impact of the new regulations on various food retailers. Data are collected through a number of in-depth interviews with senior managers involved in the implementation of the legislation and discussions about the initiatives, which are carried out to comply with the regulations, the impact on existing logistics networks and the investment that is required for the implementation of the regulations are presented.

Another research, relevant to the waste management in the retail sector, was conducted by Triantafyllou and Cherrett (2010). Noticing the increased use of hazardous materials in retail activities, the authors investigated the legislative, contractual and operational practices, which govern the management of five hazardous waste streams emanating from retailers in a dedicated shopping center. Their data were extracted by a substantial database of logistics operations of 92 businesses and their analysis provided a chance for discussions about the scope for coordinated collection strategies across supply chains potentially using local treatment facilities.

One year later, the Nordic Council of Ministers (2011) initiated a project regarding the prevention of food waste in the retail and wholesale trades. Their decision was driven by the fact that waste prevention is the highest priority in the waste hierarchy as well as by the heavily increasing discussions in society about food waste in general. Their project focused mainly on the amounts of wasted food, on the causes of food waste generation and on initiatives to reduce the amounts of food waste from the retail and wholesale sector. In addition, it provided recommendations on measures that could be taken so that the current situation changes.

Finally, Gustavsson and Stage, (2011), who realized that, few studies have been done on food waste at the retail level, decided to examine the extent of food waste of 16 different horticultural products, selected among typical fruit and vegetables. The sample of their research consisted of one of the leading Swedish retail companies. Their findings indicated that retail waste of horticultural products amounted between 0,4% and 6.3% of store supplies. At the same time, they suggested that packaging can reduce the waste of these products.

Apart from the studies that approach the issue of corporate social responsibility and waste management from the retailer's side, there is a great number of studies, who also research the same issue, but from consumers' perspective.

In more details, Garcia de Leaniz and Rodriguez (2012) focused their study on Spanish consumers' perception of corporate social responsibility. Based on a questionnaire developed by Bigne et al. (2005) and on the three dimensions of the sustainable development model, the authors conducted a survey, among 400 participants, in order to measure consumers' general support of socially responsible initiatives and their evaluation of corporate social responsibility. The results of their survey suggested that Spanish consumers support CSR practices, considering economic responsibilities of primary importance and social and environmental responsibilities of less importance.

In the same context, Alee (2014), in his own research, tried to investigate consumers' awareness and willingness to reward the ethical behavior of companies, by researching their predisposition to pay a higher price or to increase the amount purchased from those companies, which act ethically. In order to obtain his data, Alee conducted a face-to-face survey of supermarkets' consumers, at their homes, using a structured questionnaire. He focused his study on frequent consumers' who came from a medium-high or high socioeconomic class and resided in Santiago, Chile. Based on the results of his survey, the researcher concluded that Chilean consumers have low awareness on unethical business behavior and they are not willing to either pay a premium price or to increase the volume purchased in order to reward ethical behavior of companies.

Another study, which focused on consumers' perceptions of corporate social responsibility and their association with consumers' attitude and purchase behavior, was conducted by Vahdati et al., in 2015. By using questionnaires developed by previous researchers, such as Szeki (2012) and Galbreath (2010), the authors collected data from a sample consisted of all consumers of dairy products companies in Ahwaz. The results of their analysis indicated that consumers' maintaining a positive attitude towards corporate social responsibility, has a positive and direct impact on their buying behavior. In more details, according to their research, CSR activities have positive and significant impact on consumers' attitude and their buying behavior, while, at the same time, customers' attitude has a positive and significant impact on their purchasing behavior.

Finally, Stefanska and Wanat (2014) researched how consumers' perception of corporate social responsibility and their attitude toward retailers is shaped by values, such as hedonism, utilitarianism, materialism and price-sensitivity. By applying the CAPI method and running multi regression analyses, the authors conducted their survey in a sample of 1000 adult consumers and managed to segment them into four categories. The educated neutral category, which was characterized by a higher education level and amounted for the 35% of the sample, showed a relatively less positive attitude to CSR than the segments of consumers, characterized by high levels of utilitarianism and materialism.

3. METHODOLOGY

3.1 Type of Method

As Saunders et al. (2009) explain, a research may be either exploratory, descriptive or explanatory. The main difference between these three types of researches is the way the questions are structured.

More specifically, a descriptive research is usually more formal and tries to describe a situation, a problem or a phenomenon, through the formulation of hypotheses and the development of specific questions. At the same time, an explanatory study focuses on the establishment and clarification of the reason and the way of existence of a relationship between two aspects of a situation or phenomenon. In more details, an explanatory research tries to investigate why certain things happen the way they do. Finally, when conducting an exploratory research, a researcher tries to identify what is happening, to seek new insights, to ask questions or to establish a phenomenon in a new way (Saunders et al., 2009).

Regarding the research method, there are two major categories: quantitative and qualitative research. A quantitative research is conducted mainly through the collection and analysis of data in numeric forms and is often used when the researcher wants to test hypotheses. Quantitative research is carried out with questionnaires and normally includes the statistical analysis of large sets of data, using statistical software. On the other hand, when adopting a qualitative research, the researcher attempts to find out why certain things happen the way they do. Qualitative researches usually include the collection and analysis of non numeric data or data that have not been quantified and can be applied through the use of various tools, such as questionnaires, face to face interviews, transcripts of in-depth interviews and document analysis.

Taking into consideration the above information and given that our study tries to investigate the waste management practices that super markets apply regarding expired products and products' secondary packaging, it can be deduced that our study can be characterized as an exploratory study, conducted through qualitative research. Following the development of the main research question and other related questions, the qualitative data will be collected through questionnaires and then analyzed so as to draw conclusions. Blumberg et al. (2008) believe that, although the objectives of exploration may be accomplished with

either qualitative or quantitative research, explorative study relies more heavily on qualitative techniques.

3.2 Data Collection

For the purposes of our research, the population will be super markets of the retail industry globally and the sample will include chains of super markets operating in Greece. The selection of participants will be random. Taking into consideration the limitations of the research, its conclusions may, finally, constitute a pattern distinguishable in all the population.

In order to ensure that data collection will be successful, the researcher finds it necessary to conduct a pilot test. The primary objective of the pilot test will be the evaluation of the time needed to fill in the questionnaire, the identification of whether all questions are clearly stated and the acquisition of general comments. To achieve this, the pilot questionnaire will be given to five participants, which will be later excluded from the research.

At this point, it should be mentioned that one of the main issues, which arise when conducting a research, is the response rate. As Malcolm (2011) explains, two of the main reasons leading to low response rates are both the time the participant needs to fill in the questionnaire and the questions themselves. This means that questions may not be pretty understandable or that they may be expressed in a rather personal way, allowing the respondents to only partially fill the questionnaire. If the pilot test generates negative comments for the researcher, he may either reduce the number of questions or change their phrasing or do both, based on the comments generated.

After the completion of the pilot test, the researcher will distribute the final questionnaire, along with a short note explaining its purpose. Participants shall answer the questionnaire within 10 working days, with two follow-ups during them, in order to ensure a higher response rate.

An online survey tool, named "Survey Monkey" was used for both the distribution of questionnaires and the collection of the data. Survey Monkey is a survey development software, which allows its users, meaning the researchers, to develop online their survey questionnaires. At the same time, it offers them the possibility of sample selection, data analysis, bias elimination and data representation services.

Using the platform of Survey Monkey, the research sent invitations, via email, to the participants in order to participate in the research. In more details, the researcher composed his initial message, including information about his identity and informing his sample about the reasons he was conducting the research and the nature of it. In addition, he was able to track their responses, to send reminders to them and finally to thank those, who had successfully completed the questionnaire.

A total of 120 invitations were sent to people in order to participate in the survey. Taking into consideration that almost everyone visits a super market for his/her shopping, participants were selected randomly, without the application of a special selection process and without having to meet specific requirements. In more details, the researcher distributed his survey and collected responses by using a web link, which was both posted on his social media profiles and emailed to respondents, through researcher's own email client.

3.3 Data Analysis

What follows the completion of the questionnaires' process is the analysis of the participants' data, through which the researcher is supposed to discover a variety of themes, codes, possible categories, which could provide the beginnings of analysis or even ideas for future interviews.

According to Woods (2011), qualitative data analysis, which is also the case for questionnaire data analysis, consists of identifying, coding and categorizing patterns or themes, which have been found in the data. As he explains (Woods, 2011), there are four possible ways to do this:

1. The use of literature in data analysis, which may be either extensive before data analysis commences or it may be contraindicated, as in grounded theory.
2. The use of qualitative data software, which can help the researcher with data coding, data management and data analysis.
3. Data coding, which usually, includes labels, definitions of what each theme concerns, descriptions of how to know when each theme occurs, descriptions of any

qualifications or exclusions to identifying themes and examples to eliminate possible confusion when looking for themes.

4. Thematic analysis, which is supposed to recognize “themes” and categories among the collected data.

No qualitative data software was used for the analysis of the questionnaires’ data of this thesis however there has been use of relevant literature, which has been presented extensively in chapter 2, before the commencement of data analysis.

A thematic analysis was, also, applied with themes being defined by the related research questions, which have been presented in chapter 1. In more details, the themes, that were identified, are the following, while questions constituting the questionnaire are presented in appendix A’:

- ❖ Introductory questions focusing on the respondent’s current status
- ❖ Questions about the respondents’ point of view regarding environmental issues, such as packaging or expired food products
- ❖ Questions about the respondents’ point of view regarding supermarkets’ attitude towards environmental issues.
- ❖ Questions about consumers’ attitude towards “green” supermarkets.

In more details, the questionnaire was comprised of 19 multiple-choice questions, grouped into two parts. The first part, which included the introductory questions about the respondents’ status, aimed to collect demographic information. The second part included all other categories of questions and encouraged participants to express their point of view on a format of a four-level Likert scale.

3.4 Ethical Implications

During the collection of the data, the researcher took into consideration all core ethical principles.

More specifically, the researcher informed the participants about his identity and the purpose of the research as well as about the fact that they were taking part in the research

and about what the research required of them. As a result, he avoided to implement deceptive practices and obtained their informed consent. As it was mentioned in the previous section, the above were achieved through the composition and sending of an informative message, along with the distribution of the questionnaire.

In addition, the researcher ensured both the anonymity and confidentiality of the participants, by agreeing to hold such information confidential. Although the information provided by the participants was not highly sensitive, the researched treated them in a highly confidential way, during their collection, their storage, their analysis and finally their publication. To conclude, the participants were also allowed to quit from the filling of the questionnaire, at any stage of the process they wanted. This was achieved thanks to the way of structuring the research process.

4. RESEARCH RESULTS

As mentioned in the previous section, the researcher used his contacts in order to send 120 invitations for participation in his survey. Once this part of the process was completed successfully, two follow-ups by email, took place, requesting the respondents to fill the questionnaire in case they had not done it so far. Finally, the researcher managed to acquire 79 filled questionnaires; more than half of the initially distributed. As a result of this, the response rate was almost 66%, quite higher above 20%, which is usually considered an acceptable rate for this kind of research.

4.1 Demographic Profile of the Sample

The demographic profile of the respondents consisted of their age and educational background as well as of information regarding their being responsible or not about the shopping of their household and the frequency of their visiting a supermarket. The age was re-coded in four categories: between 18-24 years old, between 25-40 years old, between 41-60 years old and older than 61 years old. In the same way, educational background was also re-coded in four categories: high school or lesser, bachelor, master or PhD. Regarding responsibility of household shopping, as expected, respondents had only two options stating whether they were or they were not responsible for it. Finally, the frequency of visiting a supermarket included the following: 4-5 times per week, 2-3 times per week, 1-2 times per week or less than 1 time per week.

According to the data collected, the vast majority of the respondents are between 24-60 years old and they hold a bachelor's or a master's degree. They are, also, responsible for doing the shopping of their household and they, usually, visit a supermarket, one or two times per week and in a lesser extent, two or three times per week.

The table and figures that follow summarize the above-mentioned characteristics and information.

Table 3 - Sample Demographics

Characteristic	Value	% (Frequency)
Age	18-24 years old	15% (12)
	25-40 years old	44% (35)
	41-60 years old	29% (23)
	Older than 61 years	12% (9)
Educational Background	High school or lesser	18% (14)
	Bachelor degree	48% (38)
	Master degree	33% (26)
	PhD	1% (1)
Frequency of visiting a supermarket	4-5 times per week	10% (8)
	2-3 times per week	34% (27)
	1-2 times per week	47% (37)
	Less than 1 time per week	9% (7)
Responsibility of doing the household shopping	Yes	73% (58)
	No	27% (21)

Figure 4.1 - Respondents' age

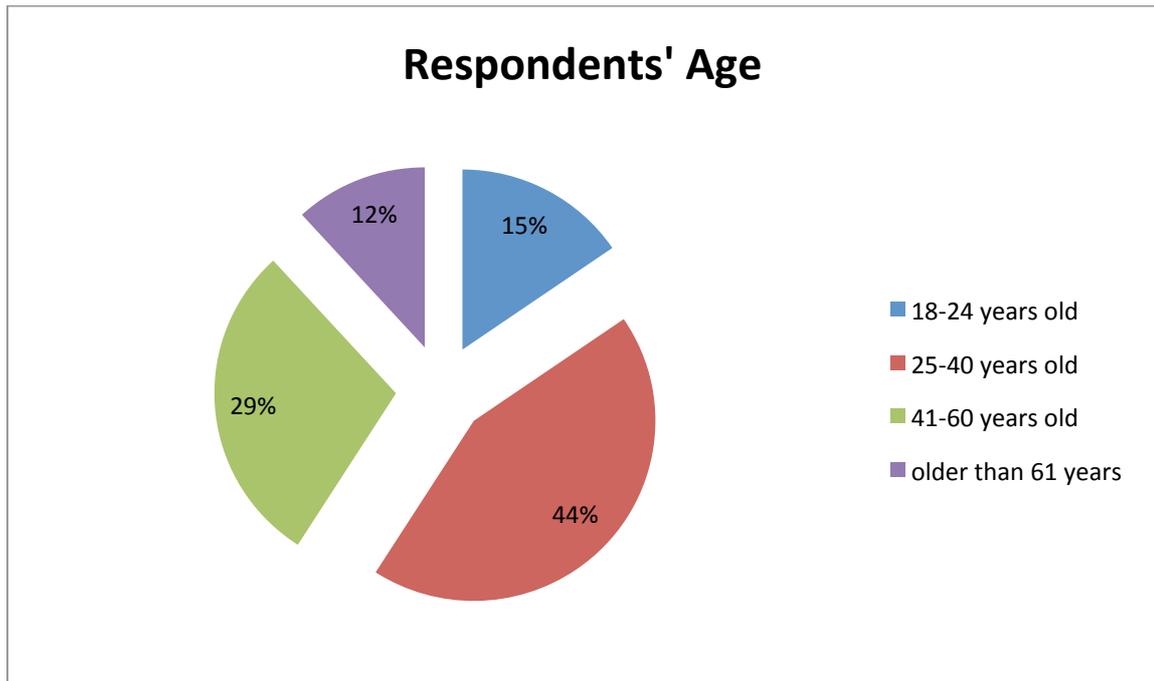


Figure 4.2 - Respondents' educational background

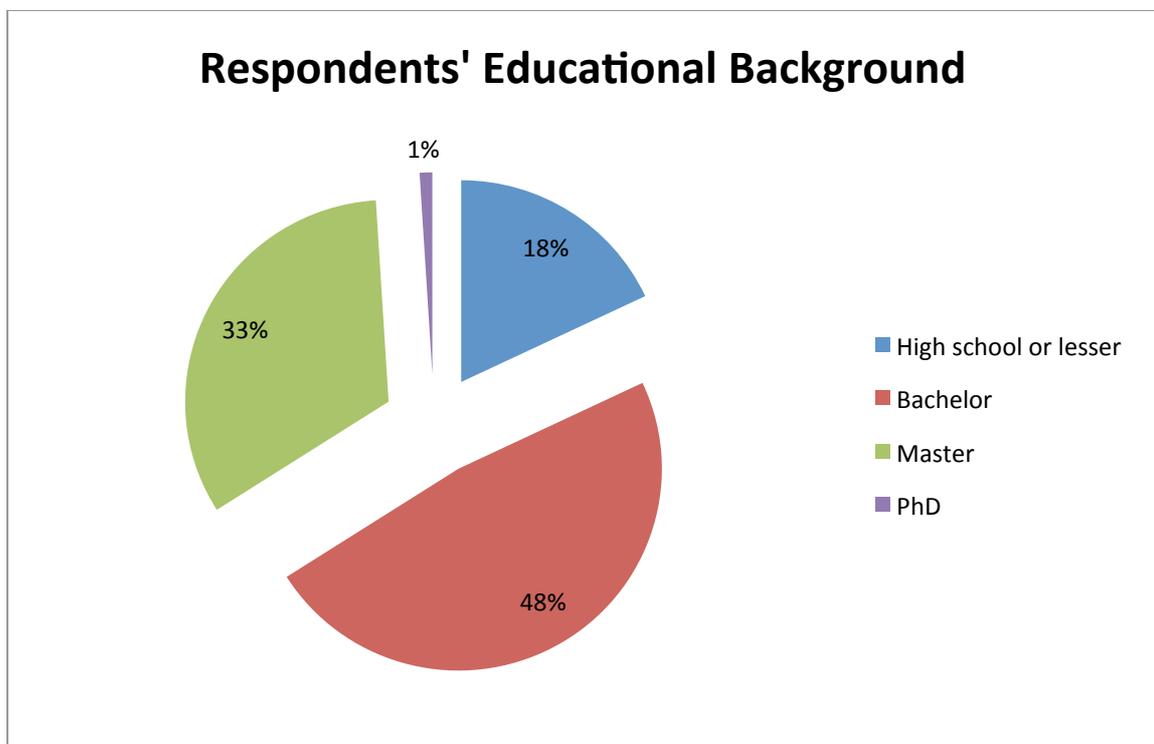


Figure 4.3 - Frequency of visiting a supermarket

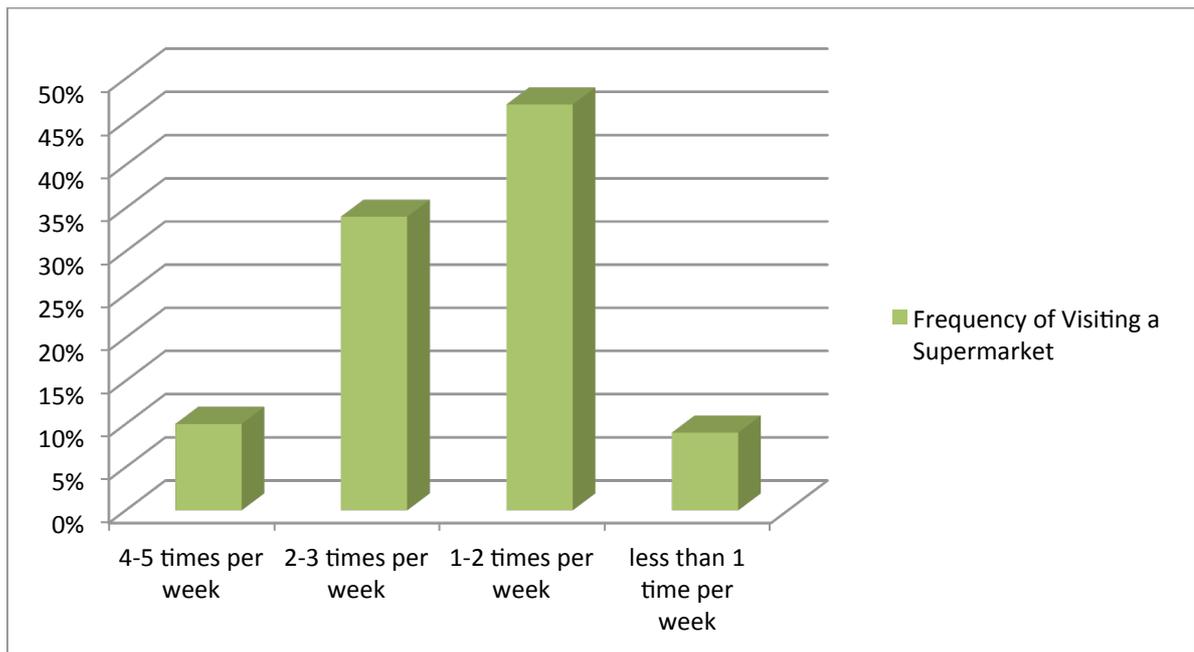
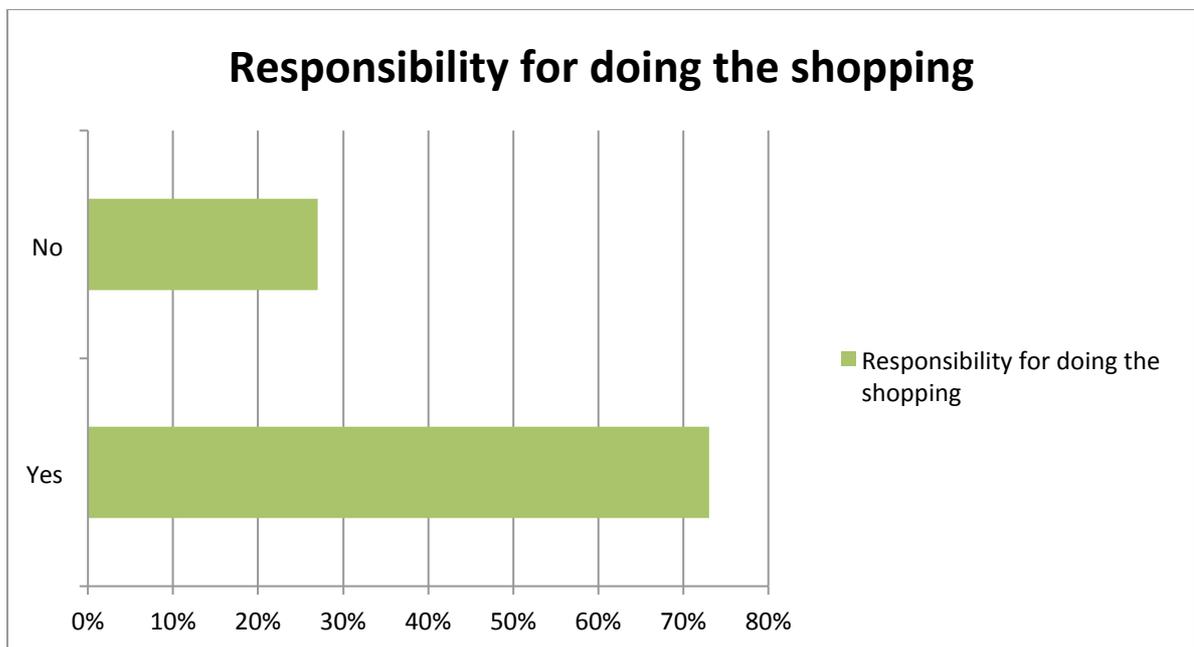


Figure 4.4 - Responsibility for doing the shopping



4.2 Analysis of Results

This section presents the results of the analysis of the data that were collected through the questionnaires. The analysis provides useful insights regarding Greek consumers' point of view about environmental issues, such as packaging and expired food products, their point of view about supermarkets' attitude towards the above mentioned environmental issues as well as their attitude towards "greener" supermarkets.

To begin with, Greek consumers consider both packaging and expired food products to be major environmental problems. In more details, the majority of respondents (78%) strongly agree with the view that packaging constitutes a major environmental problem while at the same time, they (65%) also agree with the view that expired food products constitute a major environmental issue. At this point, no significant differences were noted, among consumers of different demographic characteristics, meaning that their point of view is independent to their age or to their educational background.

Figure 4.5 - Do you agree with the view that packaging is a major environmental problem?

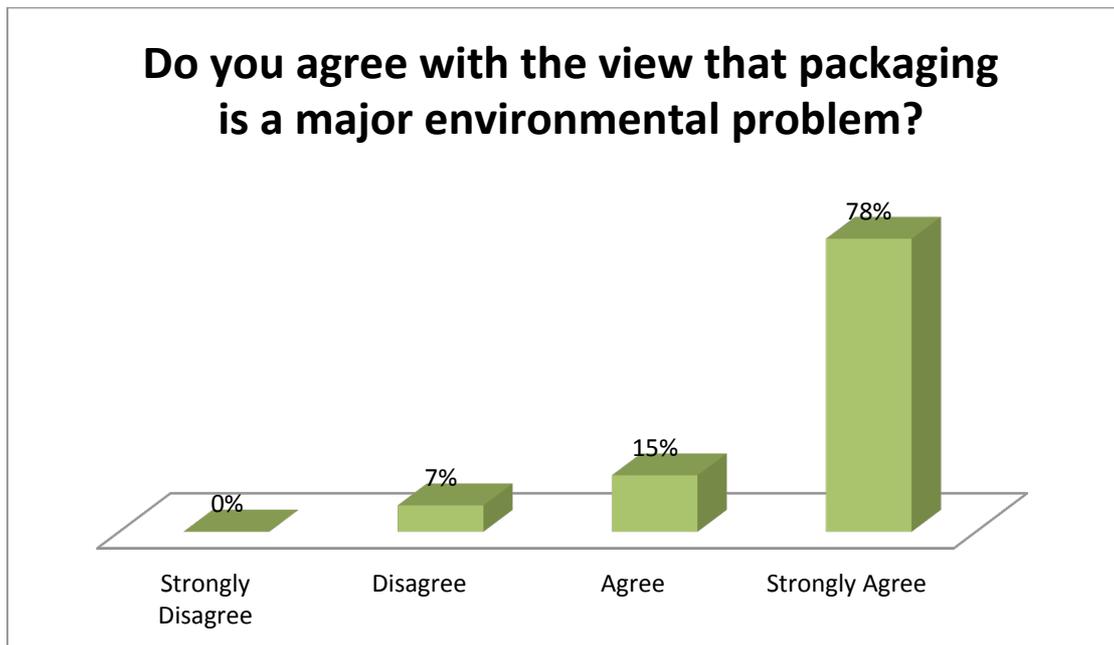
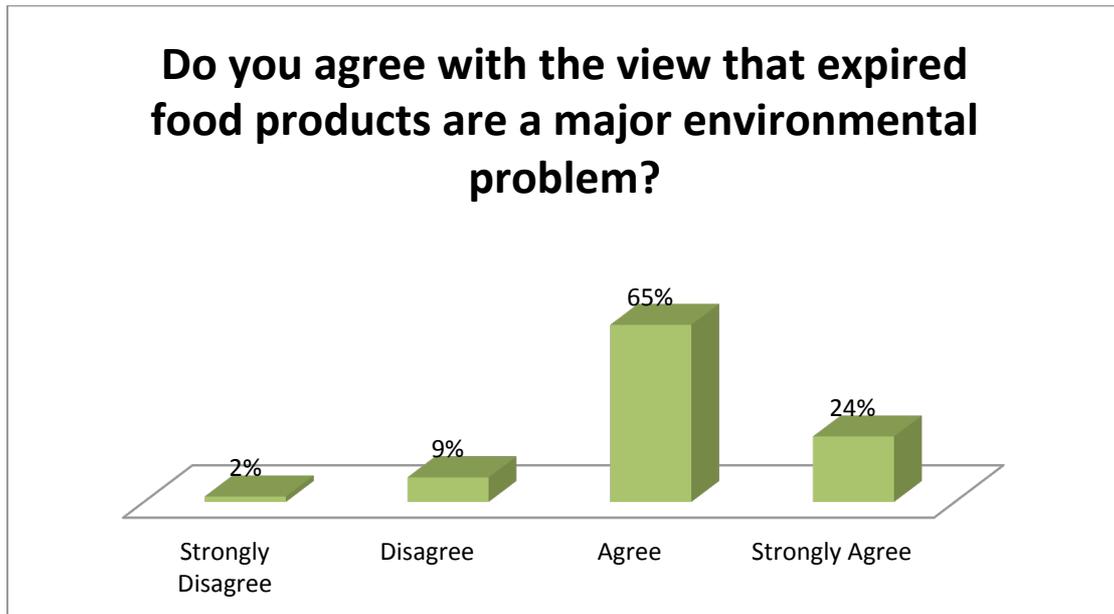
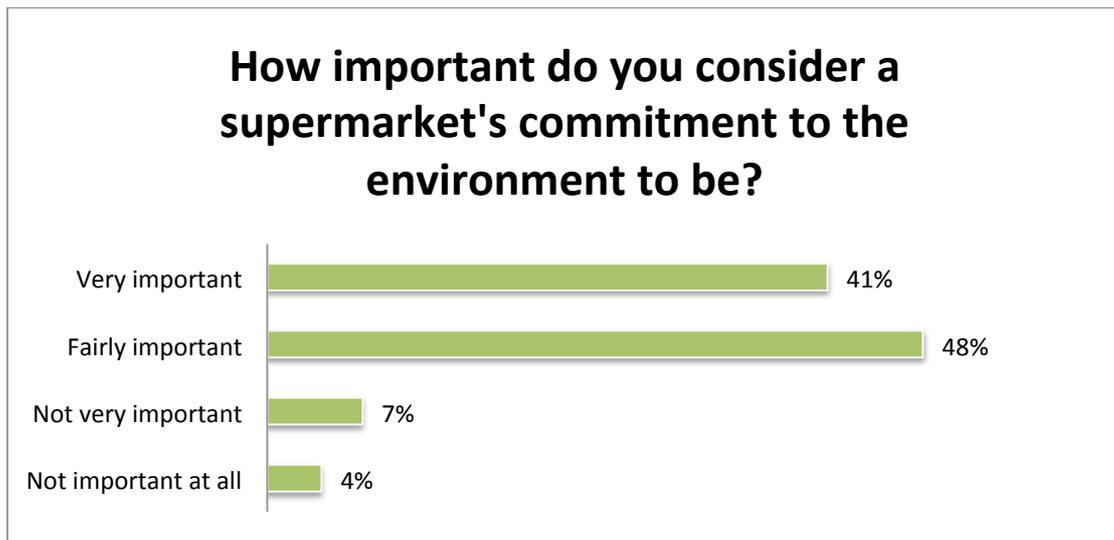


Figure 4.6 - Do you agree with the view that expired food products are a major environmental problem?



In accordance to their previous answers, Greek consumers seem to consider that it is either fairly or very important for a supermarket to be committed to the environment. Actually, 48% of the respondents stated that this commitment is fairly important while 41% of them stated that it is very important. The rest 11% consider that it is not very important or even not important at all for a supermarket to be committed to the environment. It is important to note that, according to the data collected, younger consumers seem to be stricter towards a supermarket's attitude to the environment. In more details, the majority of respondents, who consider a supermarket's commitment to the environment to be of no importance, are aged more than 61 years old while just some of them come from the age group of 40-60. On the other hand, all respondents, who are in favor of a supermarket being committed to the environment, are less than 60 years old.

Figure 4.7 - How important do you consider a supermarket's commitment to the environment to be?



The next group of questions aimed at examining the consumers' perspective about the current environmental attitude of supermarkets.

The analysis of collected data demonstrated that, according to Greek consumers, supermarkets don't take very seriously or take quite seriously the climate change and that their local supermarkets are actually somewhat environmentally friendly. Again, the answers of respondents do not seem to be affected either by their age group or by their educational background.

Figure 4.8 - How seriously do supermarkets take climate change?

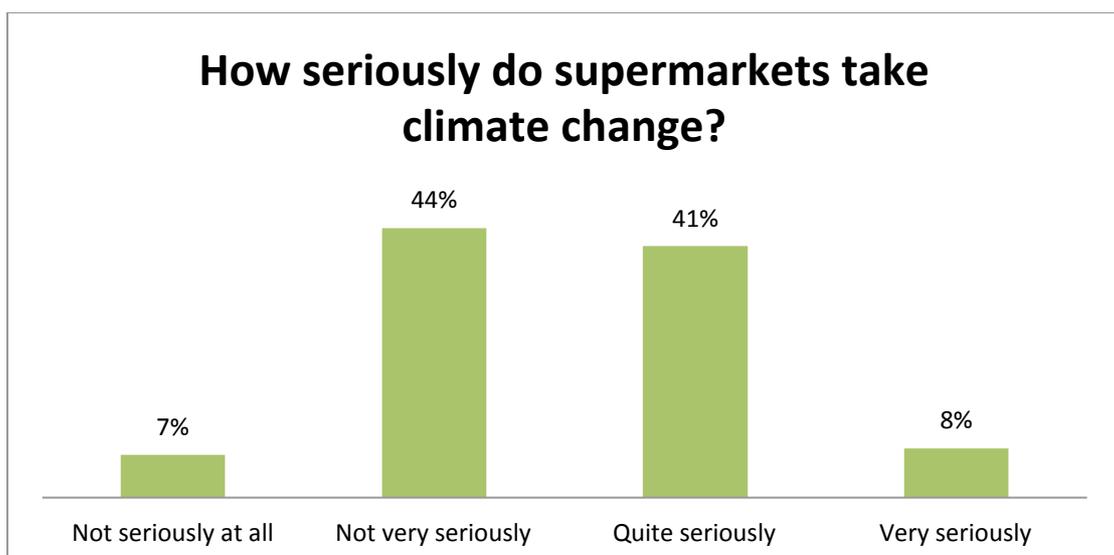
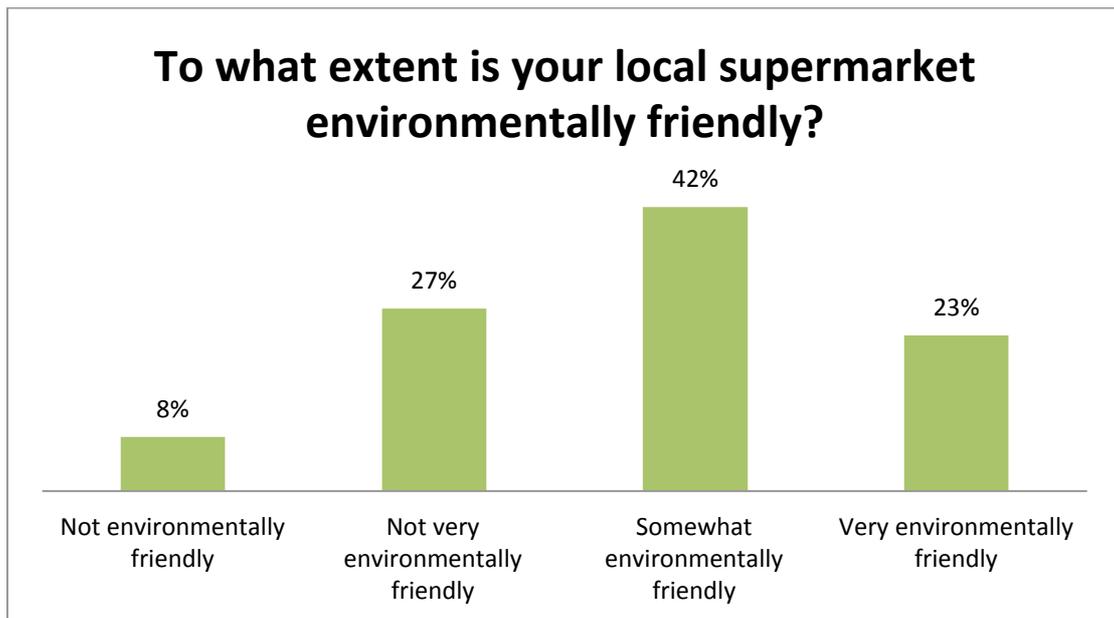


Figure 4.9 - To what extent is your local supermarket environmentally friendly?

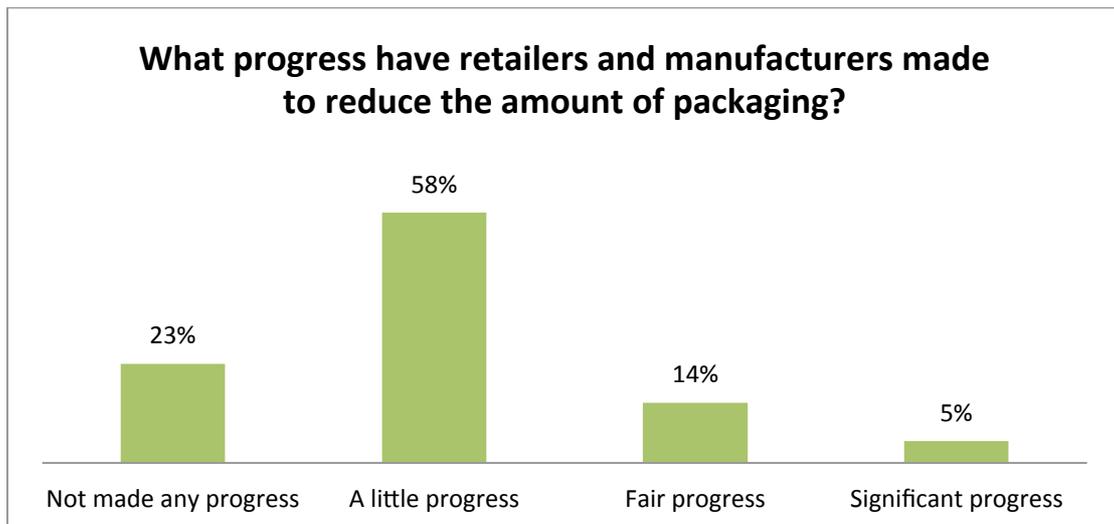


As far as packaging of products is concerned, respondents believe that their local supermarket's way of packaging products is fairly important. However, they think that both food retailers and manufacturers have made just a little progress during the recent years, regarding the reduction of the amount of packaging. Although age or educational background seem not to affect the answers related to supermarkets' way of packaging products, education plays a rather important role when it comes to packaging progress made by retailers and manufacturers, since respondents who cited as fair or significant the packaging progress hold either a PhD or a master's degree.

Figure 4.10 - How do you value your local supermarket's way of packaging products?

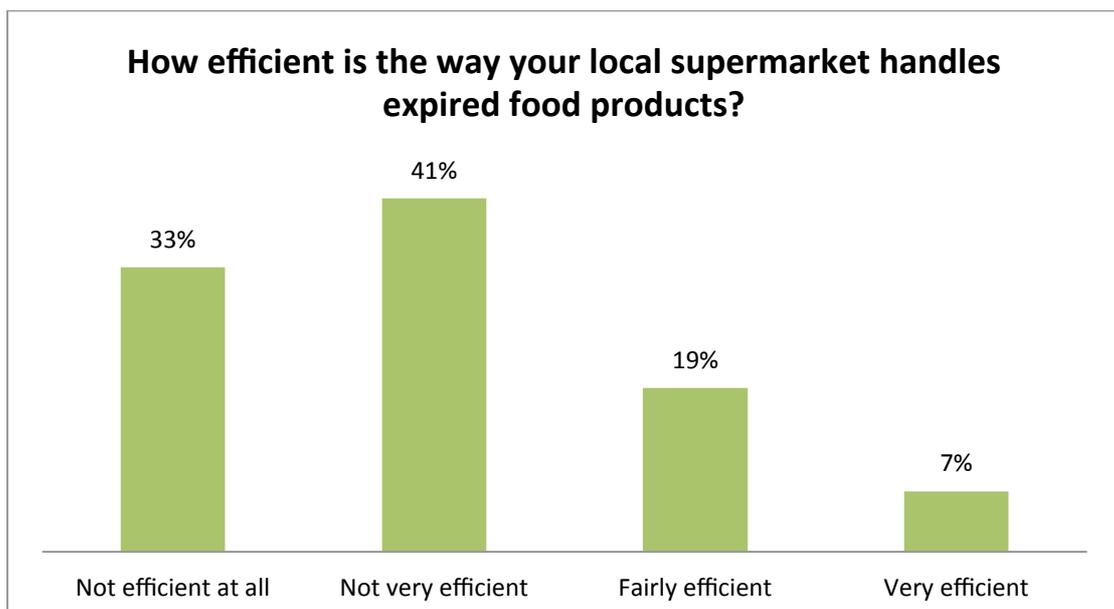


Figure 4.11 - What progress have food retailers and manufacturers made to reduce the amount of packaging?



In the same context, respondents were asked to give their point of view regarding the way expired food products are handled by their local supermarkets. Their answers revealed that their majority considers their local supermarket to handle expire food products in a not very efficient way. In more details, 74% of the respondents think that expired food products are handled in a not very efficient way or in a way, which is not efficient at all, while only 26% of the participants believe that supermarkets adopt fairly efficient or very efficient ways to handle the expired food products. The answers seem not to be affected by respondents' demographic profile.

Figure 4.12 - How efficient is the way your local supermarket handles expired food products?



Overall, consumers think that their supermarkets provide, at a greater extent, much transparent, credible and reliable information and at a lesser extent, very little transparent, credible and reliable information, in relation to their sustainability practices. Nevertheless, they appear hesitant when asked about trusting their local supermarket in relation to sustainability, with their majority stating that they don't trust their supermarket very much.

Figure 4.13 - How much do you trust your local supermarket in relation to sustainability?

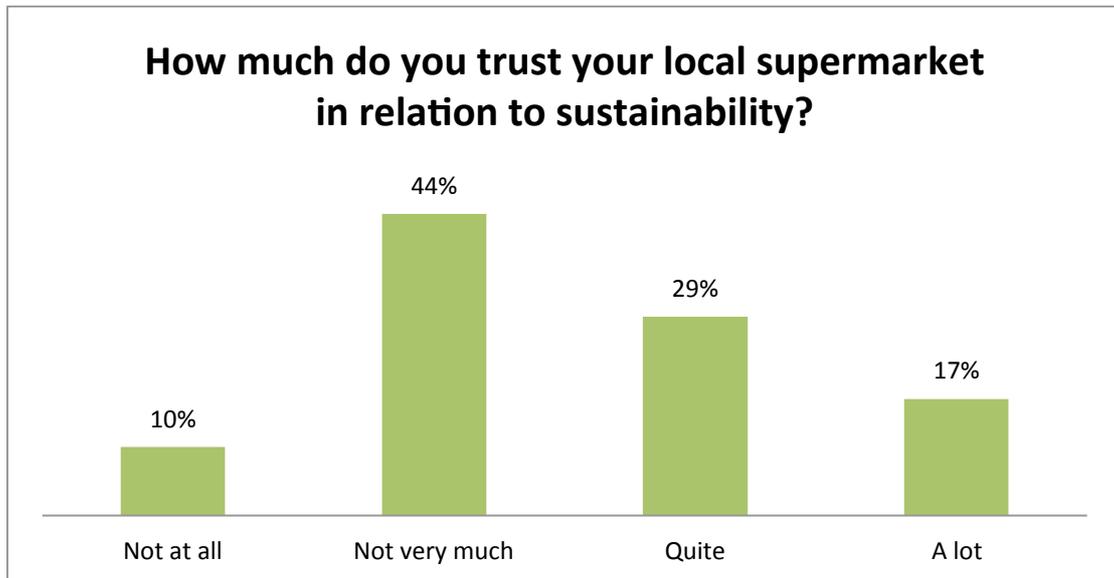
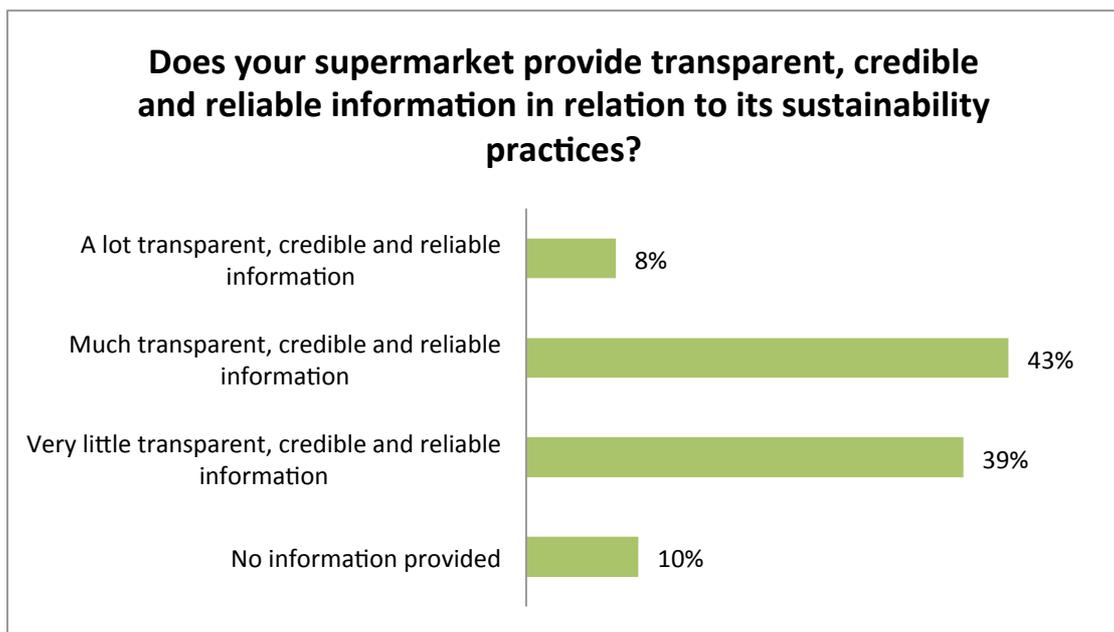


Figure 4.14 - Does your supermarket provide transparent, credible and reliable information in relation to its sustainability practices?



The last group of questions investigated consumers' own attitude towards greener or not practices of their local supermarkets. Questions examined the attention consumers pay to ethical considerations when purchasing products from a supermarket but focused mainly on consumers' willingness to change their purchasing habits in order to reward a "greener" supermarket.

As far as ethical considerations when purchasing products are concerned, younger consumers, whose educational background is higher (bachelor degree or higher) seem to pay more attention to them in comparison to older consumers or to consumers with lower educational background. The first category of consumers states to pay some or a lot of attention to ethical considerations when shopping at a supermarket, whereas the latter pay not very much attention or no attention at all. In general, the majority of all respondents confirms paying some attention when purchasing products from a supermarket.

When it comes to changing their purchasing habits, most participants seem unwilling to do so just because a supermarket emphasized its green credentials in its advertising. More specifically, 64% of the participants answer that maybe they would consider changing their habits. On the other hand, they seem to be ready to reward a supermarket, in case it turns to greener practices. In more details, 76% of respondents answer that they would probably change their supermarket towards another, which is more environmentally friendly. In addition, 65% of them appear to be willing to buy more from their local supermarket, in case it applied more environmentally friendly procedures.

Things change when consumers are asked to pay higher prices at their supermarket if it applies more environmentally friendly procedures. Respondents appear to be more skeptical than in previous questions and report that maybe they would be willing to do so. At this point, it is worth mentioning that the percentage of participants who declare not being willing at all to pay higher prices for more environmentally friendly procedures is remarkably high, as well.

Although, at a small extent, younger consumers or consumers with higher educational background seem to be more ready to change their purchasing habits in favor of more environmentally friendly practices of their supermarket, these demographic characteristics do not appear to affect in a significant way their answers.

The figures that follow present the answers provided by the respondents to the above mentioned questions.

Figure 4.15 - How much attention do you pay to ethical considerations when purchasing products from a supermarket?

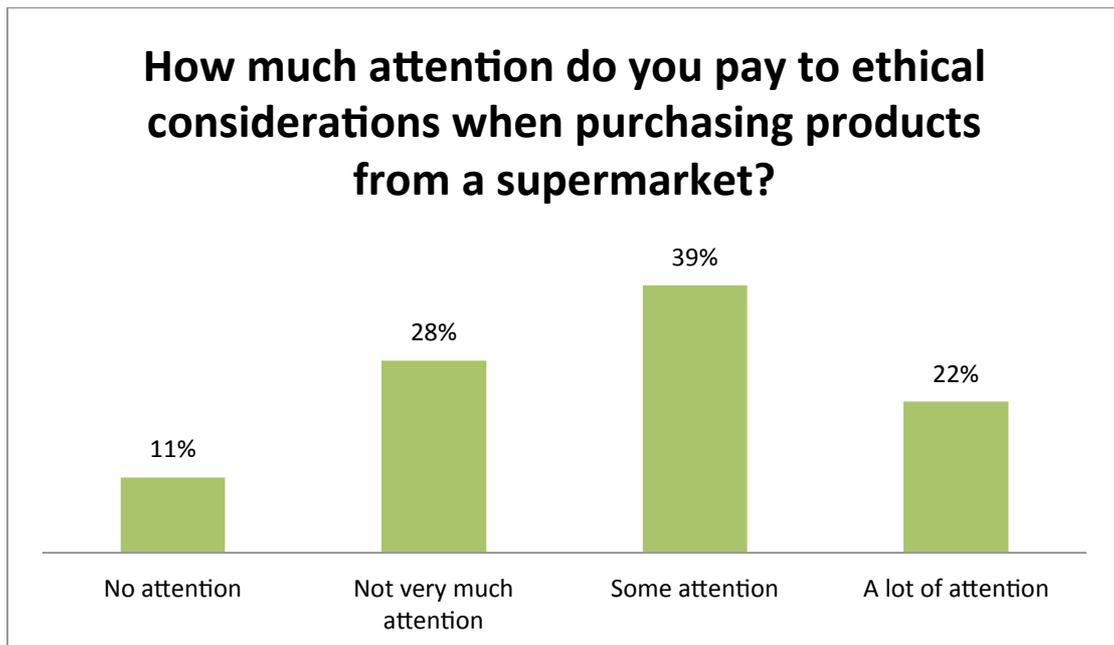


Figure 4.16 - Would you consider changing your purchasing habits if a supermarket emphasized their green credentials in their advertising?

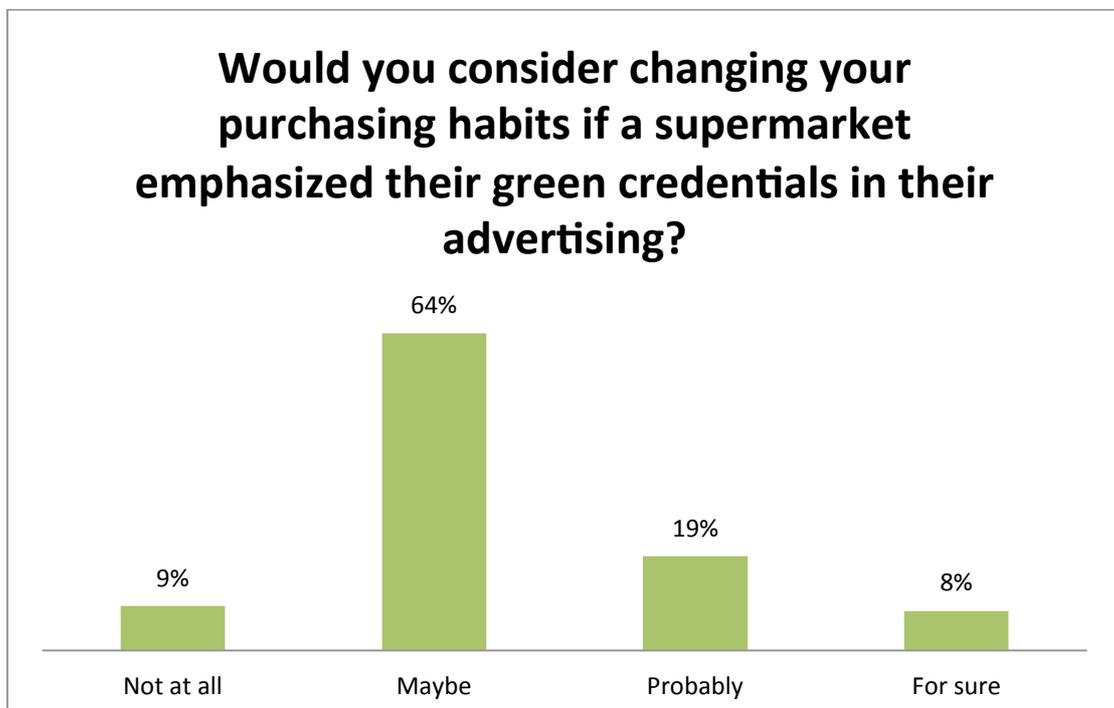


Figure 4.17 - Would you consider changing your supermarket towards another, which is more environmentally friendly?

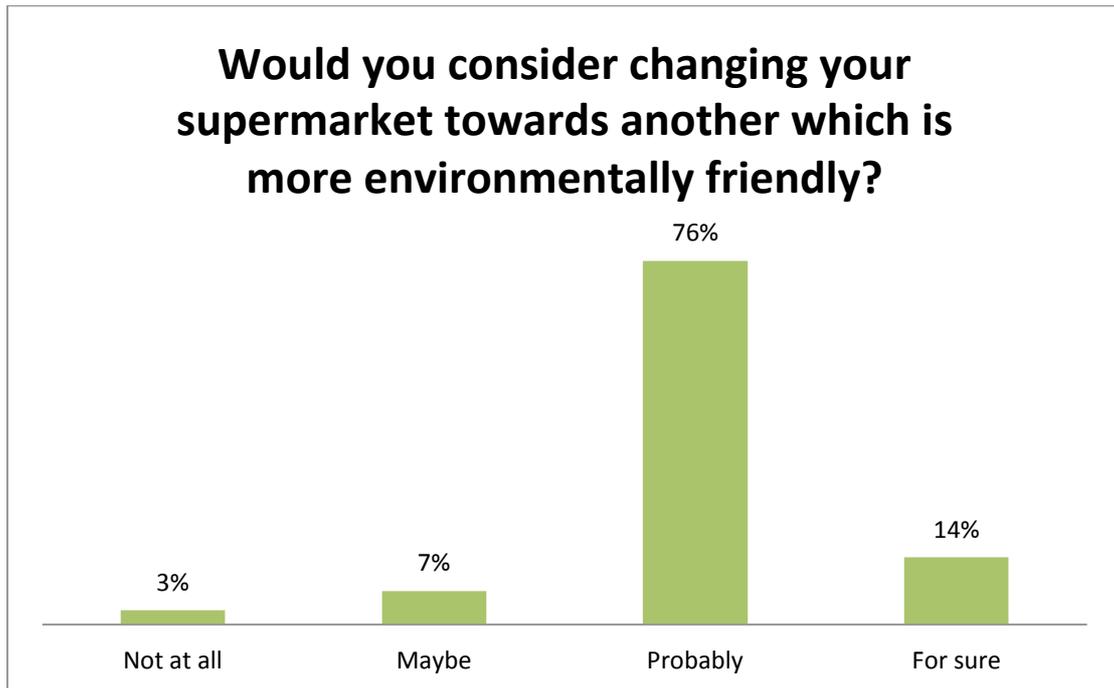
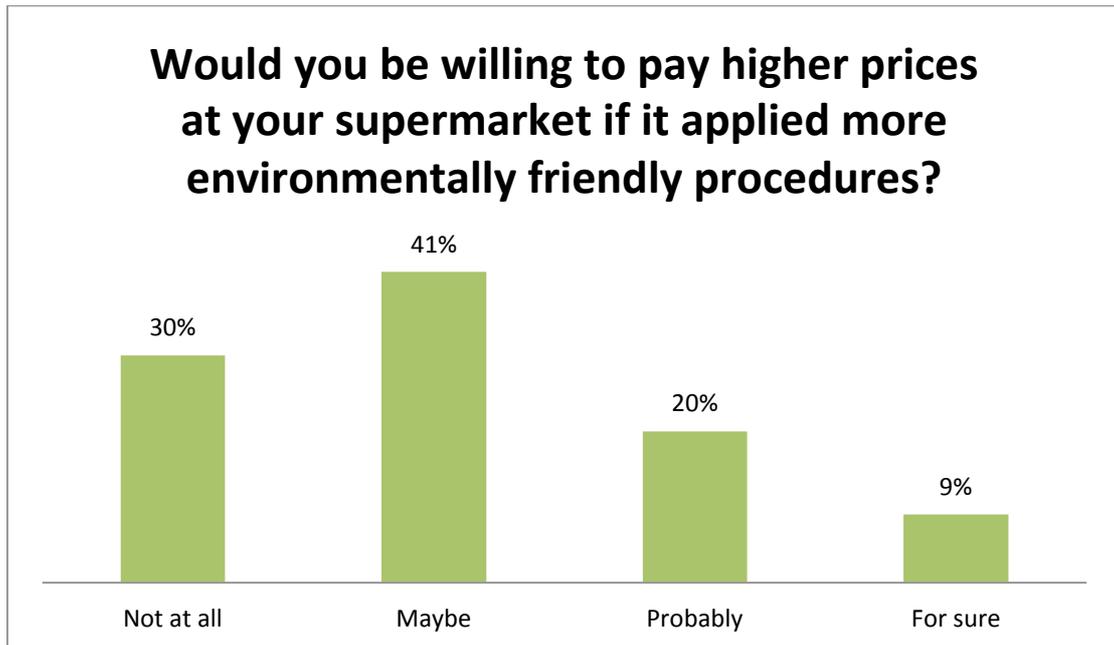


Figure 4.18 - Would you be willing to buy more from your supermarket if it applied more environmentally friendly procedures?



Figure 4.19 - Would you be willing to pay higher prices at your supermarket if it applied more environmentally friendly procedures?



5. CONCLUSIONS

5.1 Summary of Key Findings

The scope of this research was to investigate Greek consumers' perspective regarding the environmental practices applied by supermarkets of the Greek market, mainly in relation to their management of packaging and expired food products. After a brief description of the supermarkets' sector in Greece and a detailed review of the relevant literature, a survey was conducted among Greek consumers. For the purpose of the survey, a questionnaire was structured, using 19 multiple choice questions, based on a four-type Likert scale. In order to ensure that the sample, which consisted of a total of 79 consumers, is representative, the researcher distributed, via an email invitation, the questionnaires to consumers of different age groups and of different educational background. These demographic characteristics affected some of the answers while they had no impact on the rest of them.

The analysis of the participants' answers offered some useful insights, regarding consumers' perspectives about supermarkets' green practices.

More specifically, consumers, no matter their age or educational background, seem to consider the management of both packaging and expired food products as a major environmental problem. As a result of this point of view, the majority of participants consider that it is important for a supermarket to be committed to the environment. This opinion is mostly adopted by younger consumers, while some of the older ones do not, fully or partially, agree with it.

As far as the supermarkets' attitude towards the environment is concerned, consumers think that their local supermarket is rather environmentally friendly, and that it takes somewhat seriously the climate change. In addition, consumers value as fairly important the way their supermarket packages products, although they tend to believe that the progress, made during the last years by manufacturers and retailers in relation to the reduction of the amount of packaging, is just little. Only a few consumers holding a Master's degree or a PhD tend to consider this progress fair or significant.

In the same context, consumers describe as not very efficient the way their supermarket handles the expired food products. At the same time, they think that their supermarket

provides much transparent, credible and reliable information regarding its sustainability practices; nevertheless, they do not trust it very much in relation to these practices.

Finally, most consumers, especially the younger ones or the ones with higher educational background, pay some attention to ethical considerations when purchasing products from a supermarket and are willing to change their purchasing habits in order to reward a «green» supermarket. In more details, although they cannot be easily affected by advertisements emphasizing the green credentials of a supermarket, they confirm being willing to change their local supermarket in favor of a supermarket, which is more environmentally friendly or even to buy more at their local supermarket, if it applies greener practices. However, consumers are not ready to pay higher prices at their local supermarket, in case it applies more environmentally friendly procedures. This last attitude, which does not comply with the generally expressed view of consumers, could be partially due to the economic crisis and the resulting economic restraints, faced by most of the Greek households, during the last years.

5.2 Implications

This section will present both the theoretical and practical implications of the findings of this research.

Firstly, it should be noted that the current research contributes to the enrichment of existing literature, regarding sustainability and waste management. Although, a great number of studies have been conducted, investigating issues, such as the sustainability and CSR practices of retailers' side, there are just a few researches, which investigate the same topic, but from the consumers' side.

Regarding the findings of this research, they seem to be in accordance with the findings of the majority of previous, similar researches. As a result, they can be considered to confirm or further strengthen those findings. In more details, the results of this analysis, which suggest that Greek consumers pay attention to environmental practices and are willing to reward greener procedures of their supermarkets, keep up with the results of Garcia de Leaniz & Rodriquez (2012), who concluded that Spanish consumers support CSR activities, as well as with the results of Vahdati et al. (2015), according to whom, CSR activities have positive and significant impact on consumers' attitude. On the other hand, the study conducted by Alee (2014) appear to be in contrast to the above mentioned ones, as it

suggests that Chilean consumers are unaware of unethical business and they are not willing to pay or to buy more from more environmentally friendly supermarkets. Nevertheless, this difference may be attributed to social or cultural differences, which lead to a different consumer's behavior.

As far as practical implications are concerned, the findings of this research may prove to be quite informative to professionals. More specifically, managers of supermarkets could profit from taking into consideration the results of this study and from altering accordingly their practices or procedures. For example, the analysis of the data suggested that Greek consumers are aware of ethical considerations, when shopping at a supermarket, they are caring about environmental issues and they are willing to change their purchasing habits so as to support green initiatives. Based on the above information, supermarkets could possibly increase their consumers' base and their market share by actions such as:

- ❖ The organization of advertising campaigns focusing on their environmental practices.
- ❖ The organization of informative campaigns, regarding their procedures of managing both packaging and expired food products.
- ❖ The review of their environmental practices, so as to either incorporate such practices in their operations or further strengthen already existing practices of this type.

Consumers appreciate a supermarket's ethical practices and its offer towards the environment, thus a supermarket's adaption to those facts cannot prove but beneficial.

5.3 Limitations

The findings of this research may be in accordance to the results of the majority of relevant researches, nevertheless, there are some limitations, which cannot be neglected.

One of the most important limitations is associated to the quantity of the data. Although the researcher achieved a more than accepted response rate, which was quite higher than 20%, the fully answered questionnaires were just 79 out of the 120 distributed. Although the realization of the research could not be hindered, thanks to the acceptable response rate, there is no doubt that larger quantity of data strengthens more the reliability of the results.

The second limitation of this research refers to the fact that, by the way the questionnaire was structured, it was taken for granted that all participants were familiar with concepts such as sustainability and that they were aware of the environmental practices employed by their local supermarkets. Nevertheless, it cannot be ignored that some of the participants, either due to their age or to their educational background or even just because of lack of interest, are not informed about their supermarkets' procedures, regarding packaging or expired food products or provision of information about their sustainability activity.

Finally, the last limitation is related to the fact that some of the respondents stated not being responsible for doing the shopping of their household. In this case, some of the answers given, such as the one referring to the willingness of the consumer to pay higher prices in order to reward greener practices, may be affected by the lack of this responsibility. In more details, a person who is responsible for doing the household shopping, when doing so, may take into consideration various factors, as for example economic ones, which may not have the same impact on a person, who is not responsible for the household shopping and only visits a supermarket for urgent needs or spontaneous purchases. A thought about this issue would be the use of different weight coefficients for the answers of the persons, who are responsible for the household shopping and for the answers of those, who are not.

5.4 Recommendations for Future Research

In order to assure that the survey can be applied to the whole population and not just to the sample of the current research, which consists of Greek consumers, future research is recommended according to the following points:

- The research can, also, be conducted within consumers of different geographical locations, meaning among consumers of different countries, so as to assure that different purchasing behavior is taken into consideration and to ensure the heterogeneity of the respondents.
- Further demographic characteristics can be gathered, so as to identify more traits that could possibly affect the consumer's behavior and its perception towards greener practices.
- An extensive and more in depth research can be conducted, focusing mainly on either the management of packaging or the management of expired food products by supermarket. A different type of methodology, based on interviews with

supermarkets' employees could provide the reader with more information about the actual practices employed by supermarkets.

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APPENDIX A'

Questionnaire

I kindly request you to fill in the following questionnaire. Your answers will be used for the purposes of my master thesis. It is imperative that all questions are answered.

Part I

1. How often do you visit a supermarket?

- 4-5 times per week
- 2-3 times per week
- 1-2 times per week
- less than 1 time per week

2. How old are you?

- 18-24 years old
- 25-40 years old
- 41-60 years old
- older than 61 years

3. What is your educational background?

- High school or lesser
- Bachelor
- Master
- PhD

4. Are you or another member of your family responsible for doing the shopping of your household?

- Me
- Other member of the family

Part II

5. Do you agree with the view that packaging is a major environmental problem?

- Strongly disagree
- Disagree
- Agree
- Strongly agree

6. Do you agree with the view that expired food products are a major environmental problem?

- Strongly disagree
- Disagree
- Agree
- Strongly agree

- 7. How important do you consider a supermarket's commitment to the environment to be?**
- Not important at all
 - Not very important
 - Fairly important
 - Very important
- 8. How seriously do you think that supermarkets take climate change?**
- Not seriously at all
 - Not very seriously
 - Quite seriously
 - Very seriously
- 9. To what extent do you believe that your local supermarket is an environmentally friendly business?**
- Not environmentally friendly
 - Not very environmentally friendly
 - Somewhat environmentally friendly
 - Very environmentally friendly
- 10. How do you value your local supermarket's way of packaging products to be?**
- Not important at all
 - Not very important
 - Fairly important
 - Very important
- 11. Describe the extent to which you believe that food retailers and manufacturers have made progress in recent years to reduce the amount of packaging?**
- Not made any progress
 - A little progress
 - Fair progress
 - Significant progress
- 12. To what extent do you believe that your local supermarket handles expired food products in an efficient way?**
- Not efficient at all
 - Not very efficient
 - Fairly efficient
 - Very efficient

13. How much do you trust your local supermarket in relation to sustainability?

- Not at all
- Not very much
- Quite
- A lot

14. To what extent do you think that your supermarket provides transparent, credible and reliable information in relation to its sustainability practices?

- No information provided
- Very little transparent, credible and reliable information
- Much transparent, credible and reliable information
- A lot of transparent, credible and reliable information

15. How much attention do you give to ethical considerations when you are purchasing products from a supermarket?

- No attention
- Not very much attention
- Some attention
- A lot of attention

16. Would you consider change your purchasing habits if a supermarket emphasized their green credentials in their advertising?

- Not at all
- Maybe
- Probably
- For sure

17. Would you consider changing your supermarket towards another which is more environmentally friendly?

- Not at all
- Maybe
- Probably
- For sure

18. Would you be willing to buy more from your supermarket if it applied more environmentally friendly procedures?

- Not at all
- Maybe
- Probably
- For sure

19. Would you be willing to pay higher prices at your supermarket if it applied more environmentally friendly procedures?

- Not at all
- Maybe
- Probably
- For sure