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Social Marketing and Food Policy in Greece:

Findings from Research with Undergraduate

Students and Key Stakeholders

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August 2012

THE FOLLOWING FIGURE HAS BEEN REDACTED AT THE REQUEST OF THE UNIVERSITY:

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Declaration

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Abstract

Greece, like many other countries, has experienced great changes in food supply, consumption patterns and health outcomes. Famous for its Mediterranean diet, it has actually undergone a modern nutrition transition, and now has high rates of overweight and obesity and increased incidence of non-communicable, nutrition-related diseases. This study begins with that reality and the current failure of food policy and nutrition-related initiatives to tackle problems. The study explores whether and how social marketing could remedy this policy deficit and contribute to changing Greek food behaviour.

The thesis describes a contextual review of the state of nutritional health, the food system and food policy in Greece and outlines social marketing theory and experience. Two studies were conducted to answer the research questions. The first was a case study conducted on a sample of undergraduate students through nine focus groups with fifty-nine Greek undergraduate students from eight Athenian education institutes to explore the influencers of eating behaviour, the impact of current initiatives and the potential of social marketing. A second study of thirty-two key stakeholders in significant positions in the Greek food system explored through semi-structured interviews the reactions of education institutes, civil society, government and food supply chain representatives to the Greek food situation and the potential of social marketing.

The fieldwork studies found that social marketing was not likely to be a panacea but has potential for Greece. The first study found that eating decisions are complex, based on individual as well as environmental factors. Both studies highlighted policy failings in government, while the second study specified the problematic structure of the public sector and a reluctance to confront existing food culture. Both studies found potential for social marketing to help change Greek food culture but its utility depends on factors beyond the realm of food policy alone. Political will, suitably qualified people and changes in the food system are all necessary.

The thesis concludes that social marketing would be enhanced by an integrated food policy framework and from a broader understanding of behaviour change in general and of the dynamics of eating behaviour in particular. A new model of this integrated approach is proposed. Greek food policy would be enriched by the citizen-centric approach of social marketing but only if the full 5 Ps that will include "Policy" are applied as the policy element is too easily marginalised. The thesis proposes that food policy be integrated around three dimensions of action: food safety and hygiene, nutrition and environment.

List of Acronyms and Abbreviations

BMI: Body Mass Index
CAP: Common Agricultural Policy
CHD: Coronary Heart Diseases
CIA: Central Intelligence Agency
CMD: Common Ministerial Decision
DAFNE: Data Food Networking
DALY: Disability-Adjusted Life Years
DoH: Department of Health
EC: European Council
EFSA: European Food Safety Authority
EU: European Union
EUFIC: European Food Information Council
FAO: Food & Agriculture Organisation
FEK: Issue of Greek Government Gazette
GATT: General Agreement on Tariffs and Trade
GDAs: Guideline Daily Amounts
GDP: Gross Domestic Product
GMO: Genetically Modified Organisms
HBS: Household Budget Survey
IEK: Vocational Training Institutes
IOTF: International Obesity Task Force
MoH: Ministry of Health
MUFA: Monounsaturated Fatty Acids
NCDs: Non-Communicable Diseases
NGO: Non-Governmental Organisation
NSMC: National Social Marketing Centre (UK)
OECD: Organisation for Economic Co-operation & Development
PDO: Protected Designation of Origin
PGI: Protected Geographical Indication
PUFA: Polyunsaturated Fatty Acids
RASFF: Rapid Alert System for Food and Feed

SEVT:	Association of the Greek Food Industry
SFA:	Saturated Fatty Acids
TEI:	Technological Education Institute
TSG:	Traditional Speciality Guaranteed
WHA:	World Health Assembly
WHO:	World Health Organization
WTO:	World Trade Organization

Chapter 1: Introduction

1.1 Purpose of the Study

This research examined the policy related to healthy eating in Greece and the social marketing influence, if any, on food policy in order to enable the Greek population to improve their nutritional habits and adopt healthy eating patterns. So, the purpose of this thesis was to understand the role of social marketing in helping to improve the nutritional habits of Greeks and its relationship (if any) with food policy. Moreover, there was an effort to see in what way social marketing theory and methods could help the development of food policy and vice versa.

So, this study was both retrospective and prospective. Retrospective because it looked backward to see the influence of social marketing on existing food policy and prospective because it examined how social marketing could in the future feed into food policy. It is noteworthy that this study happened at a time of massive disruption and change in the Greek economy and in social structures.

For the purposes of the study and in order to answer the research questions, undergraduate students from education institutes in Athens, the capital of Greece, have been used as a case study. Furthermore, there were in-depth interviews with key stakeholders from the Greek food system.

In this context, this research examines the needs, motives and barriers of the target audience, i.e. Greek undergraduate students, concerning healthy eating habits. It also analyses the strengths and weaknesses of the current food system as well as the opportunities and threats that the Greek food system and policy face now and in the future. Moreover, it discovers the emerging role of the key stakeholders, their relationships and the potentiality for future improvements. Finally, it reveals how food policy in Greece should evolve in order to embrace the efforts for the improvement of the nutritional habits of the Greek population and what should be the role of social marketing in it.

So, the main purpose of this thesis is to answer the five research questions raised in chapters 2-4. The research questions are:

RQ1: How could social marketing contribute to food policy to improve nutritional habits in Greece?

RQ2: Why do Greeks (using undergraduate students as a case study) act as they do concerning their eating habits? How do they perceive healthy eating and which are their motives and barriers in order to adopt healthy eating habits?

RQ3: How can the micro-environment (family, friends, peers) and macro-environment (food industry practices, regulations etc) influence the choices of undergraduate students?

RQ4: What is and should be the role of each sector (State, Food Supply Chain, Civil Society) for the improvement of people's nutritional habits? What are/should be the relationships between the actors of each sector?

RQ5: What kind of initiatives should a future food policy for the improvement of nutritional habits of Greeks include?

1.2 Background of the Thesis

This thesis describes the current situation of nutritional policy and the food system in Greece. Since Greece is one of the countries where the Mediterranean Diet pattern emerged from, it is an interesting case for the study of the nutrition transition.

Globalisation, the development of big supply chains, the expansion of advertising and food companies worldwide, the new eating habits, time constraints, the disregard for cooking skills, the pressing and manipulative advertisements and the new lifestyle patterns are the main reasons that lead to the current situation of adopting unhealthy eating habits.

This nutrition transition leads to worldwide concern about the increase of NCDs and obesity rates, while food chain issues lead to nutritional scandals that have been occurring during the last two decades, such as the Bovine Spongiform Encephalopathy (BSE) in cows, dioxins in poultry, etc. which have also had an impact on Greece due to the imports from the countries where the infected foodstuffs had been detected.

Furthermore, there is great worry about the direct and indirect costs involved in these new patterns. Therefore, many countries are now taking measures in order to reverse this situation and promote healthy eating habits. They include food policies as well as the implementation of regulatory legislation that would eliminate the factors leading to the development of unhealthy eating patterns, such as advertising, lack of knowledge, misleading labelling and food industry interests.

Current initiatives are shown to have no significant impact and this makes the need for changes imperative. Therefore, all the nutritional initiatives taking place in Greece are delineated in order to understand the current situation, the main actors involved and the gaps and opportunities for further improvement. In this context, the use of social marketing for the improvement of nutritional habits has raised a great interest because of its evidence-based effectiveness in some areas.

The model used for this thesis in order to raise the importance of social marketing on nutrition-related issues, is the model of the "three nutritions" (Lang et al., 2009). In this model, the authors talk about a social dimension of nutrition which should not be omitted when trying to develop effective food policies to promote people's health.

1.3 Research Framework

As it was mentioned before, undergraduate students have been used as a case study to examine the influences on their current eating behaviours, the role of social marketing in promoting healthy eating habits and the need for policies to support the individuals. Also, primary data were collected through interviews with key-stakeholders from the direct environment of the undergraduate students i.e. education institutes feeding facilities and from the wider environment of the country, i.e. the Greek food system. The aim of these interviews was to outline the current nutritional and food issues inside education institutes and in Greece in general and discuss the potential of improvements. Hence, the research study was divided into two stages based on the conceptual model of Dahlgren and Whitehead (1991) as it is shown in Figure 1.1.

Figure 1.1: An Overview of the Primary Research Data Framework

Wider Environment in Greece:
State, Civil Society, Food Supply Chain
Based on Lang's (2005a) Triangle Model

Education Institutes Feeding
Facilities

Undergraduate
Students
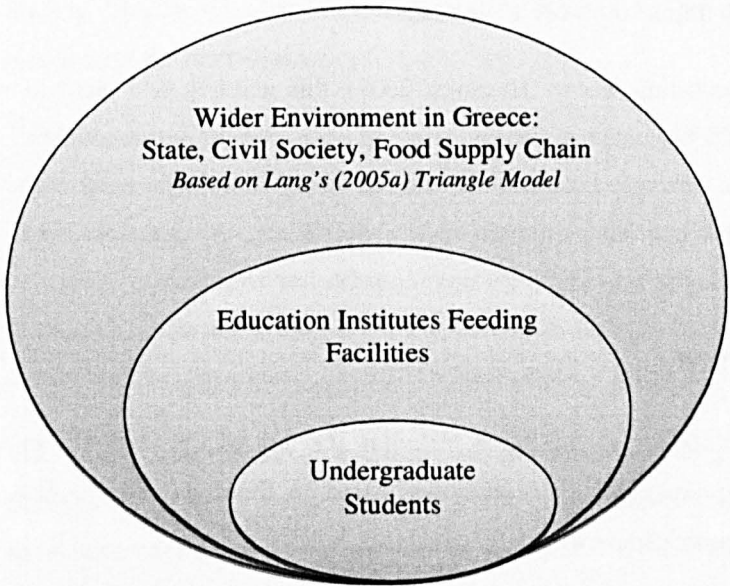
Source: Adapted to this study from Dahlgren and Whitehead, 1991.

The first stage included focus groups with undergraduate students 18-23 years old in order to develop the case study. Undergraduate students were selected from Athenian education institutes as set out in section 5.12.

The second stage included semi-structured interviews and it was divided into interviews with key employees of the education institutes feeding facilities and with key stakeholders of the Greek food system and policy. The selection of the key stakeholders' interviewees for the semi-structured interviews was based on Lang's (2005a) triangle model that suggests the existence of three important sectors inside the food system that could affect food policies, i.e. the State, the Food Supply Chain and the Civil Society. So the participants were from all these sectors.

In each stage, different research questions have been answered. Answers to RQ 2-5 have been sought through the students' focus groups, RQ 3,4,5 through the interviews with the key stakeholders from the education institutes and RQ 1,4,5 through the interviews with the key stakeholders from the wider food system.

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Data collection was based on qualitative methods in order to understand in depth the current situation and the implications for the future.

Based on the social marketing theory (Hastings, 2007), this research is a piece of formative research in order to understand how the current situation in Greece could be improved, what the role of the key stakeholders should be and how social marketing and food policy together can have a major impact. So, it uses the principles and method of social marketing to help shed light on food policy development.

1.4 Thesis Overview

Chapter one is an introduction to the thesis including the aim of the research, an overview of the main arguments that this study was based on, the research questions and an outline of the research framework.

Chapter two outlines the current nutritional problem in Greece and highlights the changes in the demographic, nutritional and epidemiological environment that have led to the current situation. There is also an overview of the Mediterranean Diet, a pattern the adherence to which is related to good health and the nutritional model that was mainly adopted by Greek citizens prior the 1970's. In this context, the evolution of the Greek food system and the main agencies affecting this transition are presented in order to facilitate the analysis of the current food policies in Chapter 4.

The third chapter introduces the theory and principles of social marketing and the theoretical behavioural models used to understand what determines people's behaviour and choices. Moreover, the role of social marketing in nutritional intervention was outlined based on the fact that healthy eating is a complex behaviour that should be approached in a different way from other behaviours like smoking, drug use and physical activity. Also, the link of social marketing to policy, public health and health promotion has been introduced and a critique of social marketing theory has been drawn.

Chapter four is a summary of current Greek food policy. Three dimensions of the Greek food policy have been introduced in this chapter; initiatives towards food safety and hygiene, initiatives for the promotion of the Greek agriculture and nutrition-related programmes developed by agents from the three sectors of the food system as

they have been introduced in Chapter 2, i.e. State, Food Supply Chain and Civil Society. This analysis has been made in order to facilitate the research design and the selection of the interviewees.

The fifth chapter describes the methodology where the decisions for the development and implementation of the research are introduced. In this chapter there is a clear explanation of the reasons that focus groups with undergraduate students and interviews with key stakeholders have been used in order to answer the research questions. Furthermore there are details about the instruments that have been used for data collection, the ethical consent and the processes of data collection and analysis.

The sixth chapter is the first chapter of the research findings. In this chapter the findings of the focus groups are presented in order to cover the following issues that have been raised during the discussions with the fifty-nine undergraduate students: their reported eating behaviour, their sources of information about food and nutritional issues, their views on health and eating habits, their motives and barriers for the adoption of healthy eating habits, the influences on their eating habits, the impact of the external environment on the adoption of healthy eating habits, their views on current initiatives towards healthy eating and on the role of the key sectors (State, Civil Society and Food Supply Chain) concerning nutrition and finally their suggestions for the improvement of the current situation.

Chapter seven is a natural consequence of chapter six. Here, the situation inside the education institutes, from which undergraduate students who participated in the focus groups study originated, is being examined from the side of the personnel that is responsible for catering services for students and staff. The interviewees talked about the role of the key players on the situation inside the education institutes, the strengths and the weaknesses of the current system and they made proposals for future initiatives that could be implemented inside the education institutes in order to help the students adopt healthy eating patterns.

Chapter eight presents the findings from the interviews with key stakeholders from State, Food Supply Chain and Civil Society organisations. These findings show the current and emerging role of the food system actors, the relationships between the key

stakeholders, the strengths and weaknesses of the current system, the role of social marketing in Greece and their proposals for the improvement of the current situation.

In chapter nine the findings of the research are discussed. The literature review, archive and grey literature data are now linked with the reported views of the participants and proposals are made for the future of the Greek food policy. Specifically, the determinants of healthy eating behaviour and the concept of choice are discussed. Suggestions for upstream and downstream social marketing interventions are made and the importance of formative research is raised. Moreover, based on the challenges of the current food system and policy in Greece, proposals are made for soft and hard policies, for the relationships among the key food system actors, for the orientation of the Greek food policy and the relationship with social marketing.

Finally, chapter ten presents the contribution of this research to the current knowledge in general and in the case of Greece specifically. The limitations of the current study and the emerging future opportunities for further research are raised and the thesis concludes with a personal note.

Chapter 2: Food and Nutrition in Greece

2.1 Introduction

In this chapter the Greek nutritional situation in relation to the nutrition transition theory of Popkin (1993) will be examined along with the impact of the new trends on Greeks health and wellbeing.

More specifically, this chapter will address the changes that have been occurring in Greece since the 60's, when the Mediterranean diet was at its zenith and Greece was still considered a developing country (Antonopoulou, 1991), up to the present when fast food and highly processed food products have won the battle against fruits and vegetables in the developed Greek society (Yannakoulia et al., 2003). This will be achieved through a review of the Greek demographical, nutritional and epidemiological environment in order to detect the new eating patterns and their impact on individuals and society.

There will also be an overview of the main factors that led Greece to its nutrition transition, like westernisation, supermarketisation, new activities and new foodstuffs. Furthermore, because the food system of a country influences the available choices of the consumers the main actors of the Greek food system and the relationships among them will be introduced.

Finally, the dimensions of nutrition based on Lang et al. (2009) will be presented in order to guide the introduction to the next chapter. By highlighting the problem of nutrition and understanding its leading factors it would be easier to find solutions and propose actions that could be effective in the Greek reality.

2.2 The Nutrition Transition Theory

According to Popkin (1993), countries worldwide face a marked shift of their diets moving from their traditional eating patterns toward the Western diet that provides excessive consumption of products high in fats, salt and sugar.

From Figure 2.1 which describes the stages of the nutrition transition, it is obvious that the nutrition transition has its roots in the wider socioeconomic changes like

industrialisation, changes in agribusiness, urbanisation, income increase and other issues that they will be highlighted later in this chapter. The nutrition transition model will be used to analyse the Greek nutritional situation in this chapter.

Figure 2.1: Stages of the Nutrition Transition (Patterns 3-5)
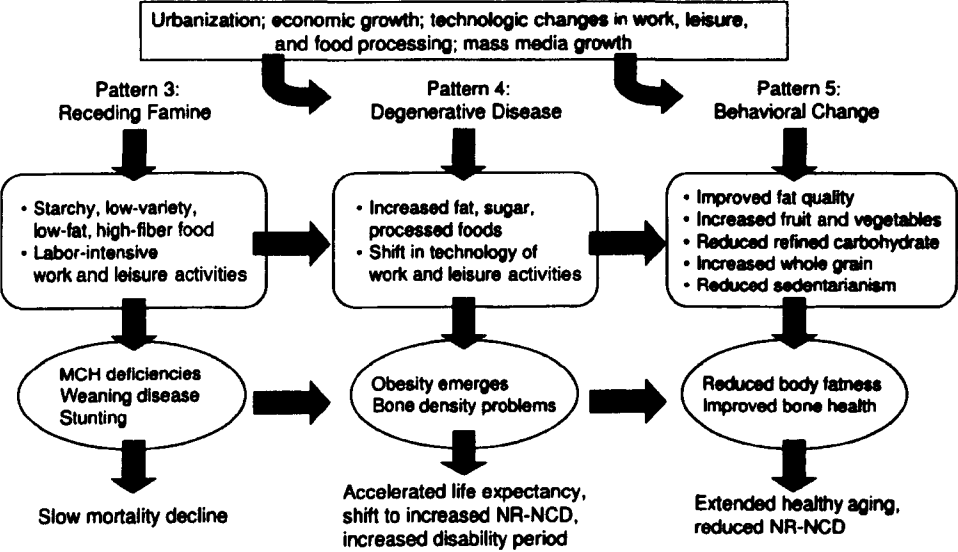
Source: Popkin, 2006

So based on Popkin's model (2006), a nutritional transition should be seen as part of a more general demographic, nutritional and epidemiological transition and therefore, in the following paragraphs there will be an investigation of these three sectors in the case of Greece in order to discover whether there is a specific Greek nutrition transition and if so, to understand its evolution, its current form and in what extend has affected Greek society. Finding the leading factors of the transition would facilitate the suggestion of specific actions in order to develop successful solutions.

2.3 Demographic Transition in Greece

Since 1960's when the country started its development course, many aspects in the demography of Greece have changed (Antonopoulou, 1991). Firstly, the population has an almost steady increase as it is shown in Figure 2.2.

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Figure 2.2: Population in Greece 1960-2007
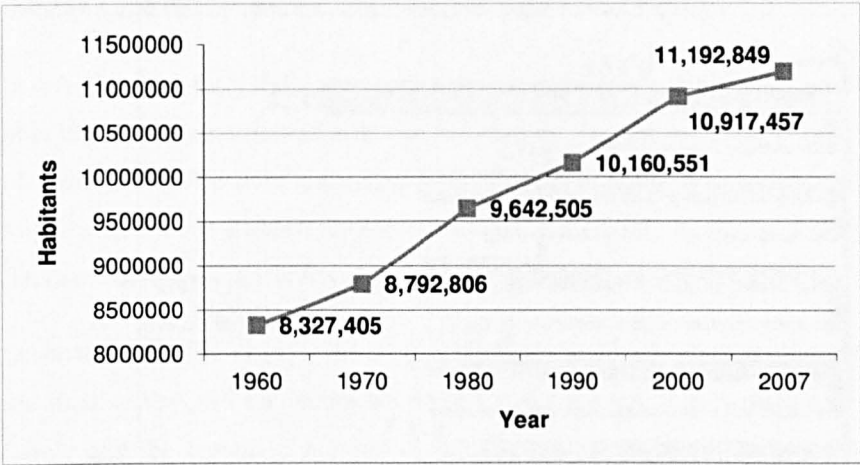
Source: Hellenic Statistical Authority, 2009

During the last decade the population increase has been a steady rate of approximately 0.4% per year, so it is obvious that this increase has also led to a raised demand for food. The urbanisation outbreak (Figure 2.3) after 1955, which reached a maximum peak during the 70's due to the increased rates of development in many sectors, like industry and the services, led the Greek population to accumulate in the big cities, especially Athens and Thessaloniki (Antonopoulou, 1991, Kofos, 2000). Therefore, the agricultural products had to travel from all over the countryside to reach the final consumer who lived in the cities.

Figure 2.3: Urban & Rural Population 1961-2030
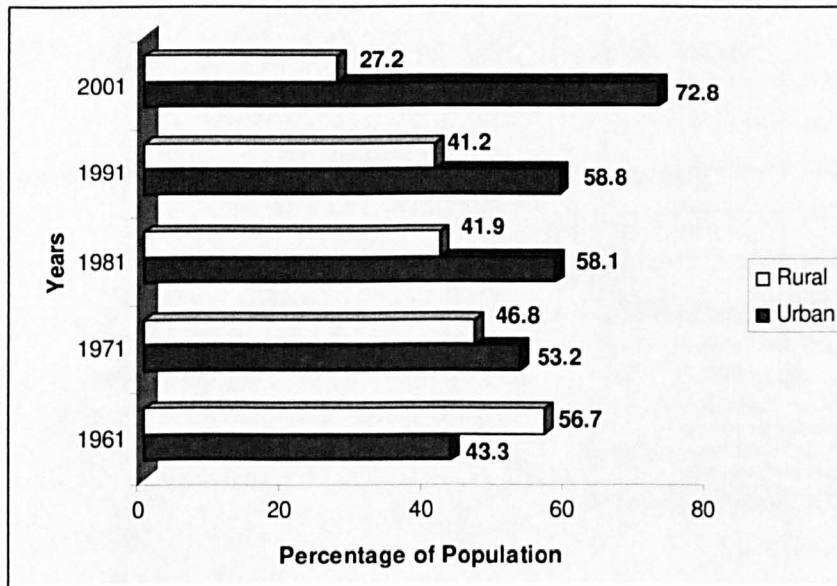
The population has increased due to two factors: the reduction of infant mortality and the increase of life expectancy at birth which from 47.46 years in 1928 rose to 82.65 in 2011 for females and from 44.95 to 77.36 years for males - Greece today holds the 30th place in expectancy at birth worldwide according to the CIA (2011).

At the same time, the age structure of a population affects a nation's key socioeconomic issues. Countries with young populations (high percentage under age 15) need to invest more in schools, while countries with older populations (high percentage of 65 and over) need to invest more in the health sector. The age structure can also be used to help predict potential political issues. For example, the rapid growth of a young adult population unable to find employment can lead to unrest. Older people, probably with some kind of chronic disease or with risk factors for these, will choose to eat different kinds of foodstuffs from the younger population. This brings about changes in the nutritional map of a country (Lang et al., 2009). Furthermore, food policies must be adapted to the needs of the population and act preventively for its health. The problem with the age shift is the dependency ratio,

because people live longer but not always in good health so they use more healthcare resources and this is another very important public health issue.

In Greece, since the 1960's, there has been a steady decrease in births, while the older population is increasing and after the millennium the percentage of people older than 65 years old has become higher than the percentage of children and adolescents. The middle aged have almost remained steady, around 65 % of the total population (Hellenic Statistical Authority, 2009).

Other demographic changes that have affected the Greek lifestyle and consequently the food system and the eating habits of Greeks are the transformation of the Greek family and the increased number of women in the workforce. In the past, food in Greece was directly related to social activities and the family. Before urbanisation, each household had a level of self-sufficiency through the cultivation of the land and the breeding of domestic animals like poultry, cows, sheep and goats. Greek society was a patriarchal society, so women were mainly responsible for the preparation of the food, including production and distribution, and the gathering of the family (Yannakoulia et al., 2003). In 2000, however, 35% of the total workforce was women (Hellenic Statistical Authority Database).

In this context, the Greek family has evolved during the recent decades and in 2008 the mean number of family members was 2.8, when in 1920 it was 4.29 and in 1961 3.78, indicating a reduction of approximately 35 % since 1920 (Hellenic Statistical Authority, 2009). The modern family is being characterised by new structures with fewer members due to a reduction in births and changes in social norms where society accepts and supports non-married mothers and high divorce rates that result in the single parent family structure. Another strong issue of the Greek culture was the role of the family and the value of eating together that strengthened family's bonds. But the changes in family structure, accompanied by the new social norms and the fact that it is harder nowadays to find the grandparents living in the same house as their children and grandchildren, thus passing the tradition of the Mediterranean diet from one generation to the other, have led to the attenuation of family bonds. It is noteworthy that the tradition of eating together as a family is gradually being abandoned and 77% of Greek children never eat with their family (INKA, 2008). At the same time the consumption of home prepared food has decreased due to lack of

time and ready-to-eat meals availability. The study of Papadaki et al. (2007), which showed that students who live away from their home to study tend to consume less home-cooked food and more convenience and fast foods in contrast to their counterparts who live with their family, highlights this trend.

Finally, the increase of the available income for consumption since the 1960s, due to the development of the country, its entrance in the EU and the adoption of specific economic policies, is another leading factor of the demographic transition of the Greek population and consequently of its consuming patterns and habits shift (World Bank, 2011).

2.4 Nutritional Transition in Greece

As Berry (1990) states, *"eating is an agricultural act"*. Hence, in order to understand the nutritional transition of a country, we should firstly investigate the changes in the agricultural sector that includes not only agricultural products' production but imports and exports of agricultural products. Apart from the available quantity, the consumed quantity as well as its nutritional value and the adherence of the population to the national and European recommended patterns should be taken into consideration in order to understand the leading factors of the epidemiological transition. Prior to this analysis there will be an overview of the traditional diet of the Greek Population, i.e. the Mediterranean Diet pattern.

2.5 The Mediterranean Diet - An Overview

2.5.1 The History of the Mediterranean Diet

During the 50s the high longevity and low rates of diet-related diseases, such as CHD, of people living in the Mediterranean basin had raised great interest (Willett, 2006). In an effort to investigate the nutritional habits of these people and their relation to healthy living, a study was conducted in 1960 called the Seven Countries Study (Contaldo et al., 2003). In this study, the term Mediterranean Diet was firstly used by Ancel Keys (Keys et al., 1986, Kromhout et al., 1989), in order to describe the diets followed in the Mediterranean countries in the late 1950s and early 1960s (Trichopoulou and Lagiou, 1997). Due to the fact that among all the Mediterranean countries, the highest longevity appeared in the Greek island of Crete (Simopoulos,

2001) emphasis was given to the dietary habits of its habitants, which also were the traditional diet habits of southern Greece of that time (Yannakoulia et al., 2003).

It is remarkable that the eighteen (18) Mediterranean countries, i.e. Spain, Southern France, Italy, Malta, Croatia, Bosnia, Albania, Greece, Cyprus, Turkey, Syria, Lebanon, Egypt, Libya, Malta, Tunisia, Algeria and Morocco have very different diets due to differences in culture, geographical position, climate, ethnicity, religion, and socioeconomic factors. For the same reasons, differences in the dietary habits can be found within the regions of a country (Helsing, 1995, Noah and Truswell, 2001, Simopoulos, 2001, Contaldo et al., 2003). For example, the nutritional habits of the population in Crete are different from these of Corfu, despite the fact that both are Greek islands (Kromhout et al., 1989)

What Ancel Keys really meant by using the term Mediterranean Diet was *"...a healthy isoenergetic diet, with a large variety of foods, mostly of vegetable origin rather than animal..."* (Contaldo et al., 2003). It was not a common diet pattern of the Mediterranean population but a pattern of healthy nutrition (Simopoulos, 1995, Karamanos et al., 2002), which was accompanied by an active lifestyle because people were working in the land (Willett, 2006).

2.5.2 Mediterranean Diet-The Modern Approach

The Mediterranean diet's portrayal has the shape of a pyramid where foods are being allocated from its base to the top according to declining frequency of consumption as shown in Figure 2.4 (Willett et al., 1995).

Figure 2.4: The Mediterranean Diet

MEDITERRANEAN DIET

Red meat
MONTHLY — 4 servings

WEEKLY — 3 servings → Sweets
3 servings → Eggs

3 servings → Potatoes
3–4 servings → Olives, pulses, nuts

Poultry
4 servings

Fish
5–6 servings

DAILY — Dairy products
Physical activity — 2 servings

Olive oil
as the main added lipid — Wine in moderation

Fruits
3 servings — Vegetables (including wild greens) 6 servings

Non-refined cereals and products
(whole grain bread, whole grain pasta, brown rice, etc.)
8 servings

One serving equals approximately one half of the portions
as defined in the Greek market regulations

Also remember to:
● drink plenty of water
● avoid salt and replace it with herbs (e.g. oregano, basil, thyme, etc.)

Source: Ministry of Health and Welfare-Supreme Scientific Health Council, 1999

According to Willett et al. (1995), who had proposed the pyramid model, the Mediterranean diet includes *"...daily consumption of non-refined cereals and products (8 servings/day), vegetables (up to 6 servings/day), fruits (at least 3 servings/day), olive oil (in daily cooking as the main added lipid) and non-fat or low fat dairy products (1–2 servings/day). Weekly consumption of potatoes (3 servings/week), fish (5-6 servings/week), olives, beans, pulses and nuts (4 servings/week) and more rare poultry (3-4 servings/week), eggs and sweets (1–3 servings/week) and monthly consumption of red meat and meat products (4–5 servings/month). Finally, moderate consumption of wine (1–2 wineglasses/day), which usually accompanies meals."*

Important features of the Mediterranean diet, which are not shown in the pyramid model, are the high ratio of mono-saturated to saturated fat (Trichopoulou et al., 1995), the consumption of complex carbohydrates and fibre (Kouris-Blazos et al., 1999) and the fresh fruits as daily desserts (Willett et al., 1995, Kafatos et al., 2000). Furthermore, the consumption of herbs and wild plants rich in antioxidant flavonoids, and omega-3 fatty acids (Willett et al., 1995, Simopoulos, 2001) and walnuts, snails and figs rich in n-3 fatty acids (Manios et al., 2006) is very common.

Finally, other influences on the Mediterranean pattern to be taken into account include the fact that Greek diet was influenced by the fasting rituals followed by the Greek Orthodox population overall 180 days annually, during which meat and dairy products should not be consumed (Yannakoulia et al., 2003, Sarri and Kafatos, 2005) and that Greece was an underdeveloped country based on agriculture, characterised by shortage of meat products and under-nutrition (Yannakoulia et al., 2003). Finally, the principles of the Mediterranean diet are moderation, variety, proportionality and energy intake equal to energy expenditure (Simopoulos, 1995, Alberti et al., 2009)

2.5.3 The Value of the Mediterranean Diet

A large number of studies have revealed the value of the Mediterranean diet to a healthy way of life. Specifically, adherence to it has been correlated to the reduction of risk factors for chronic disease, such as CHD (Renaud et al., 1995, Menotti et al., 1999, Fidanza et al., 2004, Knoops et al., 2004, Manios et al., 2006), diabetes, obesity (Panagiotakos et al., 2006), hypercholesterolemia, hypertension (Panagiotakos et al., 2007a) and arthritis (Simopoulos, 2001). Moreover, it is inversely correlated to the overall cancer incidence (Keys et al., 1986, Knoops et al., 2004, Gonzalez and Riboli, 2006, Benetou et al., 2008a) and blood pressure (Keys et al., 1986, Psaltopoulou et al., 2004) that leads to lower rates of cardiovascular mortality and morbidity (Helsing and Trichopoulou, 1989, Kafatos et al., 1991, Osler and Schroll, 1997). It is also strongly associated with overall survival and longevity (Trichopoulou et al., 1995, Trichopoulou et al., 2005, Bamia et al., 2007) and helps the avoidance of inflammation and coagulation (Chrysohoou et al., 2004). Furthermore, the same positive results between nutritional habits close to the Mediterranean pattern and longevity have been found in studies conducted with elderly people (Wahlqvist et al., 2005, Panagiotakos et al., 2007b, Benetou et al., 2008b). Finally, according to the

ATTICA study (Panagiotakos et al., 2007c) people who were following a Mediterranean diet pattern had improved quality of life. This could lead to the reduction of hospitalisation costs and productivity lost due to disability, which as a result will improve the economic indexes of a country.

Since the Mediterranean diet has beneficial results in people's health, guidelines have been developed to estimate the adherence of a diet to the Mediterranean diet pattern (Bach et al., 2006). WHO guidelines, that Greece follows, were developed under the belief that diet must follow human evolution and lifestyle changes (Simopoulos, 2001).

2.6 Agriculture

According to Hawkes et al. (2007), agriculture plays an important and multifaceted role in nutrition and consequently in health, therefore agricultural changes lead to nutritional and epidemiological changes.

Until the late 20th century, agriculture prevailed in Greece. *"In the 1800s, about 90% of the active Greek population was peasants, primarily small-scale farmers and peasant labourers and by the 1930s this percentage had dropped to 60%"* (Yannakoulia et al., 2003). The farmers grew crops mainly for self-consumption and sometimes for sale and these mostly included *"grains, legumes, wine and vegetables, and sometimes olive oil"* (Yannakoulia et al., 2003).

Nowadays, the main agricultural products produced in Greece, starting with the most important, are: wheat, corn, barley, sugar beets, olives, tomatoes, wine, tobacco, potatoes, beef and dairy products (Hellenic Ministry of Rural Development & Food, 2010). The agricultural sector in 2009 contributed 4% of the GDP, while the mean contribution in the EU is 1.6% (Tsakanikas and Ventouris, 2011).

The shift of the workforce from the agricultural sector is a phenomenon starting with urbanisation. The following Figure (2.5) shows data from 1998 and the primary sector workforce refers to people occupied with agriculture, cattle-raising, fishery and forestry. In 1981 the workforce in agriculture was 28% of the total and in 2008 it was only 11.3%. So, during the last decades the agriculture workforce has been reduced and there is an increase in the tertiary sector's occupations. It is very important to note

the fact that in 2007 almost 32% of the agricultural workforce was over 55 years old. Workforce reduction along with the high percentage of elder workers has affected agricultural production.

Figure 2.5: Workforce per Production Sector 1998-2008
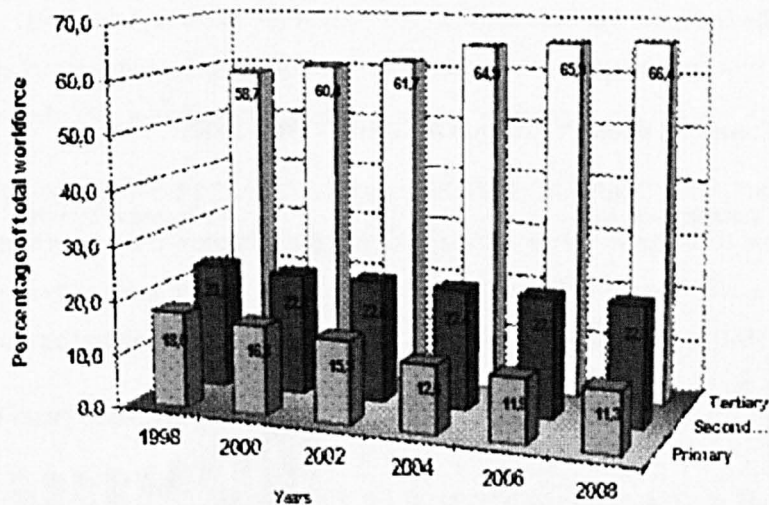
Source: Hellenic Statistical Authority, 2009

Agricultural production has changed through the decades also due to the development of new forms of production, like organic agriculture and aquaculture, and due to the technological advances which have increased the use of better agricultural machinery and more effective fertilisers and pesticides. The evolution of agricultural machinery in quality and quantity gave a boost to agricultural production and in some degree has led to the reduction of agricultural workforce. From 1961 to 2000, tractors have increased approximately 1,000% while milking machines and harvesters 260% and 160% respectively (FAOStat, 2010a).

2.7 Food Availability

Changes in agribusiness sector have led to increase of food availability as well as to the shift of the kind of products produced and imported. Agricultural land in 1961 was almost 9 million hectares while in 2005 it was 8.3 million hectares (FAOStat, 2010b).

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According to the Food and Agriculture Organization of the United Nations, concerning the agricultural production, since 1950-1960, when the Mediterranean diet was still predominant in the Greek population, a lot of changes in the Greek agriculture system have occurred. Many main components of this diet that were cultivated during those days have been reduced and others have taken their place or have been added to the food chain, contributing to the Greek nutrition transition. This trend is obvious in Figure 2.6

Figure 2.6: Trends on Food Production in Greece (1961-2008)

Source: FAOSTAT website, http://faostat.fao.org/site/339/default.aspx, accessed 19 May 2011.

Based on the statistic indexes of FAO, since 1965, there has been an increase of agricultural production in general. The important information is that along with the so called 'healthy' food categories (like cereals, vegetables and fruits), all the 'unhealthy' food categories have increased, i.e. alcoholic beverages, oilcrops, starchy roots, sugar, sweeteners and meat. At the same time, pulses production, which was a main component of the Mediterranean Diet, has decreased.

It is noteworthy to highlight that during the last decades, imports of foodstuffs have increased due to globalisation, lifting trade barriers, advances in technology and economic reasons. In this context, Greece imports fruits from the U.S.A., Ecuador,

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Spain, France, Czech Republic , Moldavia, Ukraine and Bulgaria, vegetables from Canada, France, the Netherlands, Turkey, Germany, Italy, Belgium and Cyprus meat products from Germany, Austria, France, Italy, the Netherlands and Belgium, grains from France, Germany, Italy, Hungary, Cyprus, Kazakhstan, Russia, Bulgaria, Serbia and India, potatoes from Egypt and France, cheese and milk from Bulgaria Italy, Germany, Spain and the Netherlands, and soybeans from Brazil, Argentina and the U.S.A (Hellenic Statistical Authority, 2011). Therefore, the Greek food culture has changed as the internal conditions of agribusiness have changed and new trends were developed along with food from other countries worldwide.

Finally, as the Western influence becomes more and more acute, new kinds of foodstuff made their appearance in the Greek market. Processed foods were followed by the development and distribution of 'light' foodstuffs in the 1990s, while the new trend of the last decade is the functional foods[1] (Yannakoulia et al., 2003).

2.8 Food Consumption

Available food quantity is not the same as consumed food quantity, despite the fact that the first affects the latter. In the previous paragraph the availability of agricultural products and the traditional Greek diet was set out; therefore, this section will set out the evolution of consumption trends based on the previous analysis of the Mediterranean Pattern. In this section the average daily consumption of the main food categories, the eating-out-of home habits and the ready-to-eat meals consumption will be discussed.

For the daily quantity intake of foodstuffs, the data were taken from the DAFNE (Data Food Networking) programme (Dafne Software). These data were based on the HBS which takes place every 5 years with representative samples of approximately 6,000 people from all over Greece.

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[1] *"A food can be regarded as functional if it is satisfactorily demonstrated to affect beneficially one or more target functions in the body, beyond adequate nutritional effects, in a way that is relevant to either improved stage of health and well-being and/or reduction of risk of disease. A functional food must remain food and it must demonstrate its effects in amounts that can normally be expected to be consumed in the diet: it is not a pill or a capsule, but part of the normal food pattern."* (Diplock et al., 1999)

According to this data, daily fresh fruit consumption has decreased by 69gr/d but still remains high to 263gr/d, while daily fresh vegetable consumption has increased by 4gr/d. Potatoes and pulses consumption has decreased by 34gr/d and 3gr/d correspondingly. Cereals consumption has remained steady and not very high, i.e. 19gr/d, while rice consumption has been replaced by pasta which has become more fashionable. Bread consumption has fallen by 30gr/d and bakery products, such as pies and pastries, that were not widespread before the 90s, have rapidly increased by 2004 by 21gr/d as nowadays they are available in many places, like bakeries and supermarkets and in a wider variety.

Meat consumption has started decreasing in the last decade probably due to the alerts of physicians and scientists about the potential problems that high consumption can cause to our health. On the other hand, an increase of poultry consumption (11gr/d) with a parallel decrease of red meat consumption (11gr/d) has been observed. Fish and sea food consumption has increased by 10gr/d probably due to the effort to find healthier substitutes for meat in the context of a healthier diet. Dairy products have become more widespread and they are available in a wider variety of forms like low-fat, light products with fruits or honey, fortified (added calcium and vitamins), etc., so they can satisfy more tastes and diet patterns. They have increased by 20gr/d.

Consumption of alcoholic beverages has increased by 21gr/d and this can have both positive and negative consequences. Positive effects spring from the fact that the main alcoholic beverage consumed is wine (29gr/d) that in small quantities and in combination with other factors shows to be preventive of CHD, by reducing the probability of a heart attack (Lippi et al., 2010). On the other hand, a study of Klimis-Zacas et al. (2007) has revealed that alcoholic drink consumption in Greece is still low with regard to other European countries, but it has started rising among children and adolescents as a new trend influenced by westernisation. Worrying is also the high consumption (66gr/d) of soft drinks, like Coca-Cola, Pepsi Cola and other sparkling and sweet drinks full of sugar, colour and preservatives, without nutritional value. Juices have also increased by 35gr/d since 1987 probably due to an effort from people who have lack of time to substitute fruits and vegetables.

Concerning sugar, nowadays it is being used in pastry making and added to coffee and tea. According to a DAFNE Study, its consumption has been reduced probably due to

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its substitution by sweeteners that provide low calories, in the context of healthier eating patterns. Still sugar and sugar products daily intake is high (34gr/d) relative to the Mediterranean diet where sweets, sugar and sugar products should be consumed in low quantities 1-2 times per week and not daily, otherwise they can lead to overweight and obesity as well as to diabetes.

Moreover, according to Hellenic Statistical Authority (2006) data, based on household expenditure, from 1974 up to 2005, the consumption of the following products has changed as it is shown in Table 2.1.

Table 2.1: Consumption of Specific Foodstuffs (HBS 1974 & 2004/5)

Product	Increase (%)	Product	Decrease (%)
Yogurt	92,2	Eggs	53,3
Meat	58,8	Bread	37,2
Cheese	44,2	Sugar	35,9
Milk	40,1	Pulses	16,7
Fish	26,6	Fruits	12,0
Pasta	26,0	Rice	11,5
Olive oil	20,9	Potatoes	0,8

Source: Hellenic Statistical Authority, 2006

While in 1981 fresh fruit, milk, bread, potatoes and meat constituted the highest proportion intake by Greeks; in 2004 the pattern changed. Data from both sources (DAFNE and the Hellenic Statistical Authority) lead to the conclusion that foodstuffs high in fats and sugar tend to be consumed in higher quantities leading to many health problems and increase in obesity rates. The positive outcome is that despite the fact that fruit and vegetable consumption has declined it is still high, probably because of Greek traditional habits and the strong family bonds that help these traditions pass from one generation to the next. Noteworthy is also the high consumption of olive oil instead of animal oils and fats (Simopoulos, 1995).

Concerning the consumption of the so called 'unhealthy' foodstuffs, they have increased during the 80's while they have fallen after 1998. This trend probably shows that nutrition transition was still developing in Greece around the 80's, when the influence of the western lifestyle was really high and there was still little knowledge of the nutritional hazards. Also, food scandals during the last two decades may have led to this result (To Vima 2008a, To Vima 2008b).

Furthermore, concerning the eating –out-of home habits of Greeks, a national study that took place in 2006 by the Aristidis Daskalopoulos Foundation, among 1,300 people older than 15 years old (Table 2.2), has revealed that almost 40% of the population eat out of home, in fast food stores or order from a delivery store at least once per month.

Table 2.2: Eating-out-of-home Habits of Greeks

How often do you eat in fast-food stores?		
1-2times/week or more often	up to one time per month	rare or never
15,6%	26,4%	57,8%
How often do you order food from outside?		
1-2times/week or more often	up to one time per month	rare or never
11,9%	26%	61,9%

Source: Aristidis Daskalopoulos Foundation, 2006

It is noteworthy, that from this study, as well as from the study by Hassapidou et al. (1997), children eat 'unhealthy' foods frequently and they have adopted this habit in their daily life. So, popular foods among children have shifted to those that are more energy-dense including fast foods, cereals, bakery products, chips and soft drinks (Hassapidou et al., 2006). Furthermore, the transition to more westernised diets is more obvious to the Greek students after enrolment according to the study of Papadaki et al. (2007). At the same time, there is a trend to adopt specific diets (low calories, vegetarian, etc.) in order to follow the perfect slim patterns (Polivy and Herman, 2002). These contradictious eating attitudes have been observed in Greece as well.

Studies in Greece (Simos, 1996, Morogiannis, 2000, Yannakoulia et al., 2004) have revealed that approximately 25% of girls and 7% of boys suffer from disordered eating behaviours and these percentages are among the highest in the European countries (Yannakoulia et al., 2003). According to the study of Yannakoulia et al. (2004), a high percentage of Greek students (around 15%) and especially girls had reported that they were on diet. These results place Greece among the top countries worldwide along with Israel, U.S. and the Czech Republic. Moreover, from 1993 up to 2000 the consumption of ready-to-eat food has increased by 248% in Greece (INKA, 2008).

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All these issues contribute to the nutrition transition, typically marked by a shift away from diets rich in staple complex carbohydrate foods (grains, potatoes), fruit, vegetables and fish toward diets rich in refined carbohydrates, animal fats and vegetable oils, pre-processed and fast foods, confectionary and sweet beverages and is thereby likely to contribute to an increased risk of obesity in the population (Popkin, 2006). These new dietary habits have been developed as a sequence of the adoption of the western culture where people prefer snacks, confectionary and fast food (Shepherd and Dennison, 1996) while at the same time vegetable and fruit consumption is decreasing (WHO, 2003). At the same time, these trends can occur as a result of the nutritional transition creating a vicious circle between reasons and results of the nutrition transition (WHO, 2003).

2.9 Does the Modern Greek Diet Meet the Recommendations?

In this shifting environment where people are trying to find a balance between health and abundance, studies reveal that despite the variety of food choices and the ability of most of the people to have food access, the dietary habits of the Greek population in many cases do not meet the national and European recommendations.

Based on the studies that have been conducted in Greece, there has been an effort to see whether the food intake of Greeks meets the recommendations of the modified Mediterranean diet as they have been set by the Ministry of Health and Welfare of Greece (1999). These recommendations suggest a total energy intake that derives 10-15% from proteins, around 50% from carbohydrates, less than 30% from lipids and less than 10% from SFA. The daily fibre consumption should be more than 25gr.

According to the studies of Kromhout et al. (1989) and Kafatos et al. (1997), during the 60s the diet followed by the habitants of Crete and Corfu was close to the traditional Mediterranean diet pattern. It is obvious, though, from later studies like EPIC (Benetou et al., 2008a, Benetou et al., 2008b), ATTICA (Arvaniti et al., 2006) and DAFNE (Lagiou et al., 2001), that nutritional patterns were changing through the decades and nowadays, the Greeks consume more than the recommended values of the 'unhealthy' products like red meat, dairy and sweets and less fruits and vegetables, fish and cereals. Worrying is also the high consumption of soft drinks which, according to the recommended intakes should be consumed in moderation. Finally,

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The available daily energy intake measured in kcal has increased in the last decades for people in Greece (WHO/Europe, 2011). More specifically, concerning adults (Moschandreas and Kafatos, 1999, Hatzis et al., 2006, Arvaniti et al., 2006, Naska et al., 2007, Vardavas et al., 2008), the energy intake is within the recommended values but the problem is that the energy expenditure is becoming lower during the last decades and therefore there is high prevalence of overweight and obesity. The high animal protein intake, the existence of trans-fatty acid, along with the low intake of n-3 and n-6 fatty acids and the high cholesterol consumption are important risk factors for cancer and heart diseases (Alberti et al., 2009, Simopoulos, 2001). On the other hand, lower than the recommended fibre consumption can increase the risk of colon and stomach cancer (Committee on Medical Aspects of Food Policy Working Group on Diet and Cancer, 1998). Nevertheless, it is very encouraging that, according to a recent study of Roodenburg et al. (2011), Greece has minimal intakes of trans fatty acids which can cause many health problems.

Concerning children, they have proper intake of energy and protein (especially toddlers and pre-schoolers have high protein intake), have safe intake of PUFA, vitamin E and C, calcium, Fe, folic acid and magnesium, high intake of MUFA, SFA, cholesterol, vitamin A, B_1, B_2 and B_3 and under intake of carbohydrates and vitamin D (Roma-Giannikou et al., 1997, Manios et al., 2008).

On the other hand, adolescents have the poorest adherence to the recommendations, probably because they are the most affected by the new nutritional trends. Specifically, although there is a sufficient energy and protein intake that does not exceed the limits, there is high intake of total lipids and cholesterol and the MUFA/SFA ratio is low. The carbohydrate and fibre intake is also low while there is a remarkable alcohol intake (Hassapidou et al., 2006). Vitamins, calcium and Fe consumption is within the recommendations but there is insufficient intake of zinc, copper, manganese, magnesium and folic acid (Klimis-Zacas et al., 2007)

According to studies in Greek children, adolescents and adults the fibre intake is lower than the recommended values while fat intake exceeds them. Proteins and sugar are being consumed within the recommendations; while daily energy intake from carbohydrates is a little lower than the recommended values (Karamanos et al., 2002, Arvaniti et al., 2006, Lesser et al., 2008).

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other studies have shown that the traditional Greek diet is more prominent today among the older generations (Trichopoulou et al., 1995, Papanikolaou et al., 1999), while the younger population has adopted a more westernized diet (Hassapidou et al., 2006).

Concerning dairy products and cereals, only 30% of the population meets the recommendations for the former and only 35% for the later. Moreover, 75% are consuming more than the recommended daily intake of olive oil (Karamanos et al., 2002, Arvaniti et al., 2006, Benetou et al., 2008b). Furthermore, according to a national study that took place in 2006 by the Aristidis Daskalopoulos Foundation, 1,300 people over 15 years old have been questioned about their daily intake of the main foodstuffs and the results are shown in Table 2.3:

Table 2.3: Dietary Intake of Greeks in Relation to the Recommendations

	Consumption as % of the daily recommendations
Bread/ Cereal/ Pasta/ Rice	46% less than they should
Potatoes	80% more than they should
Fruits/ Vegetables	69% less than they should
Dairy	13% more than they should
Fish	42% less than they should
Poultry	30% less than they should
Eggs	43% less than they should
Pulses	43% more than they should
Red meat	340% more than they should

Source: Aristidis Daskalopoulos Foundation, 2006

The same studies have revealed that the Greek diet during the 21st century still has many of the traditional Mediterranean diet components (like the high olive oil consumption) despite the fact that the western model has been adopted mostly among younger people (Kafatos et al., 2000, Hassapidou and Fotiadou, 2001). These include a high plant-animal fat and proteins ratio (Karamanos et al., 2002, Linseisen et al., 2002) and high MUFA intake found in olive oil along with low PUFA intake (Roma-Giannikou et al., 1997, Hassapidou and Fotiadou, 2001, Psaltopoulou et al., 2008). On the other hand, there is a worrying increase of SFA intake, which, according to studies (Trichopoulou et al., 1993b, Arvaniti et al., 2006, Klimis-Zacas et al., 2007) exceeds the daily energy intake by 13%.

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From all these studies derives the conclusion that the lipids contribution increases across the decreasing age groups, indicating that the younger generations are consuming less healthy foods, so there is a need for interventions targeted on these audiences. Furthermore, dietary fibre intake is higher in the older age groups, so older-generation Greeks have greater adherence to the traditional Mediterranean diet than the younger Greek adults. It is also important that in the Mediterranean diet although total lipid intake may be high, the high ratio of monounsaturated to saturated fat seems to explain, at least in part, the cardioprotective effect of this diet (Trichopoulou et al., 1993a, Kafatos et al., 1997).

To conclude, in the developed countries, including Greece, especially younger generations and the poor, suffer *"nutrition insecurity"* (Lobstein, 2008) as they fail to meet the recommended dietary guidelines for nutritional health, due to lack of knowledge and education or income. Nowadays, in the context of the economic recession, probably the situation will become worse as people will get poorer. This kind of insecurity along with food insecurity, are highly related to NCDs as it is going to be discussed in the following paragraph.

2.10 Epidemiological Transition in Greece

Food consumption defines the health status of a person and consequently of a population. The contents of a food product can affect health in the long run (nutrition-related NCDs and obesity), while the transport and storage conditions can affect people's health right after consumption (poisoning, salmonella, and allergies). According to EUFIC, the confirmed nutrition related non communicable diseases are: diabetes, diseases of the circulatory system, digestive diseases and some cancer types like colon, breast and cervix (EUFIC, 2011).

Figures 2.7 and 2.8 show that the NCDs' mortality has been increased since 1961. Nevertheless, it is not only nutritional habits that are to blame for this result as there are many other factors that can affect cancer and CHD, like smoking, use of chemicals, polluted air, water and stress. The cancer that is more related to nutrition is this of the colon and has increased by almost 350% since 1961 and this increase has also been affected by low fibre intake along with high red meat consumption.

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Figure 2.7: Neoplasm's Mortality in Greece

Years:	1961	1970	1980	1990	2000	2006
▣ Malignant neoplasms of the colon	470	699	819	1243	1824	2100
■ Malignant neoplasms of the female breast	241	600	1071	1272	1603	1870
▢ Malignant neoplasms of the cervix	25	51	88	113	108	95
▢ Malignant neoplasms	8877	11554	16214	19432	23763	25660
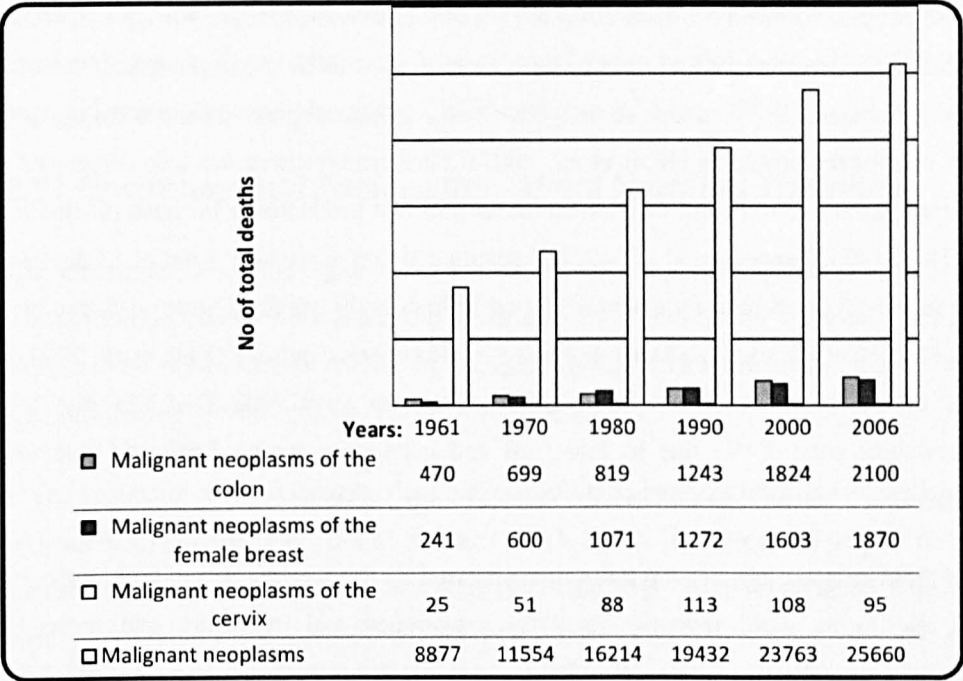
Source: OECD Electronic Database 2008

Figure 2.8: Diabetes & Circulatory System Diseases

Years:	1961	1970	1980	1990	2000	2006
▣ Diabetes mellitus	866	1935	3061	959	839	1317
■ Diseases of the circulatory system	17505	25397	38680	49079	52283	50278

Source: OECD Electronic Database 2008

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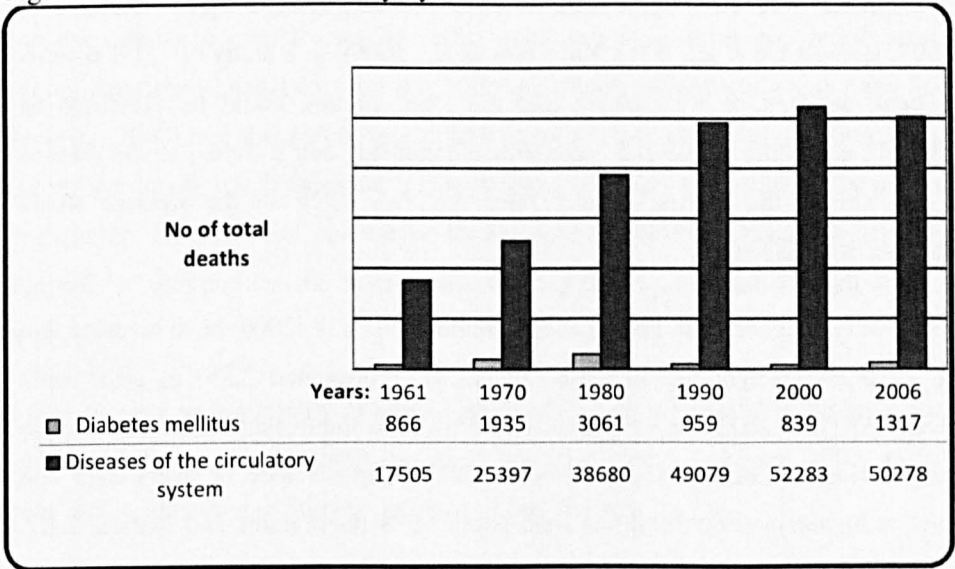
The evolution of NCDs has its roots in the increased prevalence of overweight and obese people, according to data collected by different studies from 1996 up to 2003. Specifically, overweight and obesity have been proved to be the main risk factor of type 2 diabetes, CHD, strokes, some types of cancer, neurological, gastroenterological and pulmonary problems (Knai et al., 2007). Furthermore there are also direct and indirect costs due to health care expenditures and lost productivity because of illness (WHO, 2003). Banegas et al. (2003) have estimated that every year 1 out of 13 deaths in the EU-25 are caused by diseases related to high body weight. Direct costs can be close to 6% of the total health care costs in the European countries (Knai et al., 2007) and in Greece, it has been estimated that for the year 2002 DALY'S due to overweight were 7.4%, due to low fruit and vegetables intake 3.9% and due to cholesterol 7.6% of the total DALY's (WHO/Europe, 2006b).

For these reasons, obesity has been characterised as the worldwide epidemic of our era due to its rapid increase, its early appearance and its health and societal consequences (WHO, 2003). Worldwide estimations have shown that in 2008 1.5 billion adults and in 2010 around 43 million children 0-5 years old were overweight (WHO, 2011).

In the case of Greece, the mean BMI for adults in 1960 was $24kg/m^2$ in average, in 1970 approximately 25.5 kg/m^2 and in 2005 approximately $27kg/m^2$ (Kafatos et al.,1997, Karamanos et al., 2002, Kapantais et al., 2006). In a study of 1,031 6-year-old Greek children, it was shown that half the children could be classified as overweight according to the U.S. standards (Mamalakis and Kafatos, 1996). Greece has also among the highest obesity rates, i.e. over 25% in the western world (Kapantais et al., 2006).

The studies of Magkos et al. (2005) and Papadimitriou et al. (2006) have revealed that since 1996, overweight has increased by 4.2% in boys and 3.8% in girls while between 1982 and 2002 overweight increased by 63% and obesity 202% in a sample of boys living in Crete. Also, it is remarkable that prevalence of overweight and obesity is higher in Greek children than adolescents (Georgiadis and Nassis, 2007, Kosti et al., 2007, Lagiou and Parava, 2008) showing that more children will become obese adolescents in the future. Also, prevalence of obesity is higher in men and prevalence of overweight is higher in women (Yannakoulia et al., 2008). More recent

studies (Panagiotakos et al., 2004, Kapantais et al., 2006, Tountas et al., 2007) also revealed that the majority of the Greek population can be classified as overweight (included obese). These evidences have placed Greece in the fourth place of total overweight and obese people among OECD countries (Collins, 2009).

2.11 Environmental Factors that Affect Nutrition Transition

The determinants of the epidemiological transition are lifestyle changes, due to 'westernisation', which have led to the formation of an 'obesogenic' environment that facilitate the occurrence of NCDs in younger ages and in more cases than in the previous decades (WHO, 2003). These factors include:

1. The reduction of everyday **physical activity** affected by the addiction to **television** and computer and the heavy use of the **car** (WHO, 2003). In Greece, the proportion of households that own television sets was in 1982 only 15% of the urban and 5% of the rural population, while in 2000 almost every household has at least one TV set (Hellenic Ministry of Labour and Social Security, 2003). Not only the proportion of people with access to television but also the types of programmes and access to Western influences were shifting. Nowadays, the Greek population has access to programmes from USA and the U.K. through cable and satellite TV and consequently is being exposed to modern advertising of the global food industry. The use of the car has also rapidly increased since the 1980s when only 40% of the population owned a car and nowadays almost 65% are car holders (Hellenic Ministry of Labour and Social Security, 2003) and this can have a double contradictory effect on nutritional habits. On the one hand, it can facilitate buying healthy products from places that are away from home. Nevertheless, car use limits physical exercise and consequently energy expenditure, and pollutes the environment that can affect our health through water and food.

2. The increasing availability of **processed foods** which are palatable, highly calorific and cheap along with the rapid spread of fast food chains (Alvarez, 2003) as it has been analysed in the previous paragraphs of this chapter.

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3. The trend of **'supermarketisation'** (Lang and Heasman, 2004) where the biggest retailers expand around the world developing new nutritional patterns. This factor will be analysed later in this chapter along with the Greek food system and its actors.

4. People are also forced to overeat through clever persuasive **advertising**. Nowadays, through advertising the healthy diet pyramid has been turned into the advertising pyramid (Figure 2.9) where highly promoted foods are those that should be consumed less according to the healthy eating patterns.

Figure 2.9: Shift from a Healthy Diet Pyramid to the TV Advertising Pyramid
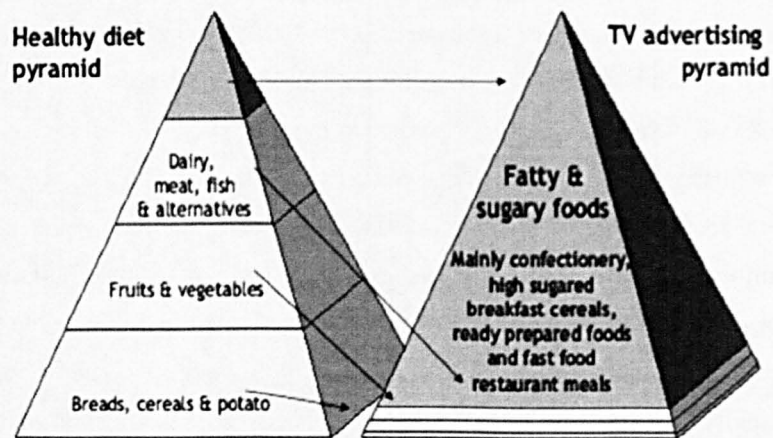
Source: Dalmeny K., Hanna E., & Lobstein T. (2003).

Big food industries know the effect of advertisement on people, especially children, therefore they invest a lot of money on it and hence food is the most advertised product (Ashton, 2004, Douglas Evans et al., 2006). Therefore, over the last years there has been growing concern about the impact that marketing techniques have on nutritional patterns and their role in nutrition transition. The focus is on children because they are more vulnerable and credulous and they cannot understand the purpose of advertisements (Hastings et al., 2003).

In this debate, views are contentious. On the one hand, there is a belief that advertising affects the shaping of food preferences (Lang, 2004) and the review of

Hastings et al. (2006) and Halford et al. (2004) provides evidence that in both developed and developing countries children are enjoying and being affected by advertising, especially by food advertisements which "are among their favourite types". This evidence has been embraced by the scientific community as well as by the WHO (WHO, 2003). On the other hand, food and advertising industries insist that there is no evidence for a direct relation between advertising and obesity (Ambler, 2004); therefore any measures to limit advertising addressed to children would have no effect (Lvovich, 2003, Young, 2003). In Greece, it is very worrying that the total cost of food marketing is increasing and between 2002 and 2003 was raised from €1.3 million to €1.8 million (Matthews et al., 2005). According to the Consumers International research (Dibb and Harris, 1996), Greece and the U.K. had the highest levels of confectionery advertising, while in Greece 60% of the total advertising was about food, which means that there was an average of 7 food advertisements per hour. However, there is not only advertising. Other marketing methods that food companies use to approach children are radio, cinema, Internet, text messaging, product placement, 'viral' marketing, information services, magazines, posters, sponsorship, product packaging, product design and point of sale positioning (WHO Forum, 2006). In particular, in Greece, children's programmes are sponsored by food companies like Kellogg's and many energy-dense, micronutrient-poor products include free gifts in order to be attractive to children (Dibb and Harris, 1996). All these marketing practices which are being implemented in Greece could have partly led to the increased obesity rates and the nutrition transition of the country.

Finally, the evolution of the food systems contributes to this transition, therefore in the next section the Greek food system and its main actors will be introduced.

2.12 The Greek Food System - An Overview

According to the System Theory (Midgley, 2003), a system is a set of things that affect one another within an environment and form a larger pattern that is different from any of the parts. The important elements of a system are its parts, its environment and the internal relationships among its objects. In this context, the Greek food system can be affected by and affect its environment and at the same time is vulnerable to the decisions and actions of its major players as will be indicated later in this chapter.

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Firstly, Figure 2.10 shows the environment where the food system in Greece exists and unfolds. Its inputs and outputs can both affect its function and at the same time they are affecting each other according to the System Dynamics approach (Randers, 1980). For example, nutritional scandals that reflect on public health can lead to the reform of the national or international food and public health policy (Lang, 2004, Knowles et al., 2007).

Figure 2.10: Greek Food System, Environment and Outcomes
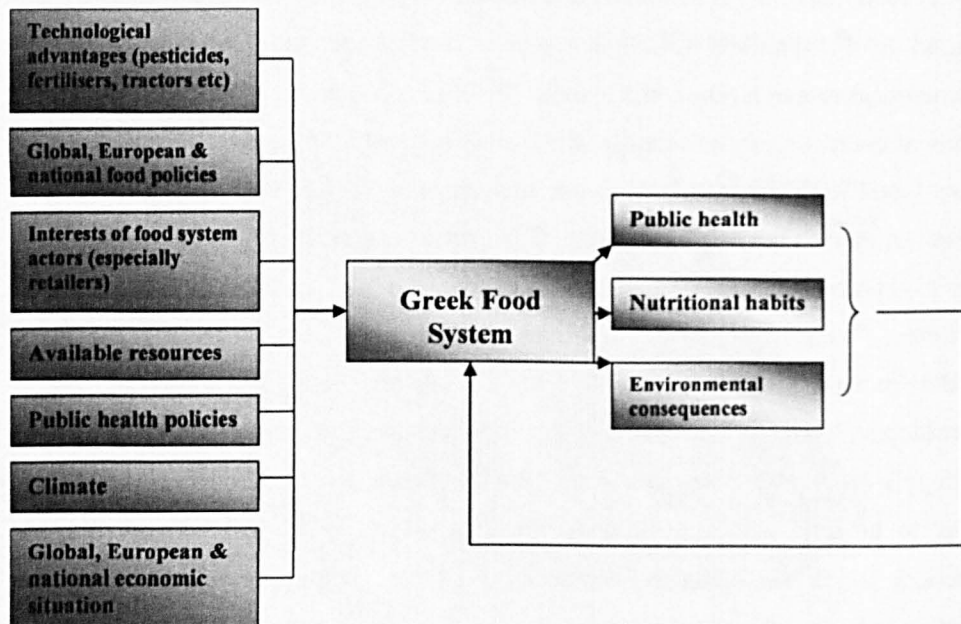
Source: Author

Moreover, the nutritional habits of the citizens of a country are based on the global and the national food system and at the same time they directly affect these systems. This happens because food system actors decide about the available products that a consumer can obtain, by determining who eats what, where and under what circumstances (Lang, 1997). These decisions can be taken according to actors' benefits, especially retailers who nowadays have great power over the food system (supply side), and at the same time according to the consumers' needs (demand side), because consumers are those who determine the products' demand and it is inevitable in a marketing based environment that producers and retailers try to fulfil consumers' needs. Of course, here there is a big debate about the free choice of people and the

choice that they have to make among the available foodstuffs in terms of price and place availability (Lang et al., 2009).

In Figure 2.11 the Greek food supply chain and its actors are shown, as shaped by the data collected through grey literature, the internet and interviews with key stakeholders (see Chapter 5).

Figure 2.11: The Greek Food Supply Chain
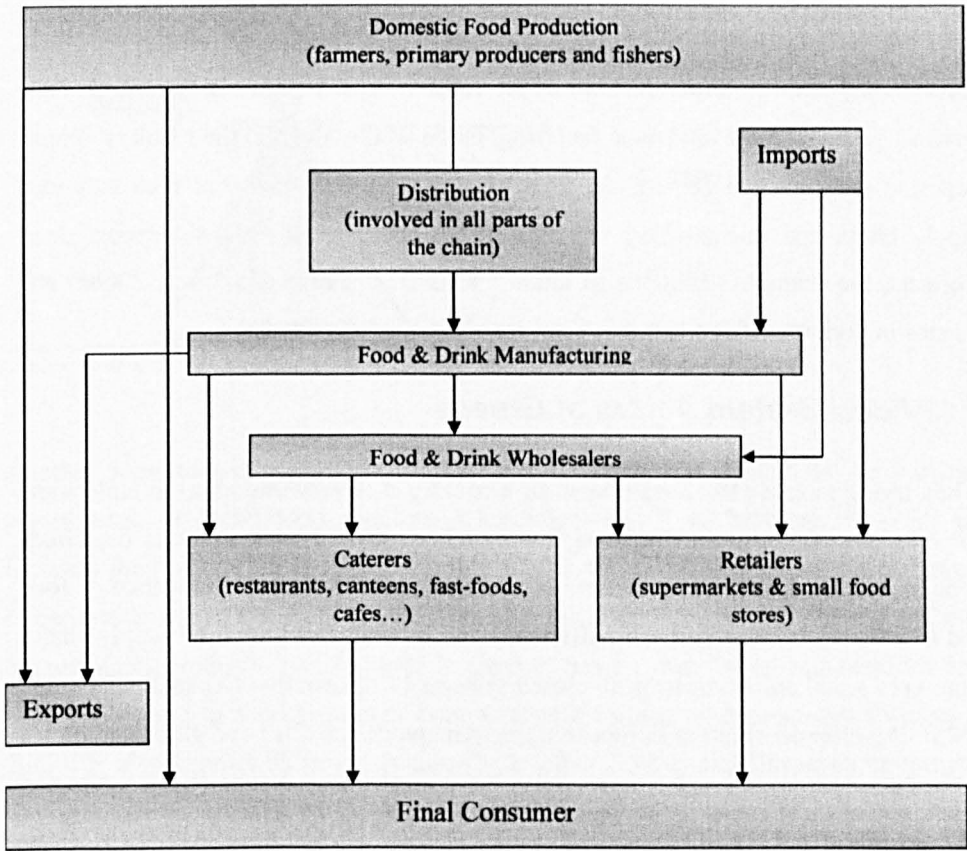
Source: Adapted to the Greek Food Supply Chain from Lang et al., 2009, p. 146

The Greek final consumer can obtain his/her food either directly from the producer, for example in the street markets which are very common all over Greece and they sell fresh fruit, vegetables and fish, or rarely from wholesalers, in order to find a better offer, but most of the times through a retailer (small or big). Food retailers can be divided into vendors, small specialised food stores (like groceries) and non-

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specialised food stores, like supermarkets, where there is a great variety of foodstuffs. Consumers can also find available ready-to-eat foodstuffs in restaurants, fast foods, canteens, bars and cafés in the form of snacks. The main actors of the food system and the food supply chain will be discussed in the following sector.

There is also another form of consumption within the food system, the self-production and consumption which can be found mostly in rural areas like villages, where people produce the majority of the products they consume. This form was more intense before the effusion of urbanisation and nowadays it tends to vanish.

Imports play another important role in the food system, because imported products 'invade' in the stage of food manufacturing, in the wholesales and the retailers' stores. Imported products can be vital for a population's health because of their extended supply chain and due to food scandals that occur in countries that export these products, for example melamine in infants' milk from China (To Vima, 2008a) and dioxins in pork meat from Ireland (To Vima, 2008b).

2.13 Food System Actors of Greece

When trying to study the food system of a country it is very important to understand the relations of power in the Food Supply Chain. Going back in time, the Greek population used to live in rural areas where agriculture was the main source of food and income. Every area had self-sufficiency and in most cases the food supply chains were very small and compact with closed systems of distribution (Yannakoulia et al., 2003). Developments in the European trade framework, the CAP and globalisation led to the development of bigger food supply chains and to the entrance of foreign capital into the national food system. These trends along with the growth of many food-related industries into food giants have influenced nutrition patterns globally (Lang et al., 2009).

These changes in the food systems worldwide have led to the creation of different balances inside the food supply chains as it is displayed in the case of Europe (Figure 2.12). Nowadays the power is in big retailers' hands, especially the big international companies, which shape the nutritional trends at global level (Raven et al., 1995, Lang, 1999). Thereupon, there is an imbalance of power and information between

consumers, who should adopt healthy eating habits and big companies, which try to earn money by providing energy-dense food at low cost.

Figure 2.12: The Supply Chain Funnel in Europe

Consumers	160.000.000
Customers	89.000.000
Outlets	170.000
Supermarket formats	600
Buying desk	110
Manufacturers	8.600
Semi-Manufacturers	80.000
Suppliers	160.000
Farmers/producers	3.200.000
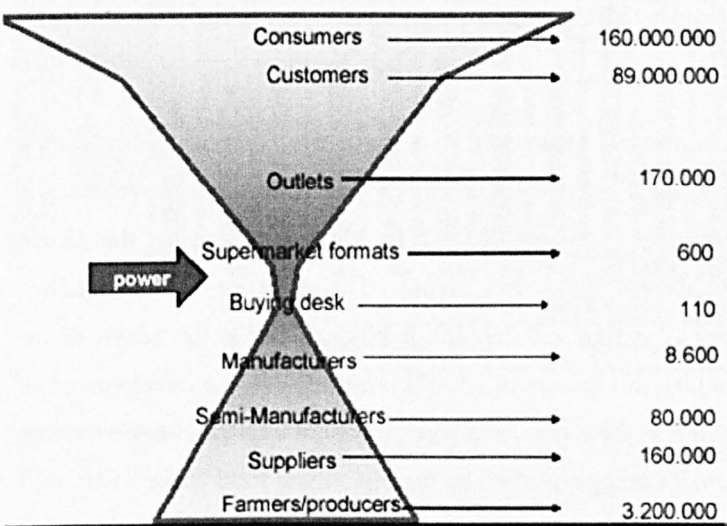
Source: Grievink. J-W, OECD (2003).

Another important characteristic of the current Greek food system is the vertical organisation of many food retailers, wholesalers and manufacturers, in order to increase their power on the Food Supply Chain and to have a better control over prices and products. For example, Delta S.A., a member of the Vivartia Group and the biggest dairy products manufacturer in Greece, has its own farms and factories for milk processing or works through contracts with farmers and producers (Vivartia, 2007). It also exports its products directly to other Balkan and European countries. The presence of an actor of the food system in many of its stages is an uncontested fact that increases its power over the food system.

2.13.1 Food Retailers

According to Hawkes (2005), many transition countries, like Greece, have been the recipients of considerable foreign direct investment. Although such investment can bring benefits such as greater economic growth and a better standard of living, it also provides trans-national companies a powerful means to promote the adoption of western diets including the consumption of processed foods and drinks, often high in

fats and added sugars. So, the nutrition transition in Greece is also supported by the predominance of big retailers on food supplies, also known as "supermarketisation" (Lang and Heasman, 2004). Doorstep delivery of milk, eggs and yogurt was a tradition until the introduction of new retailers' forms in 1980's, when within a few years consumers switched to the US model of purchasing milk and other products from the supermarkets.

Since early the 90s, foreign retail companies have made their entrance in the Greek market by absorbing smaller Greek retail companies. For example, Carrefour, the number one retailer in Greece, entered the Greek market by buying the Greek supermarket chains of Marinopoulos and Xynos. The entrance of big retailers contributes to the change of eating and cooking habits and hence the health of the transition countries, like Greece (Knai et al., 2007). Furthermore, the development of imports and exports, as well as the entrance of foreign capital into the Greek economy led to small local food chains being absorbed by the big, global food chains. This shift has had a negative effect on people's health either direct or indirect through the effect on the environment (Lang et al, 2009).

Nowadays, the food retail market is in the hands of a few big retailers, i.e. Carrefour, AB Vassilopoulos, Lidl, Metro, Veropoulos, Sklavenitis, and Galaxias S.A. From these, only the two latter are Greek companies and Sklavenitis has a significant market share. Nowadays, Carrefour is the first retailer in Greece with two retail companies, Carrefour-Marinopoulos and Dia, followed by AB Vassilopoulos, a Greek company belonging to the Belgian retailer Delhaize Group. Veropoulos is a division of Eurospar and Metro is German owned (ICAP, 2008a). Contrary to the food manufacture, the number of retail enterprises has been reduced since 2004 due to the dominance of the big retailers over the small retail companies. This phenomenon is also obvious through the reduction of the volume index of the small retailers since 1996 when big retailers started entering the Greek market and gaining a gradually bigger volume share (Figure 2.13).

Figure 2.13: Food Stores Volume Index (from 1995 up to 2007 with base-year 2000)
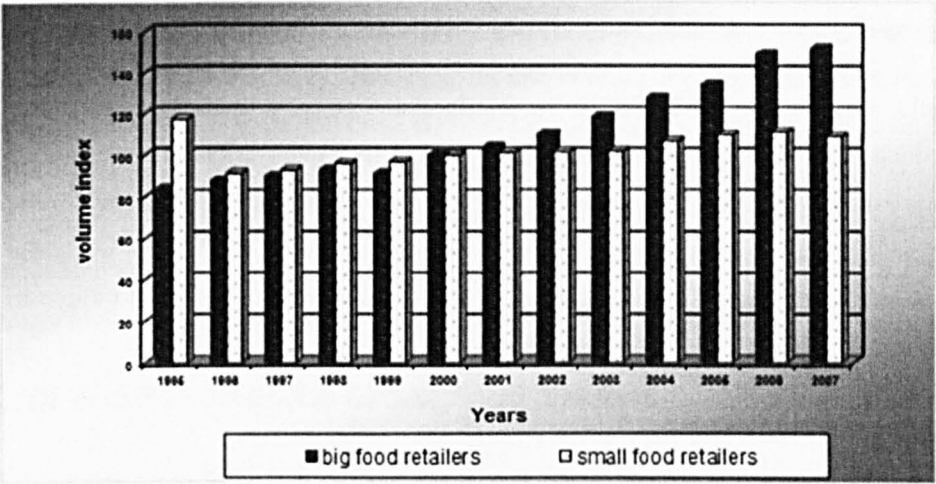
It is noteworthy that the rapid development of big retail companies could contribute to the appearance of 'food deserts' especially in underdeveloped areas of the big cities and in the county (Lang at al., 2009).

2.13.2 Food Caterers

The first tavern, in its modern form, made its appearance in the Greek urban areas in 1920 (Matalas and Yannakoulia, 2000) and since then there has been a growing development of food outlets like taverns, canteens, restaurants and more recently fast foods that started their development since 1975 when the first Greek fast food outlet was founded in Thessaloniki. The Greek fast food industry includes outlets that sell burgers, pizzas, snacks and sandwiches and ethnic foods like souvlaki (ICAP, 2008b). Global companies like MacDonald's and Pizza Hut have entered the Greek market but the Greek big fast food chains are more popular. However, in recent years many Greek fast food companies have been bought by foreign organisations that desire to enter the Greek food market. According to ICAP data (2008b), since 1992, the Greek fast food industry has a mean growth rate of 15.6% which in 2008 was 7%, while their revenues increased by 8.6% from 2006 to 2007.

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In general, since 1999, food caterers have increased by 14.5% and the number of employees working in restaurants, bars and canteens rose by 19.6%, thus the out-of-home food market is continually expanding.

Finally, according to ICAP (2002), the fast-food and delivery market was six times the value of the packaged ready-to-eat meals due to the Greek trends of eating out of home, eating with family and ordering from delivery. Nevertheless, the ready-to-eat meal market had a mean increase of 16.2% during the period 2000-2005, while the fast food market's profits increased from €431,4 million in 2001 to €667,4 million in 2005 (ICAP, 2008b).

2.13.3 Food Industry

Regarding food manufacture, in the wake of globalisation, many foreign companies have entered the Greek market and nowadays they hold the biggest market shares. The six most profitable food and beverages companies in Greece include (ICAP, 2008b) Kraft Foods Hellas, Unilever Hellas, Nestle Hellas, Vivartia, Fage and the Coca Cola System (Coca Cola Hellas and Coca Cola 3E). From these, only one, the Fage Company, is Greek while all the others are global companies that have taken over smaller Greek food companies and have entered in the Greek food market. Finally, since 2004, food manufactures have increased in number and in occupied employed staff (ICAP, 2002). This trend shows that food manufacture is a profitable and developing sector despite the dominance of few big manufacturers, because there are many small companies that promote their products mainly in the local markets (ICAP, 2002).

2.13.4 Public Sector

There is also another actor that can intervene in any of the food supply chain stages, from production and imports to the final consumer, and its role is to promote the rights of the citizens and the public good in a responsible manner (Meadowcroft, 2007). The public sector can be a powerful actor due to its regulatory power. For example, the public sector has the ability to reconnect producers and consumers by restoring the trust between them, which has been distorted by food scandals, occurring at global and national level (Lang, 2004, Renard, 2005). The public sector can also

intervene upon services, labour, economy, transport, procurement policies, eating practices, as well as upon agricultural policies through subsidies. It can also promote alternative food systems and develop new forms to manage and govern the marketplace (Whatmore et al., 2003) and all that in order to promote the public good along with system sustainability and viability (Meadowcroft, 2007), without having to compete with other food actors. In Greece, the public sector seems to keep a neutral position towards the things happening inside the food system. This thesis proposes a more active reaction by the adoption of food policies that can protect citizens and can create more supportive environments that promote healthy lifestyles.

2.14 The Future of the Greek Food System

The economic development of Greece has advantages and disadvantages. Therefore, two different viewpoints will be presented in respect of the future of the Greek food system.

The first approach is supported by those who support free trade and the adherents of the status quo, who endorse the globalisation imperative for the benefit of the consumers that can nowadays have abundance of product and price choices. They purport that there will not be any nourishment problem due to the technological advances and new ways of growing, storage and producing food to be found. Therefore, there is no need to abandon the global model of increasing economic development. This is clear also through the governments' reaction against anything that threatens growth, as they pour billions of public money into a failing financial system. Therefore, any alternative to growth remains unthinkable and this is the capitalism philosophy where in the free-market there must be constant growth, otherwise the economy would break down followed by unfavourable consequences for the countries (Jackson, 2008). According to this perspective, for example, any proposal of less consumption, which may be the single biggest thing you can do to reduce carbon emissions, is rejected because it would threaten economic growth.

The second approach is supported by concerned public health scientists, ecologists and active citizens, who argue that choice at the cost of cultural, safety, and health considerations is a false choice and that even if people were willing to continue paying the public-health price, they are not going to have the cheap energy or the

water needed to keep the system going, much less expand production (Pollan, 2008). Nutrition transition, over-consumption along with under-nutrition and extinction of the local culture cannot be beneficial to any person and especially the poor (Gabriel and Lang, 1995). So, according to the second opinion, there is an urgent need of change at every link in the food chain, through concerted action by Government, Supply Chain and Civil Society. This way of thinking fights for shorter supply chains and local food which do not harm people's health and traditions. It is against supermarketisation that increases processed and branded foods, while, it supports urban production, short-distance distribution networks through community convenient stores and primary process near the point of production in order to empower local food economies. In this context, Lang states, *"we must transform ourselves from being passive consumers to active consumers"* (Gray, 2008) and he adds that *"avoiding food that takes a lot of resources to produce like meat and dairy products, and growing more food ourselves could change our food system from the bottom up"* (Lang, 2008).

So, quality of food and living can be achieved through alternative ways of food production and localisation (DuPuis and Goodman, 2005) in order to avoid the negative effects of big food chains and global food systems, which sell branded processed products to consumers (Tansey and Worsley, 1995) and accumulate the power on big retailers hands (Harvey et al., 2004). In this context the Greek food policy will be analysed in Chapter 4 in order to understand the initiatives that the Greek State adopts in order to protect citizens health.

2.15 The Dimensions of Nutrition

The data from the previous paragraphs pictured the current situation towards nutrition in Greece, and in some aspects worldwide. There were data about the composition of the food that people consume, like the micro and macro nutrients, as well as data about the social factors that have changed the nutritional habits of the population. In this context, Lang et al. (2009), when talking about nutrition, developed a typology of three dimensions of nutrition. These dimensions or the 'three nutritions' as they call them include:

1. The 'Life Science Nutrition' which focuses on the ingredients and the nutrients of the food and their consequences on populations' health.

2. The 'Social Nutrition', which pictures the relationship between nutrition and social factors. Social factors can affect nutritional habits and at the same time eating behaviour fits into social contexts and consumers' culture.

3. The 'Eco-Nutrition' that centres on the production and consumption of food in an ecological, environmentally-friendly environment.

All these dimensions are equally important in order to study the nutritional habits of the population and develop nutritional interventions to improve citizens' health.

In this study, we are trying to approach and understand the social dimension of nutrition in terms of why people in Greece have adopted these specific nutritional habits and what can be done in order to reverse this situation. In order to unfold the social dimension of nutrition we are going to use the marketing theory that belongs to the social sciences and it is a tool that is widely being used by the food industry to shape consumers' choices and attitudes towards many things that also include food. Specifically, through the lenses that we are investigating these issues, i.e. public health orientation, social marketing theory will be used. The philosophy and application of social marketing theory will be discussed in the next Chapter.

2.16 Conclusion

This chapter revealed the rapid changes in the agribusiness sector as well as in the demographical and epidemiological environment that have shaped the nutrition transition in Greece. Using Popkin's model of the stages of nutrition transition (Figure 2.1), Greece was at the time that the study began in Pattern 4 of the nutrition transition continuum. People are trapped between two contradictory sides. On the one hand, there is the Greek traditional diet and culture, where food is very important and on the other hand the western patterns of body appearance and nutritional attitudes. The confusion becomes even worse by adding the storm of contradictive messages that people receive by food companies, dieticians, physicians and their families (Lambert et al., 2002, Yannakoulia et al., 2004).

According to Lang's (1999) opinion of the transition of the food system, the Greek food system has moved from localisation to globalisation with the increase of worldwide imports. During the last decades, changes in the food system have been fast, the decisions are global and centralised (E.U., international retailers, Common Market) and the costs are externalised to the consumer. Fast food chains have increased, cooked food has been replaced by microwave reheated food, fresh food by processed and food from the land is replaced by food from factories. Moreover, in the agricultural sector the use of agrochemicals, non-renewable energy and biotechnology have changed the old cultivation patterns. Finally, hypermarkets have taken the place of local food markets, the market players have been reduced and the power is in the hands of the few. All these changes widen health inequalities and have turned citizens into consumers who live in order to consume instead of consuming in order to live.

The agricultural sector has undergone major changes during the last decades. The demographic transition has been in favour of the tertiary and secondary sector leading to the decline of the agricultural sector, which was also negatively affected by political decisions and manipulations. It is easy to imagine the benefits of the Greek agriculture in the case where the Greek State would follow a more land-friendly policy by giving motives to the peasants and especially to younger people who would like to leave the big cities and make a living in the countryside, especially, nowadays, in the context of the economic crisis.

So, Greece has always been an agricultural country and it is very encouraging that the situation is not as bad as in other developed countries, like the U.S.A. and the U.K (CIA, 2011). Especially, under the recent economic crisis, the challenge for the Greek policy makers is to create policies that would help people so that the Greek society could move forward to Pattern 5 (Figure 2.1) and this can happen through appropriate changes in the food system which should be based on health protection rather than profit and inequality. For this reason, the social dimension of nutrition will be investigated with the use of social marketing theory.

Chapter 3: Social Marketing

3.1 Introduction

The effectiveness of social marketing on delivering positive outcomes and having a sustainable impact across several social behaviours for a variety of target audiences, such as individuals, communities, governments and professionals all over the world, has been highlighted by many studies (NSMC, 2006, Stead et al., 2007a, Smith, 2007a, Kotler and Lee, 2008).

More specifically, in the field of nutrition there are studies that have revealed the positive impact of social marketing interventions on behaviour modification and dietary knowledge (McDermott et al., 2006, Gracia-Marco et al., 2011).

On the other hand there are people who claim that social marketing has not been proven to deliver behavioural outcomes and therefore it may not be worth the big amount of money invested in its implementation (Lefebvre and Flora, 1988, Goldberg, 1995). It is important to recognise that social marketing cannot work in isolation but always in the context of other initiatives as it often requires policy to support its funding and development. This issue is discussed in this chapter and in the conclusions of this thesis.

Moreover, social marketing borrows from other sciences in an effort to explain people's behaviours and choices. Therefore, an overview of the main theoretical models of behaviour change used in social marketing programmes will be presented. The third chapter will be an introduction to social marketing, its components and benchmark criteria. There will be an analysis of social marketing toward public health and health promotion principles and models and a presentation of its link to policy and regulations.

Also, there will be an indication of social marketing interventions in general and in regard to nutrition, in order to discover what the literature suggests for effective implementation and what social marketing interventions on nutrition have been carried out to date bearing in mind the peculiarities of food and hence of healthy eating as a social marketing product. Furthermore, the opposite view that questions

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the effectiveness of the application of social marketing in the field of health will be examined.

Finally, the link between social marketing and policy will be introduced in order to lead to the discussion of the Greek food policy in Chapter 4.

3.2 What Is Social Marketing?

Social marketing has its origins in America in 1971 when Philip Kotler and Eduardo L. Roberto wrote the book 'Social Marketing: Strategies for Changing Public Behaviour'. During the last decades, social marketing has been provided with many definitions which all agree on the fact that social marketing is the use of commercial marketing techniques for society's benefit.

According to Kotler and Lee (2008, p.7), "social marketing is a process that applies marketing principles and techniques to create, communicate and deliver value in order to influence target audience behaviours that benefit society as well as the target audience". This definition is based on the American Marketing Association's definition for commercial marketing (Dann, 2008).

Hastings (2007, p.9), director of the Institute for Social Marketing, has adopted the definition of Lazer and Kelley (1973): "social marketing is concerned with the application of marketing knowledge, concepts and techniques to enhance social as well as economic ends. It is also concerned with analysis of the social consequence of marketing policies, decisions and activities."

Andreasen (1995, p.7) defines social marketing as

"...the application of commercial marketing technologies to the analysis, planning, execution and evaluation of programmes designed to influence the voluntary behaviour of target audiences in order to improve their personal welfare and that of their society."

French and Blair-Stevens from the Social Marketing Centre in the U.K. (NSMC, 2006) describe social marketing as "...the systematic application of marketing concepts and techniques to achieve specific behavioural goals relevant to a social good." Finally, social marketing is a framework that draws from other sciences like

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sociology, anthropology and psychology and helps understand how to influence people's behaviour (Wymer, 2011).

So, these definitions help us see social marketing as a process that leads to a beneficial outcome for society and as a mindset where the citizen-consumer is in the centre of every action. These will be analysed in the following section.

3.3 Social Marketing Framework

The social marketing framework involves a *"voluntary exchange between two or more parties, in which each is trying to further its own perceived self-interests while recognizing the need to accomplish the perceived self-interest of the other to achieve its own ends"* (Rothschild, 1999, p.30). In this context, social marketing will be analysed as a mindset and as a process and it will be critically discussed later on in this chapter.

3.3.1 Social marketing as a mindset

In Figure 3.1, the social marketing framework is introduced as a mindset where the consumer is in the centre of every action. Everything is developed based on her opinion and for her own good. It is very important to make clear that social marketing can have many target audiences and there should be a clear distinction between customers and clients. Customers are the public, the people who have adopted or are going to adopt a negative behaviour that social marketers would like to change for society's benefit. On the other hand, clients are the people/organisations that can help social marketers reach the customers such as non-profit organisations, the government, professionals, volunteers and community organisations (Smith, 2007c, Andreasen et al., 2008). Social marketers should choose carefully both their consumers and clients in order to implement the social marketing intervention (Hastings, 2007, Kotler and Lee, 2008) and never forget to locate them in the centre of every initiative.

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Figure 3.1: Social Marketing Framework

Source: U.K. NSMC, 2006.

Based on the social marketing framework (Figure 3.1), in order to define a campaign or programme under the term "social marketing" there should be some prerequisites called social marketing benchmark criteria (Andreasen, 2002, NSMC, 2006) which are:

1. *Clear focus on behaviour with specific behavioural goals* which should be SMART[2] and may refer to individual or group behaviour.

2. *Research* on consumer's needs and preferences and collection of multisource data to design an appropriate initiative.

3. *Insight driven* to find out the deeper motives of people's behaviour, what they believe, feel and think.

4. *Use of segmentation approach* in order to *target* the appropriate target audience.

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[2] SMART is the acronym that stands for Specific, Measurable, Attainable, Relevant and Time sensitive (Kotler and Lee, 2008, p.139)

5. *Theory based and informed* to select and develop the appropriate intervention depending on the context. The main theories used in social marketing programmes are: the health belief model, the theory of reasoned action, the social cognitive theory, the stages of change and the diffusion of innovations (Lefebvre, 2001). In order to select the appropriate theory to guide the programme development, Karen Moses from Arizona State University, suggests answering the following questions:

- Where are people in relation to a particular behaviour?

- What factors cause this position?

- How can they be moved in the desired direction?

Factors that affect people's choice and behaviour towards nutrition and the role of behavioural theory models will be introduced later (see section 3.4).

6. *Integration of a mix of methods* such as the Marketing mix that includes the use of the commercial marketing 4P's that will be analysed in the next paragraph.

7. *Use of exchange concept* that includes the tangible (money) or intangible cost (time, emotions, stress, sociability etc) in relationship to the benefit of the adoption of a new behaviour or the abandonment of an old one (social marketing product). The aim is to reduce the short term cost and increase short term benefits.

8. *Use of competition concept* which can be external (negative behaviours or other programmes with contiguous goals) and internal (values, willingness, addiction of the target audience). The aim is to understand the competition, find its weakness and try to make the desirable behaviour better than the opponent.

All these points are very important for the development of effective health interventions and should not be neglected due to lack of resources or time.

3.3.2. Social marketing as a process

Social marketing interventions are based on the total process planning model (Figure 3.2). This model is a systematically planned process that includes five stages which can help ensure an effective intervention (NSMC, 2006).

Figure 3.2: Total Process Planning Model
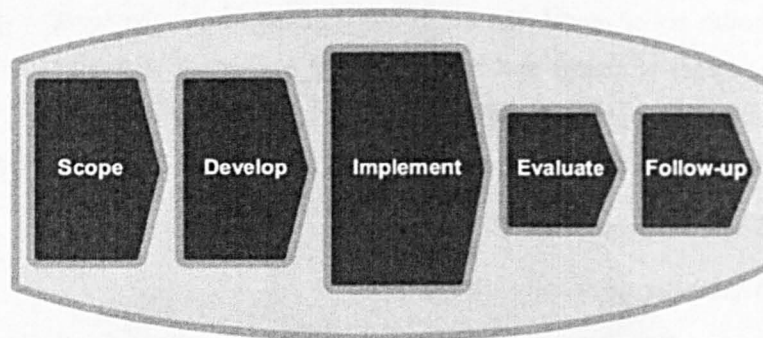
Source: U.K. NSMC, 2006.

Scoping helps to get insight of the current situation, the target audiences and the competitors. Development includes the creation of the marketing mix that includes the 4Ps (Kotler and Lee 2008):

Product is the benefit that the target audience wants while performing the desired behaviour (core product), the desired behaviour that the audience should adopt (actual product) and/or the complementary services and tangible things in order to support the desired behaviour (augmented product).

Price in social marketing is the cost in order to abandon an old behaviour and adopt a new one and refers mostly to non-monetary things such as effort, time, risk, self-esteem, prestige and pressure, and secondly money.

Place is where and when the target audience will perform the desired behaviour and buy the complementary products and services. Nowadays place can be physical or electronic, via the internet (Lagarde et al., 2007).

Promotion refers to the ways in which social marketers communicate their product and its benefits to the target audience.

It is very important that there is a research at every single stage of the social marketing intervention starting from formative research, pre-testing, monitoring and finally evaluation and follow up. That could help social marketers to choose and understand the target audience (Niblett, 2007) get feedback on the appropriateness of specific messages and marketing tools and evaluate the outcomes (NSMC, 2006, Hertzog and Williams, 2007).

Finally, the duration of a social marketing intervention could differ according to the objectives and resources. It can be a social marketing initiative (short term: within 1 year), a social marketing campaign (medium term: 1-3 years) or a social marketing programme (long term: 3-10 years) (NSMC, 2006, DoH, 2008).

3.4 What Determines People's Choices? – Behavioural Theory Models

In order to understand people's behaviour and choices in their everyday life, including food, psychologists have developed theoretical models to explain the determinants of people's behaviour. In this section, an overview of the main theoretical models that social marketers use in order to design their programmes will be introduced.

According to Lefebvre (2001), the main theoretical models used in social marketing programmes are the transtheoretical model of behaviour change (or "stages of change"), the related theory of reasoned action, the health belief model, the social cognitive theory, and the diffusion of innovations.

Stages of change, is a theoretical model that sees behaviour as the result of specific stages that a person goes through and includes the pre-contemplation, contemplation, preparation, action and maintenance stage (Prochaska et al., 1994). So, it is important to understand the stage at which the target population is towards a specific behaviour and develop appropriate initiatives. In addition, the Theory of Reasoned Action (TRA) explains that people's behaviour can be shaped by their beliefs that lead to specific attitudes, intentions and finally to a specific behaviour (Lefebvre, 2001).

These two models (Stages of change and TRA), have been criticised mainly because they focus on the individual and do not embrace the external factors that may affect people's choices. Moreover, both follow the linear approach of Knowledge → Attitude → Behaviour and therefore fail to introduce the complexities of specific behaviours like physical activity and healthy eating (Adams and White, 2005). In this context, Jackson (2005), in his review about behaviour change, described the theories of rational choices and presented the critique about them by saying that the actual choice is not only based on the individual and on a linear model of knowledge that could lead to specific behaviours, but rather on a complex system of internal and

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external stimuli that could affect the final behaviour in the wider context that the individual acts.

In contrast to the individual focused theories, Social Cognitive Theory tries to explain how people acquire and maintain certain behavioural patterns, based on the environment (social & physical) which provides models for behaviour (Bandura, 2001). In the case of nutritional behaviour, the social environment includes family, friends, role models and fashion patterns, while the physical environment includes the food system components. Another important factor, according to Social Cognitive Theory, is the situation, which in respect of nutrition can include the economic and health situation of a person or her/his attitude towards healthy nutrition (Glanz et al, 2002).

In addition, the Health Belief Model focuses on the attitudes and beliefs of individuals towards a behaviour that can affect their health. Their perceived barriers and benefits along with their perceived susceptibility and severity of the problem being faced would lead them to a specific behaviour (Becker, 1974). One of these is eating habits, i.e. food choices can be affected by people's expectations that a negative health condition can be avoided and that they can derive benefits from taking recommended health action such as following a proper diet (Glanz et al, 2002).

For the last two models, factors like educational status, attitudes and beliefs toward nutrition, available income, accessibility in stores, influences from other persons or food advertisements/marketing, health status, prices and other social and personal factors can affect people's food choices. On the other hand, retailers (and other kinds of food sellers) affect the food that a consumer will consume through their decisions concerning the location of the stores, the kind and variety of products provided by the stores, the promotional strategies, the nutrition-related activities and the prices of the foodstuffs. These decisions are being made based on the objective of these companies to have a high profit (Hawkes, 2008).

Another theory that goes beyond the individual is the Diffusion of Innovations. This theory suggests that people may belong to different types of innovation adopters and could be characterised as innovators, early adopters, early majority, late majority or laggard. These groups of people have different needs, perceptions, influences from

their external environment and beliefs towards innovations and therefore they can be approached in different ways (Lefebvre, 2001).

Finally, another very interesting model that connects choice with policy is the Social-ecological Model of Change or the Social Model of Health that Dahlgren and Whitehead (1991) proposed. This model describes the relation between the individual and his/her environment taking into consideration all the potential factors that could influence people's choices in many environmental levels that include individual, interpersonal, organisational, community and public policy environments (Gregson, 2001).

According to Lefebvre (2011), social marketing should be based on theoretical approaches of behaviour change but, in order to lead to effective initiatives that would have wide impact on populations, models that focus on groups and not individuals should be used. Moreover, Winett (1995) says that different theoretical models are more appropriate to be used when developing each one of the 4P's.

There are many other behavioural models and theories available for social marketers in order to inform their initiatives based on them. The challenge is to choose the most appropriate one in order to create effective initiatives and supportive environments for the individuals. Therefore, in this thesis, in order to propose effective actions and implications for policy for the improvement of nutritional habits, it is vital firstly to understand how the target population perceives health issues, on what their food decisions are based and whether these models could inform policy makers. All these issues will be raised in the discussion (Chapter 9).

3.5 It is Not A One (Wo)Man's Show – Models And Principles

The confirmed effectiveness of social marketing in some cases does not mean that it is going to replace the existing practices of health promotion and health communication to improve public health, rather, its role is to support these interventions and be a part of an intervention mix for behaviour change in a positive way (NSMC, 2006). Thorpe et al (2008) stated that despite its positive impact "...*social marketing is not the answer to every question...*", but it could be included in an intervention mix along with education, measures of legislation and regulations, organisational change, media

and policy advocacy, community initiatives and mobilisation, environmental changes and communication (DoH, 2008). Furthermore, according to Lagarde et al. (2007), many professionals consider advocacy and policy change as the *"integral components of social marketing practice"*.

In order to understand the role of social marketing in this mix, it is essential to find out at which level it and its 'bedfellows' work and what is the relation between social marketing, public health and health promotion (Figure 3.3).

Figure 3.3: Relation among Public Health, Health Promotion & Social Marketing
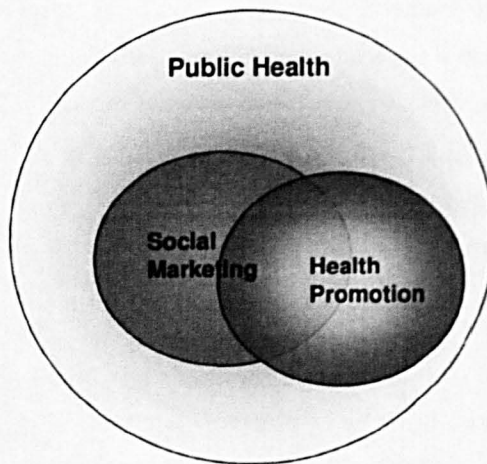
Source: Adapted from Griffiths, Blair-Stevens and Thorpe, 2008

Modern public health made its appearance in the 19th century as the epidemiological branch of medicine when governments started adopting health policies in order to improve the population's health (Green and Thorogood, 1998). Public health in the 19th century tried to change the situation in the workplace and the issues of everyday living conditions, by the mid-20th century there was a focus on the behaviours that could harm the individual and in the late 20th century, based on the Ottawa Charter and the Jakarta Declaration, there was a combined, more complex approach that seeks the origins of health problems in the social domain by trying to find how the environment affects peoples and trying to change the conditions that induce ill health (Nutbeam, 2000). Lang and Rayner (2007) introduced the term 'ecological' in public health by defining it as *"the composite interactions between the physical,*

physiological, social and cognitive worlds that determine health outcomes in order to intervene, alter and ameliorate the population's health by shaping society and framing public and private choices to deliver sustainable planetary, economic, societal and human health". According to the same authors, public health has three sectors:

1. Health protection, which refers to disease prevention.
2. Health development of communities (sometimes called health promotion).
3. Health education, which informs the population of lifestyles in order to maintain health and wellbeing.

The branch of public health that tries to investigate and affect lifestyles and behaviour is called Health Promotion (Green and Thorogood, 1998). Health promotion is *"the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment.... Therefore, health promotion is not just the responsibility of the health sector, but goes beyond healthy life-styles to well-being"* (WHO, 1986).

According to Ashton & Seymour (1988), health promotion works in a community context in order to empower communities to take control of their activities and make healthy choices through providing information, education and skill development. Furthermore, health promotion helps to build a healthy public policy, creates supportive environments to promote health, strengthens community actions, develops personal skills and reorients health services for the improvement of public health (WHO, 1986).

In the same context of health promotion, social marketing can be a tool of public health that provides techniques, methods and insight for health promotion. Albeit being a supplementary method to health promotion, social marketing provides a different philosophical framework in order to improve public health. Specifically, it is based on the use of commercial marketing techniques (exchange, research, consumer orientation and 4P's) and mass media (Daviri, 2007) but it stems rather from social psychology and mass communication than from marketing (Ratzan, 2001). Like health promotion it focuses on individual behaviour, hence there are many cases

where health promoters face social marketing as a competitor that has nothing new and effective to offer more than what health promotion techniques can provide (Buchanan et al., 1994). These views will be discussed in a following paragraph (see section 3.9).

Recently, both health promotion and social marketing have been trying to go beyond the individual by investigating the political, technological, cultural and economic influences in order to improve the overall level of public health (upstream) (McKinlay and Marceau, 2000, Hastings and Donovan, 2002). In the context of the 'ecological public health' (Lang and Rayner, 2007), social marketing can been seen more as an applied health education model, so, according to this concept, it would just be a branch of health promotion, but social marketing goes beyond this and tries to influence communities and the entire society and to mobilise politicians to adopt public health initiatives (Walsh et al., 1993).

So, social marketing mostly works at an individual level (Bentz et al., 2005) even if this means working upstream, downstream or midstream, while public health tries to fix the conditions in order to create an environment that promotes health (Institute of Medicine, 1988). Novelli (2007) insists that there is a need for environmental change along with the individual one. When the environment changes the new social norms can provide an easier way for the adoption of the desirable behaviour; at the same time, citizens should be ready and have the knowledge and the skills to change. Hence there is a great need for public policy and social marketing synergy (Swinburn et al., 1999, Wallack, 2002). Social marketing can also help understand who are ready to change or not (Walsh et al., 1993) and why people are at high risk and therefore it can contribute to social change (Wallack, 2002). Hence the application of social marketing can be upstream, downstream as well as midstream (Wallack, 2002, Hastings, 2007, Lagarde et al., 2007). When social marketing moves upstream it can affect the focus and direction of healthcare services provision and the allocation of public funds by influencing the public opinion gatekeepers (Bentz et al., 2005, DoH, 2008). At this level media advocacy, which *"is the strategic use of mass media, in combination with community organizing to advance healthy public policies"* could play an important role (Wallack, 2002). Donovan and Henley (2003) support this

view by stating that comprehensive marketing includes, apart from the commercial marketing 4P's, advocacy, motivation and education.

Consequently, social marketing should be used in a wider context of interventions in order to take advantage of every opportunity that could affect behaviour change, like regulations, legislation, education and everything else the target audience needs in order to adopt healthy behaviours. As Hastings and Haywood (1991) state, the intension of social marketing is not to work *"as a potential replacement for all existing practice. We simply want to see whether insights gained from it can, along with ideas from other disciplines, help health promotion."* At the same time all these initiatives, whatever their name is, should be used in combination in order to create a strategy context for a healthy population by achieving the goals set by the Ottawa Charter (WHO, 1986) and include:

- *Building healthy public policy*
- *Creating supportive environments*
- *Strengthening community action*
- *Developing personal skills*
- *Reorienting health services*

3.6 Components of Effective Social Marketing Interventions- An overview of the literature

Prior to the analysis of effective social marketing campaigns it should be made clear that not all social marketing interventions are effective. On the contrary, the majority are partly effective or ineffective and do not achieve their primary goals (the reason for these outcomes will be explained later in this chapter). Nevertheless, a glance at those initiatives that had a positive impact on some nutritional issues is valuable for the development of potentially effective social marketing programmes and would facilitate the analysis of the main research data.

As mentioned before, an effective social marketing campaign- or better a campaign that has a great potential to be effective- should include the 8 benchmark criteria mentioned above and be well-designed. Still, there is no specific recipe for the best social marketing intervention as every time the context, the participants and the conditions are different (Williams and Kumanyika, 2002). Studies have revealed that

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in order to design proper social marketing interventions, social marketers should keep in mind the following nine issues:

Firstly, social marketing can be an effective tool when applied systematically and for a long period of time (NSMC, 2006). Nevertheless, most programmes have a short duration mainly due to lack of funds (Dutta-Bergman, 2003).

Secondly, at the centre of every social marketing element comes the consumer (customer, client or citizen). Because of the different types of target audience and the existence of people who are distrustful, a fruitful research should explore the benefits that the target audience wants to gain in order to change behaviour and this is a real challenge because people often do not know or cannot tell what they really want (Smith, 2003). When people realise the advantages that they get through the adoption of a new behaviour, they would be able to change their behaviour *voluntarily* (DoH, 2008) and not due to bans, punishments and restrictions, which according to Smith (2003) and Geller (2002) may have an inverse effect on the target audience persuasion to 'buy' the social marketing products. On the other hand, Donovan (2011) disagrees with the term 'voluntary' and believes that the current conditions cannot facilitate the voluntary, free choice of the citizens. In addition, the fact should not be neglected that in many cases and due to unequal socioeconomic and educational background of populations, legislation and regulations can make the adoption of a healthy behaviour easier; for example it can facilitate the access to healthy food by reducing its price or making it available in more places (WHO/Europe, 2004).

Thirdly, social marketers should not rely on just communicating the health benefits of their programme. The development of the right message may be more complex according to consumers' needs (Jones and Rossiter, 2002). Smith (2003) points that people are not motivated only by health benefits but also by what they find interesting and important, such us being sexy, young, good-looking and cool (Bird and Tapp, 2008).

Fourthly, another very important factor is the selection of the target audience. A study (Dutta-Bergman, 2003) has shown that community participation can influence individual behaviour as well as changes at policy level. So it may be better to target people with high community involvement who can be the future supporters of our

brand. At the same time the wider environment is really important, therefore there should be a focus on people that can influence the target audience such as their peers and family (Hastings, 2007, Stead et al., 2007a, DoH, 2008).

Fifthly, beyond audience research for the consideration of consumers' needs, social marketing professionals agree that people should participate in the development of social marketing interventions because this could strengthen their commitment towards what they have created (Hofmeyr and Rice, 2000, Syme, 2002, Lefebvre, 2007, Smith, 2008a).

Sixthly, the competition should also be evaluated. It can be 'purposeful', for example the food companies are the competitor of a campaign against obesity or about healthy eating, and 'inertial'. Inertial competition refers to people's resistance towards the behaviours that social marketing promotes which are not very attractive and most of the times hard to adopt (Hastings, 2003a). When the competition has been recognised the social marketing product should be designed to transfer greater value than the competitive products. Specifically, social marketing products should offer short term along with long term benefits in contrast to the competitive marketing products that offer short term benefits but long term health costs. At the same time the perceived cost must be reduced to make the product more desirable (Smith, 2002b, Andreasen et al., 2008). Thus, social marketing products must be fun, easy, popular and cool (Hastings, 2003a, French, 2008), should cover target audience's needs more accurate than the competition (Deshpande et al., 2004) and be compatible with existing values (Dutta-Bergman, 2003). Furthermore, the brand of social marketing product should be memorable and catchy and in line with the perceptions, values and beliefs of the target audience in order to feel comfortable to adopt it (McDivitt, 2003, Kotler and Lee 2008). The use of new media like online forums, facebook and interactive webspaces provide a channel for more personalised social marketing products, direct and easier access, less waste of time and money, better access to younger target audiences and experiences sharing with peers and people having the same worries (Lefebvre, 2007, Bird and Tapp, 2008).

Seventhly, another great challenge for social marketers is to cooperate with the competitors by developing partnerships with the private sector, helping them at the same time to increase their profitability through social marketing product promotion

and support (Lee et al. 2005, Hastings, 2003a). The creation of a partnership can be invaluable in social marketing be it upstream, downstream or midstream. For example, partnerships between the public and private sector has proved to maximize the effort for public health improvement (Ahn et al., 2000). Usually social marketers find funds and gain better access to the target audience through their partners and that gives power to the latter because they have the opportunity to develop public relations, promote their social responsibility and hence their products/services and elude government regulation by adopting self-regulatory strategies (Bentz et al., 2005, Lagarde et al., 2005). Most of the times the third parties (funder/ partner) care about their own benefit and not about the results and the sustainability of the social marketing intervention therefore a careful selection of the partners is vital (Lagarde et al., 2005, Sowers et al., 2005)

Eighthly, although there is evidence that community-based strategies are more effective than national due to the fact that they are more targeted to specific groups which have common needs (Carroll et al., 2000, Hornik, 2002, Dutta-Bergman, 2003), a multi-sector cooperation at local and national level that includes the state, the citizens, the policymakers, NGOs and both the private and public sector is vital (Sowers et al., 2007). Lavack et al. (2007) suggest that a combination of community-based intervention and the use of mass media can improve efficiency.

Ninthly, while social marketers try to develop an intervention considering all the above, the ethical issues of social marketing must not be overlooked. There are two schools of social marketers. The first (Glecker, 2006 cited by Dann, 2007) sees social marketing as a tool for good and the other (Dann, 2007, Andreasen, 2006 cited by Dann, 2007) as something neutral that can be used according to the values of the user. Whichever position a social marketer chooses there is a great need to evaluate the ethical sides of each intervention, because in most cases social marketing campaigns deal with vulnerable social groups which should not be mishandled.

To sum up, Kotler and Lee (2008, p.66) suggest the following 15 principles of success:

1. take advantage of prior and existing successful campaigns
2. start with target markets most ready for action
3. promote single, simple and doable behaviours-one at a time

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4. identify and remove barriers to behaviour change

5. bring real benefits into the present

6. highlight costs of competition behaviour

7. promote a tangible good or service to help target audiences perform the behaviour

8. consider non-monetary incentives in the form of recognition and appreciation

9. make access easy

10. have a little fun with messages

11. use media channels at the point of decision making

12. try for popular entertainment media

13. get commitments and pledges

14. use prompts for sustainability

15. track results and make adjustments

Lefebvre (2007) supplements the suggestions of Kotler and Lee (2008) by pointing out the 5 Es that social marketing effort should include to avoiding failure: 'Education' of the target audience in order to be aware of the healthy and unhealthy behaviours, 'Engagement' in the purpose of the initiative, 'Entertainment' offered by the initiative, 'Empowerment' of the target audience to participate actively in the initiatives and 'Evangelism' which means that the target audiences should become the evangelists who will promote and support all these efforts.

When social marketers implement the above in the development of social marketing interventions there is a great probability that they will succeed. But they should not be avaricious. As Smith (2008b) suggests, "...successful reform starts with the ripest fruit -the easiest win- and then uses this success to build momentum."

3.7 The Peculiarity of Healthy Eating as a Social Marketing Product

The components presented in the previous paragraph have been included in interventions about various healthy behaviours like anti-tobacco, safe sex and healthy eating campaigns. Despite the fact that all these campaigns have a common objective, to improve populations' health, programmes that target healthy eating behaviours have some peculiarities due to the nature of food.

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Eating habits are multifaceted having a biological, cultural, psychological and social dimension. First of all, food works as a fuel for our organism (Hastings, 2007), so it is something that we cannot abstain from like tobacco. Thus, it can lead to good health or even to death if there is lack of food or if the food is unhealthy (Lang et al., 2009). There is also a strong link between food and culture (Lang et al., 2009). Different people have different views about meals, cooking habits, food preparation and foodstuffs (Asp, 1999) and these beliefs affect their perceptions about healthy eating and good nutrition. In many regions food is also linked with religious beliefs (Asp, 1999) as is the case in Greece. Also, in different countries, different kinds of foodstuffs are promoted more than others, as in the case of the UK where fruits and vegetables are not common in their diet, while products high in fat are more popular (Lambert et al., 2002).

In its psychological dimension, people often eat specific foodstuffs when they are feeling sad or stressed or as a way of giving a gift to themselves and to people they love (Hastings, 2007). Furthermore, concerning its social dimension, food can be a means to bring people together, like family members who gather to have lunch, or friends who meet each other in restaurants (Asp, 1999).

Moreover, according to Lefebvre (2003), healthy eating faces more competition (internal and external) than for example physical activity, because of the nature of food and the power of the food industry which still deny the negative effects of their products on the population's health by providing unsupported scientific data (Chopra and Darnton-Hill, 2004) and is in a constant attempt to increase its profits (Lambert et al., 2002). Finally, the originated costs of food can be linked to people's health, social and environmental consequences (Lang et al., 2009).

In addition, food can have many options (fresh or frozen), variety and different hidden components that could be good or bad for health and the consumer may be aware of these (when buying a packed product that has the components on the package) or not (when eating in a restaurant) (Lambert et al., 2002). Also, people may like or dislike food based on its taste, smell, appearance, colours, texture, temperature etc. (Drewnowski, 1997).

All these attributes of food make it more difficult for social marketers to fight against the unhealthy nutritional habits by understanding the leading factors of people's choices towards food. Therefore there is a need of a variety of approaches to cover all these issues. In the next paragraph there will be a presentation of the way that social marketers have dealt with issues around food in order to promote healthy eating behaviours and reduce obesity rates.

3.8 Lessons from Social Marketing Interventions about Nutrition-Related Issues- An Overview of the Literature

The aim of this thesis is to understand the role of social marketing in improving the nutritional habits of Greeks. In the previous paragraph the peculiarities of food have been introduced along with the difficulties that social marketers would face when introducing healthy nutritional habits. In this context, there will be an overview of international initiatives that aim to promote healthy eating, reduce obesity rates or endorse any other aims relative to nutritional issues, in order to find out whether it is possible for social marketing to achieve its objectives in the sector of nutrition.

In a review (McDermott et al., 2006) of 31 studies on nutrition there was strong evidence that nutrition interventions using social marketing practices can be effective in terms of changing nutritional knowledge, perceptions and behaviour, while there was limited effect on physical health like BMI, blood pressure and cholesterol, probably because the latter takes a longer time to change or they were not measured (Stead et al., 2007b). Moreover, in respect to obesity, a review of 41 social marketing initiatives showed that the majority of the interventions were effective in achieving behaviour changes or for BMI, overweight and obesity prevalence (Gracia-Marco et al., 2011).

Different studies suggest specific components that led to the effectiveness of social marketing interventions towards nutrition-related issues. These refer to the characteristics of the target audience, the development process of the plan, the place of implementation, the evaluation of the plan and the wider environment.

In terms of the attributes of the target population, social marketers, while trying to develop a social marketing intervention on nutrition, should recognise the factors that affect the nutritional habits and the food choices of the target audience. In the case of children, the nutritional habits and behaviours of their families should be considered as well because there is strong evidence that dietary patterns of children are affected by their family (Fitzgibbon et al., 2002). Smith (2002a) supports the social networks' existence, because of people's need to socialise with others. Carroll's et al. (2000) review on social marketing programmes has revealed that neighbours and families play an important role in the individual's behaviour. Therefore they suggest a community-based social marketing intervention for nutritional issues especially for the prevention of negative behaviours. Wilkinson and Marmot (2003) have also highlighted the importance of being poor and the implicit stress, which is a leading obesity factor for the poor, along with unhealthy diet and lack of physical activity in the so called 'food deserts' (Kennedy, 2001, Lang and Caraher, 1998). Therefore, stress elimination through convenient and appealing products and services (French, 2008) for the low-income population should be the first concern for social marketers (Smith, 2007b).

Concerning the development of the plan, target audience participation in the development of the intervention is the main characteristic of effective social marketing campaigns on nutrition (Syme, 2002). Alcalay and Bell (2000) in their review of 50 campaigns on nutrition and physical activity recommend that the components of the campaigns should be based and driven by the objectives that have been carefully set. Behavioural theories, research and audience segmentation should be considered carefully while designing the campaigns (Walter and Agron 2002). Moreover, Alcalay and Bell (2000) suggest the direct promotion as more likely to bring positive results when it focuses on children and adolescents. Dutta and Bodie (2006) alert that even if a community-based or another approach is going to be adopted, campaigns for health improvement should not focus on just one aspect of health behaviour such as the consumption of fruits and vegetables but they should include all the aspects related to healthy eating. In addition, McDermott et al. (2006), ascertain that social marketing interventions can produce changes across a variety of outcomes, like higher fruit consumption, lower fast food consumption etc. and not target only one goal at every attempt. Successful social marketing campaigns on

nutrition offer the target audience short term, attractive and motivational personal payoffs during the exchange process and constant support in order to quit their old habits.

What is also very effective is the production and publication of people's stories about how they manage to control their eating habits and weight (Lavack et al., 2007). Many effective social marketing campaigns on tackling obesity use the principles of Protection Motivation Theory in order to create persuasive messages, which will increase target audience empowerment, by reminding them of the costs of being obese and by raising their self-confidence that they can adopt healthy eating habits and achieve normal weight. Convincing messages could lead to the adoption of healthy perceptions, beliefs and behaviours which could be diffused in the population. Therefore, social marketing campaigns should guide the individuals by providing specific small steps in order to achieve their final objective (Cismaru et al., 2008). These actions could create a sustainable will to change especially when the messages are designed in a way that does not blame the victim but works supportively to her/his needs (Kotler and Lee, 2007).

About the place of implementation, community-based social marketing interventions are suggested by Dutta-Bergman (2003) as well, on condition that the actions will be in line with the existing culture. Furthermore he suggests that strategies to reduce economic barriers for the adoption of the proposed behaviour like coupons and discounts, would lead to a high participation rate. In addition, Kennedy (2001) states that 'community involvement is paramount to sustainable programmes' but he also comes to the conclusion that it is difficult for poor and low income people to adopt healthy eating patterns because of the environmental conditions rather than their lack of knowledge, due to expensive healthy food and 'food deserts' existence in low socioeconomic areas. It is noteworthy that in order to implement effective social marketing interventions at community level, professional training is vital in order to communicate social marketing messages effectively (Cassady et al., 2002). In another case study about a social marketing intervention cited by Cork (2008), workshops in schools (place) have increased the consumption of foodstuffs that are considered healthy; hence there was an impact on behavioural change. At the same time, a review of 14 school-based interventions showed an increase in fruit and vegetable servings

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(Knai et al., 2006). Furthermore, a review of Pomerleau et al. (2005) shows that worksites and health care settings are appropriate places for effective interventions that focus on increasing fruit and vegetable consumption.

In terms of monitoring and evaluation, there must be consistent measurement of intervention impact, the results of which could be a very important tool for future interventions (Lister et al., 2008). Lavack et al. (2006) cited by Lavack et al. (2007) point out how important it is for the participant in order to join a programme to have feedback of his /her progress measurements during the attempt and prizes should be given as means of reward and incentives.

Concerning the wider obesogenic environment, recent data on interventions which focus on individuals, such as the popular weight loss diets, have shown not very effective (Dansinger et al., 2005) and have created a growing need for environmental interventions. (Douglas Evans et al., 2006). According to Stead et al. (2007b) social marketing has been shown to change behaviours towards healthy eating and physical activity while at the same time contributing to the changes of the wider environment in order to promote healthy lifestyles. For this reason, there is a need for a long-term, coherent and coordinated strategic approach. Furthermore, Swinburn et al. (1999) have added that obesity is a result of behaviours, biological needs and characteristics of the situation; hence attention must be paid to each one of them. However, environmental interventions have not attracted great attention. For this reason, they suggest the use of environmental interventions, along with individual ones, that will include the following steps: analysis of the environment, the problems and the needs of the target population, development of the programme strategy, implementation and monitoring. Kennedy (2001) supports the multifactorial approach for a sustainable change of lifestyles. Walter and Agron (2002) suggest that media advocacy along with social marketing should be used to change the environment.

Finally a review for the national Healthy Eating Programme in New Zealand has revealed some important factors that could lead to successful social marketing campaigns on nutrition. These factors are:

"• Simple messages that are tailored to a target group, culturally appropriate and acceptable to a wide range of stakeholders and service providers.

• *Use of a comprehensive approach with multiple intervention strategies and communication channels.*

• *Development of strong partnerships between government, industry, NGOs, and communities.*

• *A national approach that is coordinated with, and supports, local programmes.*

• *Interventions that are of a sustained duration.*

• *Culturally specific and tailored interventions set within a population approach that includes community control, community participation and leadership.*

• *Monitoring and evaluation of social marketing programmes to inform and modify programmes over time.*

• *A focus on foods rather than nutrients.*

• *A focus on environmental barriers, for example through legislative, pricing and policy changes"* (Thornley et al., 2007).

Thus, these examples can lead to the conclusion that in the case of nutrition and obesity it is probably imperative to use social marketing along with other initiatives like policy and regulations due to its multifaceted nature that takes more time to move on from impact to outcomes. In the next section the arguments about the effectiveness of social marketing programmes will be discussed.

3.9 Does Social Marketing Work? - Main Arguments

Social marketing has been adopted by major public health organisations, like the WHO, and governments, like the U.S.A. and the U.K., and plays an important role in many public health campaigns (Buchanan et al., 1994). Social marketing cannot be the 'cure' for every public health issue (Walsh et al., 1993). Since the current evidence is not the most supportive of the impact on behaviour there is reasonable disbelief in social marketing usefulness. It is noteworthy that sometimes, even the marketers themselves have been hesitant to apply marketing principles in this field (Hastings and Haywood, 1991). This reaction consists of two axes: the high costs of social marketing interventions (in relation to their results) and the introduction of market components into the public health domain. The following discussion will be based on these two axes, starting with the later.

Buchanan et al. (1994) in their article-response to Hastings and Haywood (1991), try to reveal any costs that the use of social marketing may conceal, while highlighting its ethical dimension (Walsh et al., 1993). Furthermore, they blame social marketers for providing ideas that are not novel to the public health world but have been restated in a more 'catchy' way, such as the 4P's (Buchanan et al., 1994). However, the major turmoil is caused by the introduction of the 'exchange', 'product' and 'consumer' concepts (Rayner, 2007). Social marketing adversaries see exchange as something against the selflessness and philanthropy required in the health field and marketers as people who try to make profit from their 'market' (Buchanan et al., 1994), without understanding that the idea of profitability in the public health sector refers to efficiency and not profit. Furthermore, marketing adversaries cannot see how behaviour can be perceived as a product and be consumed (Rayner, 2007). Therefore, they question social marketers' motives and their relations with the public because they could reflect commercial marketing's concerns and values (Wallack, 1990, Buchanan et al., 1994). But obviously that is not the case, as exchange in social marketing is about values, not money; it is about a win-win situation, not about domination (Hastings and Haywood, 1994) and the relationship between social and commercial marketing is like *"...football and rugby. The two marketing games have much in common and require similar training, but each has its own set of rules, constraints, and required skills. The good player of one game may not necessarily be a good player of the other"* (Bloom and Novelli, 1981). Probably this debate on exchange notion is the reason why in the definition of social marketing or in its key elements many authors include the concept of the exchange theory (e.g. Lefebvre and Flora, 1988, Kotler and Roberto, 1989, Novelli, 1990) while other authors omit any mention of the exchange theory (e.g. Manoff, 1985, Andreasen, 1995).

In the same context, social marketing has been accused of following the motto 'the end justifies the means', paying no attention to the side effects that an action could have on the public as long as it can lead to a desirable result (Lefebvre and Flora, 1988, Buchanan et al., 1994) and here the answer is that it is the same thing, the knife, that can be used to kill or to slice bread (Dann, 2007).

Concerning resources allocation, the biggest fear of public health specialists is that more resources are going to be spend on supportive activities like planning and

research and less on actions (Lefebvre and Flora, 1988) and that the costs of all these procedures are very high in relation to the effects (Goldberg, 1995). In contrast, social marketing, as a trend coming from the economic and business sciences, has the potential to be very cost-effective and at the same time to reach the largest possible population (Lefebvre and Flora, 1988).

According to Quinn et al. (2005) public health professionals do not use social marketing despite the fact that it consists a public health tool due to low budget, not enough time, being already committed to another approach, or because they don't have knowledge, skill or experience, they believe that social marketing is not 'real science' and 'manipulates' people's values, so it is not useful for policy interventions. Almost the same prejudices expressed by health professionals and practitioners towards social marketing were also presented by the study of Whitelaw et al. (2011).

Finally, the disconnection between social and commercial marketing forces Rayner (2007) to doubt whether social marketing could change consumers' behaviour as effectively as commercial marketing does and to conclude that social marketing theory has a narrow perspective as a psychological theory, therefore, it cannot lead to the desirable results of altering behaviours. Hence, it should be replaced by a stronger, more integrated theory.

Thereupon, the question 'does social marketing work?' would be better reformulated into: 'is social marketing worth the effort and the money?'

Wallack (1990) challenges social marketers to persuasively present the advantages for public health through the use of social marketing. Also, other social marketing supporters are aware of its limitations and its questionable effectiveness and call the interventions *"marginally successful"* (Carroll et al., 2000). Probably many social marketing interventions failed to meet the high expectations of their developers and funders due to wrong designation, implementation, evaluation biases or lack of support or relevance to the other initiatives included in the intervention mix. It is also very risky when tackling a health problem to use social marketing as an approach on its own; it should always be a part of an intervention mix along with other initiatives. On the other hand the fact should not be neglected that some social marketing interventions have been successful in preventing the adoption of unhealthy eating

patterns in children as well as in other fields like family planning and smoking prevention (Alcalay and Bell, 2000, Stead et al., 2007a). Their effectiveness on knowledge and attitude change cannot be ignored because, according to behavioural theories, knowledge, followed by attitudes, are two of the leading factors of human behaviour. In the case of nutritional habits and obesity, changes in behaviour can only be seen in the long run, because in contrast to commercial products, which mostly offer immediate gratification, health 'products' are usually delayed. Therefore the trial of new combinations of social marketing techniques may result in the desirable outcomes but again there is a possibility of belated benefits. Hence, there is a great need for sustainable, long-lasting and repeatable interventions along with other techniques that can affect other leading aspects of peoples' behaviour (e.g. legislation changes the environment in order to facilitate peoples' behaviour). But is it worth spending so much money for little or no effects in terms of behavioural change?

The answer is not simple, but the anti-obesity, nutrition related programmes implemented by many countries, like the U.S.A., Australia, New Zealand, Canada, Italy and the U.K. show that social marketing is going to play a leading role in the future interventions towards nutrition and obesity. In England the social marketing campaign against obesity has spent for its activities £75 million (DoH, 2009) and this shows that it is extremely expensive to use marketing techniques, especially advertising. Therefore, many times even though the evaluation of a programme shows positive results, the funding stops and this situation cannot lead to permanent and sustainable results. Probably this is one reason why the current social marketing campaigns have little or no impact on trends and cannot cope with environmental factors (Alcalay and Bell, 2000, Rayner, 2007). Another reason could be the fact that social marketing tools like simulations and formative researches on small groups of the population cannot allow social marketers to know exactly what the real impact of an intervention would be. Therefore an effective experimental intervention on a small population sample can easily be ineffective on the entire community. Also, marketing experts often complain of being asked to contribute to these initiatives when it is already too late and the process has begun on a wrong basis, so there is little that they can do (Walsh et al., 1993).

In the case of obesity, Rayner (2007) argues that social marketing theory may be unhelpful and he amplifies his argument based on the fact that it targets the individual behaviour rather than the societal. Hence, he believes that 'social marketing theory may only be temporarily popular as a model for planning interventions aimed at behaviour change'. Moreover, there are health professionals who argue that the integrated approach of social marketing theory seems to take the external (social & physical) environment as given; hence, social marketing can provide nothing more than what health promotion does (Wallack, 1990, Buchanan et al., 1994) and its individual-centric philosophy has been translated as an effort to *"blame the victim"* for his/her choices (Lefebvre and Flora, 1988, Kotler and Lee, 2007, Hastings, 2007). Since obesity and other public health problems are not only individual problems but mainly societal, the effectiveness of social marketing, that targets peoples' behaviour, has been questioned, especially in the case of children who are not mature enough to make their own choices and are being influenced by their families and other peers (Lang and Rayner, 2007). On the other hand a societal problem is at the same time an individual problem; therefore, social marketing can be effective in the context of proper health policies but not independently and it can also affect the wider environment in its comprehensive upstream approach (Kotler and Lee, 2007). This can happen by targeting the stakeholders of the immediate and wider domains in the same way that social marketing targets the individuals, by identifying their needs and motives, segmenting them and providing an exchange of values in order to change the 'ill' environment (Hastings, 2007, Kotler and Lee, 2008).

Furthermore, Rayner (2007) gives a very good reason why social marketing interventions cannot reduce obesity rates. He argues that obesity is a multifaceted phenomenon that has not only to do with people's choices. It depends on many societal factors, stimuli that are all around us, that lead people to make the wrong move and adopt an unhealthy lifestyle. Thus, he suggests abandoning the individual interventions and targeting the societal factors through policy, legislation and regulations. The question raised here is how can a societal factor change if the people in a society have not changed? It is something like the chicken and the egg. But in this case it does matter what comes first. A social marketing friendly approach suggests that people should learn that they have to change without the pressure of adopting the changing parameters of their society. Therefore it would be more anthropocentric if

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the state does not decide what to change but change what the citizens ask for and give them freedom of choice (Hastings, 2007). On the other hand, it is more likely that social marketing interventions on nutrition would work better in the context of an advertising regulation of unhealthy foods, because the new 'advertising-free' environment would be more supportive for people to change behaviour (Douglas Evans et al., 2006, Thornley et al., 2007). Both are necessary and they are going to co-exist like the chicken and the egg but the answer to what should come first is not simple and depends on the context of every problem. Hastings (2007) suggests that moving our efforts only upstream or downstream can be proved dangerous or ineffective and not efficient. What is needed is *"action at all sections of the stream"* (Hastings, 2007, p. 112).

In fact social marketing has often been confused with commercialisation and carries the negative reputation of advertising (Hastings and Haywood, 1994, Jobber, 2001). All the misconceptions mentioned before spring from the normal resistance of people toward change and especially toward a trend of the political and economic science, which has been criticised probably more than anything else due to the negative effects of advertising that tries to penetrate the social sector. On the other hand, the cost of prevention by using social marketing approaches is rather small compared with the high costs of healthcare and the current reduction of healthy-life years (IUHPE, 2000). However, understanding these tensions and considering the current situation, there is no time for 'civil wars'. It is vital to use all the available means to tackle obesity, tobacco use and other global public health problems. Harmful advertising should be controlled, while the good types should be welcomed and everyone in the public health sector should be made to understand that the days of romanticism have passed for ever giving their place to what capital commands and unfortunately that is very obvious in the public health sector where the budgets for running health interventions are really short.

As Walsh et al. (1993) state, *"a number of perennially frustrating health problems society continues to confront-the inadequate reach of prenatal care, immunization, and other public health services; and the intractability of risk behaviour leading to the spread of human immunodeficiency virus, substance abuse, teenage pregnancy, and violent injury-can be radically rethought and more effectively addressed"*

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through social marketing lenses. And what can work better depends on the context. For example, when there is no awareness there is a need for education, when there is awareness but resistance to change there is a need for social marketing and when there is no desire for change what is needed is law and policy. So social marketing works only when it adopts a more upstream and activist approach (Goldberg, 1995) while being combined with other methods such as media advocacy, legislation and policy; that is when it can have positive and sustainable outcomes.

3.10 Social Marketing and Policy

In this paragraph the existent connection between policy and social marketing will be presented in order to justify the use of social marketing theory for the purposes of this study. In the case of nutrition, policy can take the form of food policy, nutritional policy and public health policy and these would embrace social marketing and other kinds of nutritional interventions. This relation exists due to the fact that according to the ecological approach, the social environment has a marked impact on our choices; hence, people need supportive environments that policy could create (Douglas Evans et al., 2010).

However, policies cannot be introduced without citizens' participation according to the *"public driven model"* (O'Reilly, 2010). In this context, social marketing could be considered appropriate in order to reveal what citizens need, translate this into policy terms and try to affect policy-makers, the mass media, community responsible agents and *"other gatekeepers of policy change"* (Bentz et al., 2005) to adopt a citizen-friendly policy that would facilitate people's healthy behaviour (upstream social marketing). Then, based on the policy objectives and targets, the social marketing strategy can be developed, implemented and evaluated (downstream social marketing) based on the Total Process Planning Model (NSMC, 2006). It is about a collaborative and complementary relation between social marketing and policy; therefore, every effort to tackle health issues should contain both (Novelli, 2007).

It is noteworthy that most social marketers agree that in order to achieve greater impact on the population's health status, there should be change in socioeconomic conditions and this can happen only through appropriate policies (Bentz et al., 2005). Actually, Wymer (2011) argues that social marketing campaigns often fail to achieve

their goals because they lose their upstream character or they do not even have any upstream orientation. Therefore, Stead et al. (2007b) talks about the existence of 6P's in the marketing mix, which include, apart from the 4Ps, 'Policy Change' and 'People' and this shows that policy can and should be a part of the marketing mix. For example, a nutritional intervention might comprise 3P's like, media advocacy (Promotion) to spread the message of healthy eating, policy development (Policy Change) to reduce fruit prices and community activities (Place) to give more direct motives. Moreover, in obesity prevention, family, community and policy-makers can be targeted by social marketing initiatives (Douglas Evans et al., 2010).

Another important issue is that social marketers should try to change not only public policy but also policies and practices of the private sector which in the case of nutrition can include the elimination of food marketing to children and the creation of healthier foodstuffs from the food industry, which at the moment is a very powerful competitor (Novelli, 2007). In the direction of policy shaping, media advocacy plays a very important role as it can influence mass perceptions towards health issues, like obesity and healthy nutrition, due to the mass media power to influence and shape culture and values, and therefore it can be a powerful tool for social marketers to influence policy-makers (Douglas Evans et al., 2006). This relationship makes clear that social marketing probably would not work effectively without the existence of a supportive environment and for the development of an environment that would facilitate people's healthy behaviours the existence of social marketing is vital in order to guide policy change. So, for example, social marketing initiatives to improve nutritional habits will work better in a food regulatory environment. Food regulations can play an important role in the effectiveness of social marketing because they can influence people's choices. These can include accurate labelling, health claims on food packages, in advertising and at the points-of-purchase and reduction or elimination of food advertising aimed at children (Swinburn et al., 1999). The need of combined downstream and upstream social marketing initiatives to tackle obesity has been also raised by Noble (2006). This connection between policy and social marketing stems also from the 'three nutritions' typology (see Section 2.15) which highlights the social aspect of nutrition that affects food choices.

To sum up, social marketing advocates suggest that social marketing can contribute to shaping policy for the creation of supportive environments by understanding citizens' needs, guiding policy-makers and other stakeholders in the right direction, creating engagement with the policy measures because they will be based on people's wants and influencing people to easier accept and adopt any regulations through knowledge increase. Therefore, downstream and upstream social marketing should work in cooperation to increase the effectiveness of the interventions (Hoek and Jones, 2011). For this thesis, there is an interest in food policy and social marketing, hence, this section links Chapter 3 with the following chapter where the Greek food policy will be introduced.

3.11 Conclusion

Literature review suggests that social marketing, always in the context of an intervention mix, along with other appropriate initiatives like regulations, media advocacy, education and health promotion actions could play an important role for the improvement of nutritional habits of a population.

Especially important is the conjunction of both downstream and upstream social marketing initiatives in order to increase the potential effectiveness of the interventions in order to create supportive environments through policies that would embrace downstream initiatives.

Theoretical behavioural models that examine the individual's behaviour are used in social marketing programmes in order to understand the motives of the target audiences and help them adopt healthy behaviours. The debate here is whether all these models are appropriate to understanding people's behaviour or whether specific models that go beyond the individual should be adopted to achieve this goal.

Moreover, social marketing through its philosophy and the tools and concepts that it provides could probably help policy makers answer the questions raised about the social perspective of nutrition and for this reason, this thesis examines the role that social marketing could play in shaping the Greek Food Policy. It is very important though, that food policy could not be considered to be like any other policy due to the

peculiarities that embrace food which have biological, sociological, psychological and cultural dimensions.

So, in the following chapter, the Greek food policy will be presented along with any initiatives towards healthy eating in order to understand the current situation in Greece and to start understanding any links that may exist between social marketing and food policy.

Chapter 4: Food Policy: Definition & Relation to Nutrition

4.1 Introduction

"Eating is an agricultural act, as Wendell Berry famously said. It is also an ecological act, and a political act, too." (Pollan, 2006, p. 10).

The nutritional habits of a population are determined and can further be determined by the current food policies in a country. Therefore, in this chapter there will be an introduction to food policy in general and a reference to the main actors who can affect food policies based on the Triangle Model by Lang (2005a). Also, there will be an overview of food policies at a global and a European level that could affect the Greek food policy. A detailed presentation of the food policy in Greece will follow.

The Greek food policy that affects the food system and hence the eating habits of the population will be discussed in terms of the current initiatives towards food safety, agriculture and healthy eating. The nutrition-related initiatives will be divided based on the actor that undertakes them, i.e. State, Civil Society and Food Supply Chain.

Details about the relationships between food policy and food system players and the degree to which each one of them can affect eating habits through initiatives that could include policy, health promotion, social marketing or other initiatives will be also revealed through the research study (see Chapter 8).

As there was no scientific literature about the nutrition-related interventions in Greece, grey literature from websites, leaflets and archival data was gathered (see Section 5.6).

The aim of this chapter is to facilitate the understanding of the current situation, the development of the research and the selection of the participants for the research, hence the sources of the data could not be presented in detail in order to keep the anonymity of the interviewees, because connections can be made between the initiatives presented in this chapter and the findings from key stakeholders in Chapter 8.

4.2 Food Policy Definition

Food policy is that part of public policy that refers to food. This concerns a wide group of actors from growing food through to eating and including transport and inclusion policies. According to Timmer et al. (1983) *"food policy encompasses the collective efforts of governments to influence the decision-making environment of food producers, food consumers, and food marketing agents in order to further social objectives. These objectives nearly always include improved nutrition for inadequately nourished citizens and more rapid growth in domestic food production. Many countries also seek more equal income-earning opportunities and security against famines and other food shortages"*. More recently, Lang (1997) gave the following definition: *"Food policy is about the decision-making process which affects who eats what, when, where and on what conditions. (...). In the sphere of food policy, we are interested in the distribution of power over food, this vital means for human subsistence. We try to piece together the different areas of activity which affect the total picture of food production, distribution and consumption. The shape of food policy may be as interesting to us as its content"*.

Therefore, food policies can and should affect the nutritional habits of a population through:

- The promotion of healthy nutritional patterns, by using marketing techniques and by making healthy foods easily accessible and affordable.

- The provision of safe and quality food at every stage, from production to consumer.

- The equal distribution of foods so that everyone would have choices for a healthy and adequate nutrition.

- The reinforcement of the cultural patterns of the country in order to promote the local production. This is very important in the case of the Mediterranean diet because it is considered as one of the healthiest diets in the world. Furthermore, local production could improve the national and local economy.

- The education of the population and especially of the younger generations in order to learn how to make the right choices.

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4.3 Food Policy Actors

According to Lang's Triangle Model (2005a, p. 126), food policies are being developed based on the interaction of three fragmented power groups who usually experience tensions between them (Figure 4.1).

Figure 4.1: The Triangle Model of Food Policy

State
includes local, sub-national, national, regional and global governments and governmental organisations.

Food Supply Chain
includes farmers, manufacturers, retailers, logistics and food services

Civil Society
includes the consumers, NGOs, scientists, Consumer Unions etc
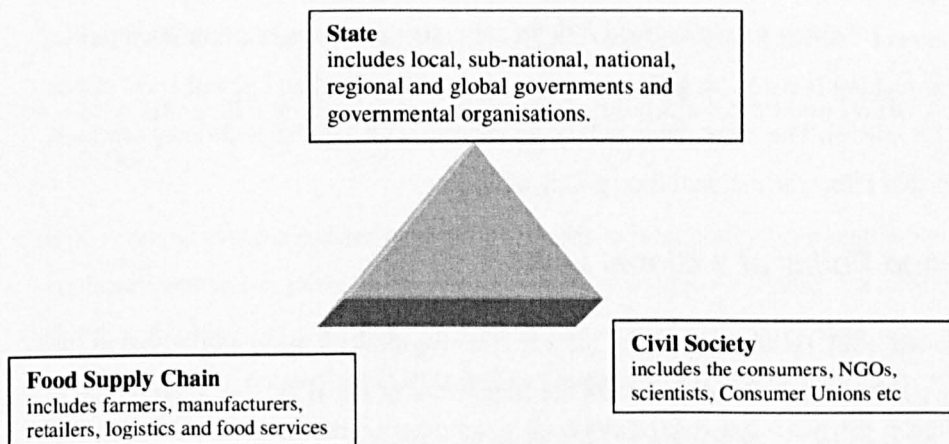
Source: Lang T. (2005a, p. 126)

As mentioned before (Figure 2.12), nowadays the power is in the hands of retailers, so, there is an urgent need for government intervention through food policy in order to protect consumers from being cheated by those who have the power. This can only be achieved through legislation that promotes competition, strict labelling requirements and mandatory food standards (Hawkes, 2008). On the other hand, there is great interest in consumers' protection from unsafe foodstuffs. This interest has increased dramatically after the nutritional scandals of the last decade and it has made the creation of food hygiene standards and monitoring systems vital (WHO/Europe, 2004).

Furthermore, greater attention has been given to environmental influences on food choices, like socio-economic factors and food marketing and to policies that could increase availability and access to fruits and vegetables with simultaneous cost reduction (Morland et al., 2002).

In order to help citizens make the right food choice and protect them from any food-related hazards, the food policy of every European country is shaped by International Organisations as well as by the EU policy-making bodies. This need for international interventions is imperative due to the new trade trends (globalisation) and the European single market in order to protect the consumers all over the world from environmental dangers (pesticides and new cultivation methods) and health problems (food safety and nutrition related diseases) (Maxwell and Slater, 2003, Department for Environment Food and Rural Affairs, 2005). As Lang (2005a) states, nowadays, most decision making is made by governments at national, regional and global level rather that at local level. Therefore, there will be an analysis of the global and European food policies that affect the national food policy of Greece.

4.4 Food Policy at a Global Level

At a global level, Greek food policy includes the negotiations being carried out at the turning point of the millennium within the framework of the WTO. So, food policy is driven by the GATT, which since 1993 includes agricultural issues (WTO website: http://www.wto.org/english/tratop_e/gatt_e/gatt_e.htm).

Furthermore, due to the rapid increase of foodborne diseases, WHO started taking part in the global food policy and in 2003 developed the "Diet, nutrition and the prevention of chronic diseases" report of a joint WHO and FAO expert consultation. (WHO, 2003)

In this context, the WHA, the decision-making body of WHO, came up with the Global Strategy on Diet, Physical activity and Health in 2004 (WHA 57.17/2004), which at a national level defines national dietary and physical activity guidelines, and highlights the need for public health endorsement in the food and agricultural policies of the member states (WHO, 2004).

Another important issue related to the policies that affect nutritional habits is the one concerning food marketing and advertising. WHO, in the Report on Marketing of Food and Non-Alcoholic Beverages to Children (WHO Forum, 2006), highlights the need for an international effort to eliminate food marketing aimed at children in order

to tackle obesity and promote healthy eating patterns. In this context four policy options have been suggested:

1. Prohibiting promotional marketing of energy-dense, micronutrient-poor food products at specified times, in specified settings, using specified techniques or targeting specified age groups.

2. Prohibiting the commercial promotion of energy-dense, micronutrient-poor foods and beverages to children.

3. Prohibiting the commercial promotion of all food or drinks to children.

4. Prohibiting all commercial promotion of any products to children (WHO Forum, 2006).

In this context many countries have adopted policies which vary from regulatory, non-regulatory and self-regulatory. In Sweden, Norway and Quebec there is a total ban of advertising aimed at children, in Ireland, Australia and Italy there are partial restrictions and in most of the countries like Greece (SEVT, 2007), the U.S.A. and the U.K. there are self-regulation measures by food and advertising industries (Caraher et al., 2006).

Also, another body is the FAO, which is a UN agent trying to fight hunger and promote policies for sustainable agriculture (FAO website). The joined FAO/WHO food standards programme led to the development of the Codex Alimentarius Commission in 1963. The main objectives of the Commission are to protect consumer health and promote fair and safe international trade by setting standards, codes of practice and guidelines for safe and quality foodstuffs. These standards are used for food policy development at every level (Codex Alimentarius website)

4.5 Food Policy at a European Level

Since the 1980s when Greece joined the EU, it has had to align its policies to what the common market enforces. Therefore food policy in Greece at a European level includes the application of the agricultural aspect of Agenda 2000. Specifically, all agricultural issues are under the CAP according to the EC Regulation No 1782/2003 and its amending Regulations. The Directorate of Agricultural Policy and

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Documentation of the Ministry of Rural Development and Food is responsible for the explanation and implementation of CAP in Greece.

Furthermore, the EU has published its leading principle on safe foods from the farm to the final consumer in the White Paper on Food Safety (COM 719/1999). According to this Paper, the EFSA was created and is responsible for food safety issues through the functions of risk assessment, risk management and risk communication at a European level. The general principles, requirements and procedures on food safety from the farm to the final consumer follow Regulation No 178/2002 as established by the EFSA. Furthermore, there is strict implementation of measurements for food security and hygiene based on the COM (2004) 852, COM (2004) 853, COM (2004) 854 and COM (2004) 882 Regulations of the European Parliament. According to these regulations, risk analysis at every food production stage is mandatory and includes the following areas:

- Animal feeding
- Animal health
- Plant health
- Sanitary controls
- Labelling (including ingredients, nutrition data, GMOs and organic products)
- Added substances
- Imported products

All the assessments on food safety are delivered based on the food laws laid down by the RASFF - Regulation EC/178/2002.

Also, WHO published "The First Action Plan for Food and Nutrition Policy WHO European Region 2000-2005" (WHO/Europe, 2001) and 'The Second WHO European action plan for food and nutrition policy 2007-2012' (WHO/Europe, 2008) in its attempt to help European countries overcome the rapid increase of foodborne diseases.

Furthermore, the Directorate-General for Health and Consumers (DG SANCO) is a body of the European Commission responsible for keeping updated data for the EU laws on food safety, consumer rights and health protection, therefore the provided

data, especially the data for the improvement of the RASFF, are used for the development of the national food policies (DG SANCO website).

Finally, since 2005, the EU platform for diet, physical activity and health of the European Commission have been developed to bring together key stakeholders from the Food Industry and the Civil Society in order to solve major issues of nutrition and physical activity in European countries.

4.6 Food Policy at a National Level

In Greece, almost everything is based on EU Directives. Food Policy in Greece is mainly oriented to food safety and hygiene and nutrition in terms of agricultural production and promotion initiatives, which as highlighted in Chapter Two, are strongly linked to the nutritional patterns of a population. So, the Greek food policy will be analysed in this section in its dimensions, i.e. the food safety and hygiene, the nutritional dimension and the efforts towards agricultural production.

4.6.1 Greek Food Policy: Food Safety and Hygiene

Greek food policy is based on the fact that there is high demand for safe and healthy foodstuffs; so, up to now emphasis has been given to food safety and hygiene. Therefore, the National Strategic Plan of Agricultural Development 2007-2013 is based on the new CAP, which stresses the role of agriculture for a better environment and safer foods (Hellenic Ministry of Rural Development and Food, 2008). This Plan was developed with the cooperation of the Ministry of Rural Development and Food, the European Committee, NGOs, social and economic partners and other competent agents for the achievement of social acquiescence. Based on the EU Directives, the Greek Codex for Foodstuffs and Drinks (General Chemical State Laboratory, 2009) has been developed in order to set the guidelines for food inspections.

Regarding safe foodstuffs in Greece according to the EU Regulations mentioned above, there are three public competent agents providing risk analysis and the inspections of foodstuffs from production to the final consumers. For these inspections, the responsible public agents cooperate with the Prefectural Directorates.

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Finally, for the elimination of specific products' stocks there is the Policy of preventive withdrawal. According to this policy stocks of specific fruits and vegetables, cheese, rice and pasta are provided free of charge to families having three or more children, to NGOs and to the Church. The two latter destinations have been chosen because of their charity work to provide food to poor people. The decisions for their selection are the responsibility of the Prefectural Directorate. This policy is based on the EU Regulations COM (2007) 1146, COM (2005) 1819, COM (2004)103 and COM (2007) 937 which in Greece are described in more detail by the Joint Ministerial Decisions for each product category. It is noteworthy that this policy could indirectly lead to a degree to a decrease in disparities of food distribution and to the provision of a sustainable food supply.

4.6.2 Greek Food Policy: Agricultural Production

Whereas the public health/nutritional direction of the Greek food policy is under-developed, there are four fields in it which refer to agricultural production and through which healthy eating and the Mediterranean diet can be promoted due to the empowerment of the agricultural sector.
These fields are:

1. The promotion of the *Protected Designation of Origin (PDO) / Protected Geographical Indication (PGI)/ Traditional Speciality Guaranteed (TSG) and Organic Products*. These labels' main objective is the promotion of food quality. The Directorate of Organic Agriculture of the Hellenic Ministry of Rural Development and Food is responsible for the promotion, management and assessment of these products in Greece. Furthermore, the body which is responsible for the control, supervision, protection and approval of these products is the Agricultural Products Certification and Supervision Organization (under the distinctive title AGROCERT). AGROCERT is a Private Law Legal Entity operating for the public benefit under the supervision of the Hellenic Ministry of Rural Development and Food (L. 2637/98). The certification of these products by AGROCERT, and by other organisations accredited by AGROCERT, warranties full compliance with Community and National Legislation requirements. The Greek policy for these product categories is based on EC regulations and Joint Ministerial Decisions, which provide supplementary measures for the implementation of council regulations at a national level.

2. *Integrated Management of Agricultural Production.* According to this policy measure, the producer reduces chemical use and other methods of cultivation which could destroy the environment and have negative effects on consumer health. According to the new institutional framework, AGROCERT is the responsible national Authority for the evaluation, approval and supervision of private Certification bodies, accredited by the National Accreditation System, regarding the Integrated Management System for agricultural production, in compliance with AGRO 2.1 & AGRO 2.2 standards.

3. Commission Regulation (EC) No 1914/2006 includes detailed rules for applying Council Regulation (EC) No 1405/2006 laying down specific measures for *agriculture in favour of the smaller Aegean islands (population under 100,000).* The main objective of this policy is to promote local production and agricultural economy, to secure the supply of food from the mainland of Greece especially during winter and to maintain the local tradition. The Directorate of Processing, Standardisation and Quality Control of the Ministry of Rural Development and Food is responsible for the monitoring and implementation of the Programme.

4. A national initiative is under way, *'Alternative Agriculture'*, referring to the policy for the support of the production of specific products in order to turn them into important investments from an economic, nutritional and traditional point of view. 'Alternative Agriculture' includes traditional local Greek products such as tsipouro, a Greek alcoholic drink, crocus, asparagus, shell beans, honey, figs, cherries, the mastic of Chios, chestnuts, strawberries, the fava bean and the small tomato of Santorini, pistachios, rice, wine, apples, oranges and peaches. Responsible agents for the selection, management promotion and monitoring of the products of 'Alternative Agriculture' are the Office of 'Alternative Agriculture' in the Ministry of Rural Development and Food and the AGROCERT.

4.6.3 Greek Food Policy: Nutrition Initiatives

This thesis reveals that the Greek Food Policy is mainly oriented to food safety and hygiene while, concerning nutrition, it focuses mainly on agricultural production. Nevertheless, there are initiatives towards healthy eating from the three sectors (see

Figure 4.1) as they are presented in Figure 4.2. The aim of the following presentation of the Greek initiatives toward nutrition is to understand the current context and the existing gaps in this field and link them to the findings from the interviews with the key stakeholders (Chapter 8) in order to draw specific proposals at the end (Chapter 9). For the anonymity of the interviewees, because some initiatives can be linked to the quotes of the key stakeholders in Chapter 8, the organisations responsible for the initiatives, or specific departments of Ministries and state organisations will not be mentioned in the following analysis.

The initiatives presented in Figure 4.2 will be outlined in the following paragraphs.

Figure 4.2: The Greek Interventions on Nutrition

Greek Nutritional Initiatives

State Initiatives

1. National Action Plan for Healthy Nutrition and Eating Disorders

2. National Platform for Action on Diet, Physical Activity and Health

3. Development of the Hellenic Advertisement and Communication Codex

4. Health education in schools

Initiatives from the Civil Society

NGOs

1. Health education programmes

2. Websites

3. Scientific researches

4. Visits to schools

5. Conferences

6. Publications (magazines)

Scientific Associations

1. Conferences

2. Scientific researches

3. Nutritional education through seminars and lectures

Advisory Committees

1. Promote National nutritional preferences in Europe

2. Consult the Ministries for Policies

Consumer Unions

1. Handle consumers' complaints

2. Research about nutritional and consuming habits

3. Visits to schools

4. Websites

5. Advocate for policies to protect consumers

Initiatives from the Food Supply Chain

Food Industry, Retailers, Caterers

1. Health information on the packages and websites and clear labelling

2. Sponsorships in nutritional interventions and conferences

3. Production of healthier and functional products

4. Events for the promotion of healthy diet patterns

5. Limited advertising and marketing interventions on children (self-regulation)

Trade Association

1. Educate their members

2. Promote consumers' protection

3. Advocate for nutrition and food policy measures

4.6.3.1 State Initiatives

The problem of nutrition (and of food in general) is a challenge for the Greek government especially under the pressure of the global and European policies and regulations.

Because of the big debate on food due to the nutritional scandals and the obesity epidemic, in 2004, the Ministry of Agriculture was renamed into Ministry of Rural Development and Food in order to adopt a broader aspect of food matters not restricted to agricultural issues. It has now become one of the main food policy agents of the government regarding food safety issues.

In addition, the Ministry of Health and Social Solidarity is about to be renamed to Ministry of Health, Nutrition and Sports in an effort to embrace the nutritional aspects that affect populations' health.

Finally, the Ministry of Development plays an important role in the development of food policies through the General Secretariat for Trade and through the Secretariat General of Consumers, which are governmental organisations. The first tries to regulate imports and exports within and outside the EU while the later regulates all issues concerning consumers.

Interventions with nutritional orientation by State agents include:

1. The National Action Plan for Healthy Nutrition and Eating Disorders
2. The National Platform for Action on Diet, Physical Activity and Health
3. The development of the Communication Control Council
4. Health education in schools

The National Action Plan for Healthy Nutrition and Eating Disorders 2008-2012

In the current trend to empower the nutritional approach of food policy, the National Action Plan for Healthy Nutrition and Eating Disorders 2008-2012 was developed in 2008 by the Hellenic Ministry of Health and Social Solidarity and with the contribution of scientists and NGOs. This initiative was taken due to the great debate that has been raised on nutritional issues and the related diseases and dangers at a local, national, European and global level. The need for such action plans was

highlighted by the EU through the Green Paper [COM 637] on *Promoting healthy diets and physical activity: a European dimension for the prevention of overweight, obesity and chronic diseases'* which was published by the Commission in December 2005, the White Paper [COM 279] on 'A Strategy for Europe on Nutrition, Overweight and Obesity related health issues', released in May 2007 and the EU Platform for Action on Diet, Physical Activity and Health, developed in March 2005. Since then, European countries started adopting food and nutritional policies in order to improve their citizens' health and data from these initiatives are very encouraging.

The Plan stresses the value of an intersectoral collaboration and the objectives of the Action Plan are:

1. the promotion of a healthy diet, based on the traditional Mediterranean Diet
2. the reduction of nutrition related diseases and eating disorders
3. the reduction of health and nutritional inequalities
4. the protection of young people who are the future of the country.

The Action Plan consists of 4 axes:

• The first axis includes actions on the prevention and promotion of healthy eating choices like the promotion of ingredients and nutritional labelling on food according to the European legislation and legislation on marketing and advertising especially for children. The increase of the consumption of vegetables, legumes and fishes with parallel reduction of meat consumption, the implementation of healthy nutritional patterns in mass feeding in schools, kindergartens, hospitals and in the workplaces and finally, the information of the population about healthy eating, physical activity and eating disorders

• The second axis includes the early diagnosis and treatment of eating disorders through the development of consultative dietetic and nutritional services and public services for obesity and other eating disorders' treatment.

• The third axis refers to intersectoral cooperation for a National Nutritional Policy which includes public organisations, ministries, NGOs and food companies.

• Finally, the fourth axis includes scientific support, monitoring and evaluation through research programmes on nutritional habits, the development of the nutritional

and food-related diseases map of the Greek population and the education of people who work in public health in order to have the capacity to implement these actions.

All actions included in this Plan were about to be implemented at the end of 2008 or at the beginning of 2009 up to 2012. According to the Plan, the National Nutritional Policy Committee, to be constituted by members of every agency involved and not change due to government shifts, is to be responsible for the coordination and monitoring of the National Action Plan. The implementation would be followed by a persistent procedure of monitoring and evaluation through reports on the results of specific actions included in the Plan and on the health status changes of the population. The National Action Plan for Nutrition promises many changes in every aspect around the development of healthy nutritional habits and its budget has been estimated to € 26,104,526 for 4 years (Hellenic MoH, 2008). Nevertheless, the only actions which have already been implemented (up to February 2012) are the communication campaigns 'Life has Colour' and Children's Weight/ A Weighty Issue'.

"Life has Colour" Campaign

In December 2007 the Hellenic Ministry of Health and Social Solidarity announced the implementation of the first coordinated effort to inform Greek people and particularly school children up to 18 years of age about critical health issues including healthy eating. The campaign 'Life has Colour-Find Yours' focuses on issues like alcohol, physical activity, smoking, nutrition and drugs and its aim is to inform young people and their families about the existing hazards and the adoption of healthy habits and through this to try to change their attitudes and behaviours concerning these areas. The campaign includes TV spots, a representative song from a popular Greek singer and school interventions. School interventions include the development and distribution of educational and scientific material in every school in the context of a national health promotion intervention. The campaign was sponsored by a bank, two food companies, two pharmaceutical companies and a telecommunication company. (Data gathered from the website http://www.mohaw.gr/ accessed 23 May 2011 and through printed information leaflets in Greek)

"Children's Weight/ A Weighty Issue" campaign

In the context of the Programme 'Life has Colour', the Ministry of Health and Social Solidarity developed the social marketing campaign 'Children's Weight/ A Weighty Issue' which was launched in March 2008. The title of the campaign has double meaning; on the one hand parents should try to help their children to have a normal weight and on the other hand, more time should be dedicated to children in order to teach to them healthy ways of eating. So, the aim of the campaign is to disseminate knowledge about children's obesity and about ways of its prevention through a balanced diet, eating with the family and avoidance of unhealthy food consumption.

The target groups are the children and their families. For these purposes, the campaign focuses on nutritional habits in order to tackle children's obesity and includes:

1. Development of two handbooks, one for children of the primary school, 6-12 years old and one for students of junior high school and high school, 13-18 years old, which are going to be handed out in schools. The second handbook focuses mostly on appearance because it refers to older children. It tries to connect the appearance with the daily diet and through this it provides tips in order to prevent obesity and includes information on calories, micro and macro nutrients, water, meals, the Mediterranean diet pyramid and physical activity. At the end, there are educational activities and information for parents.

2. Creation of campaign mascots that travelled around Greek schools in order to promote healthy eating.

3. Development of educational TV programmes on nutritional and obesity issues which are going to be hosted by the Hellenic Broadcasting Corporation (ERT S.A.).

4. Visits to schools around Greece with the participation of Olympic winners, who talk to the students about the value of healthy eating and physical activity and about the dangers of obesity.

5. The establishment of the 'House of Healthy Nutrition' in the exhibition area of the Metro station in Syntagma Square (main square of Athens), where children and their parents could be informed, through interactive activities, about healthy nutrition & physical exercise.

The promotion of the campaign also included four TV advertisements along with advertisements on the public means of transportation, i.e. trams, the underground, buses, trains and trolleybuses.The campaign lasted for almost a semester.

(Data gathered from the website http://www.mohaw.gr/ accessed 23 May 2011 and through printed information leaflets in Greek)

The National Platform for Action on Diet, Physical Activity and Health

In the context of the E.U. Platform for Action on Diet, Physical Activity and Health and under the pressure of many non-governmental agents, the Ministry of Development through the Secretariat General of Consumers announced the development of a National Platform for Action on Diet, Physical Activity and Health in November 2007. The aim of the National Platform is to establish a forum for national actors who would co-ordinate their actions for the development of a strategic plan for a balanced diet and physical activity.

Specifically, the objectives of the platform are:

➢ promotion of a balanced and healthy diet

➢ information and education of the consumers-parents about nutritional issues so that they could make conscious choices

➢ introduction of a nutrition module in schools and seminars for the teachers

➢ improvement of the sport centres

➢ research on nutrition, obesity and nutrition related diseases

➢ reliable advertisings, especially ads concerning children

➢ food industry policies

(Hellenic Ministry of Development, 2007)

The results from the debate in the context of the Platform have been used for the development of the National Action Plan for Nutrition mentioned before. Active members in this effort were from the very first the Greek food industry, many scientists and non-profit organisations.

Development of the Hellenic Advertisement and Communication Codex

The Hellenic Advertisement and Communication Codex includes chapters about foodstuffs, safety and health, and advertisement and communication to children. The

Communication Control Council is a company set up by Law 2863/2000 on the development of self-commitment and self-control organisations. Its role is to control every kind of commercial communication in order to be aligned with the Hellenic Advertisement and Communication Codex, in the context of the European and Greek legislation (Law 2251 FEK 191-16.11.1994). For this reason, the Council creates committees to assess the communication efforts undertaken by the Greek companies.

School Interventions

The Hellenic Ministry of Education, Lifelong Learning and Religious Affairs is the responsible agent for national health promotion interventions in schools. At the local level, there are the prefectural directorates of primary and secondary education which have 1 or 2 persons in charge of health promotion programmes in schools.

The participation in the Health Promotion interventions in schools is voluntary. At the beginning of each school year (September-October) a briefing about the programme takes place in schools by the responsible Prefectural Directorate. After this, if there is any teacher who wants to run a health promotion programme in his/her school on condition that there is an acceptable number of students who would like to participate, he/she informs the school director who submits the application to the Approval Committee of the Responsible Prefectural Directorate. The approval depends on the competencies of the teacher who will run the Programme. The choice of the issue depends on teachers' and students' preferences. Only one issue could be included in the intervention for each class. The participants can choose from a variety of issues which among others include 'nutrition and nutritional habits'. The duration of the classes is approximately 6 months (November-April), two times per week and they take place right after school hours. The teams that participate could consist of up to 20 students regardless of class level. The methods and techniques used for this purpose include:

    1. 'passive learning', such us lectures by specialists, video tapes and slide shows

    2. 'active learning', such us research, interviews and questionnaires

    3. 'learning by doing' methods, such us theatrical plays, story writing, photos and paintings.

The selection of the educational method depends on teachers' competencies and attitudes but the guidelines focus on the last two. In most cases, participants are divided into teams of 4-5 members and they make their own research on the subject, in order to present a paper on their findings at the end of the project.

In general, at the end of the project there is a formal evaluation where the participants present their work to their schoolmates and teachers as well as to the employees of the responsible Prefectural Directorate.

As far as nutrition is concerned, in 2000 two books have been prepared for the Hellenic Ministry of Education, Lifelong Learning and Religious Affairs by professionals on nutritional and educational issues. These books, which refer to primary and secondary education students respectively, are about nutritional issues and they are handed out during the health promotion interventions. Specifically, they contain the following units:

> Culture and nutrition
> Advertisement and nutrition
> Nutritional habits
> Nutrition- related diseases
> Micro and macro nutrients
> Physical activity
> Food safety
> Cooking skills
> Development of a healthy diet

The books have been designed through a EU subsidy in the context of the Operational Programme of Education and Initial Vocational Training and they have not been revised since then.

The final work of the participants is often a book with healthy and traditional recipes, paintings or theatrical plays dealing with nutritional issues and papers with tips for healthy eating. (Data gathered from the website http://www.mohaw.gr/, http://www.ypepth.gr/el_ec_page413.htm accessed 23 May 2011 and through printed information leaflets and booklets in Greek)

During the school year 2007-2008, 65 programmes were carried out only in the second prefectural of Attica from which 15 were about nutrition (personal informal communication with an employee from the Attica prefecture). Nevertheless, there is a great need for higher funding, better communication of the programme, and motivation so that the programme could be implemented in every school.

4.6.3.2 Civil Society Initiatives

Civil society includes all these agents that try to rectify the imbalances caused by food companies in order to reduce inequalities and develop a healthy eating framework. The existence of these agents is really important for the development of active citizens who can influence policy changes in order to create a health-supportive environment. The most important representatives of Civil Society occupied with nutritional issues are

- Independent non-profit organisations that run nutrition interventions (NGOs)
- Non-governmental and non for profit scientific associations
- Non-governmental advisory committees (consisting of scientists and professors)
- Non-governmental and non for profit consumer unions

NGOs Initiatives

In the context of this study, it was found that in Greece there are three main organisations that focus on nutritional issues and obesity and NCDs tackling. The main initiatives that these organisations undertake include:

Health education programmes: these programmes focus on children of different ages and take place in specially designed places. Through these programmes, students learn about food, its ingredients, its nutritional value and its relation to a healthy way of living, they learn ways of cooking and food hygiene, as well as occupations related to food. Finally, they learn about the relation between food and culture through stories from the previous decades and through interactive activities where children have the opportunity to see, touch and smell different kinds of foods as well as to play and create their own recipes. Moreover, these organisations organise nutrition educational programmes for health professionals, educators, public health officials, journalists, etc. For example, in 2008 one of these agents organised in Greece a seminar on the

'Basic Principles of Food Safety and Hygiene' for specialists and for those interested in the field of food safety, in cooperation with the Colorado State University. Finally, another agent works on educating children and their parents at a municipality level.

Website design that includes information about healthy eating, nutrition-related diseases and obesity dangers. Another example is the Greek translation of the Cool Food Planet website that has been developed by the EUFIC in order to provide information and tips for a healthy way of eating in order to tackle obesity and other nutrition-related diseases and it has three sections; one for kids, one for adolescents and one for teachers and parents. At this point, it is noteworthy to mention that the EUFIC is a non-profit organisation developed and funded by European food and drinks companies probably as an effort to strengthen their corporate social responsibility.

Organisation and funding of scientific studies on health, nutrition and food safety issues: This includes national studies, like for example one in 2007, which included the national research of the nutritional habits of children (3-12) and adolescents (13-18) in a sample of 1,305 persons or a national research in 2008 for the consuming habits of Greeks which was conducted in a sample of 1,000 people 15-65 years old. Moreover, another organisation is trying to develop guidelines for the prevention of obesity at the workplace through a national research.

Visits to schools in the context of the Health Promotion Programmes in Greek Schools. Members of the organisations organise visits in schools in order to present research results and to talk about important nutritional issues.

Organisation, support and participation in national and international conferences.

Publishing of information about nutrition either for the public in general or for particular groups within the population through magazines or other publications: For example, one of these organisations publishes for free the quarterly issue 'About Nutrition' which includes original journals of Greek and foreign scientists as well as translated journals from other scientific organisations. Moreover, it gratuitously offers two books titled 'Obesity and Diabetes' and 'Nutrition and Metabolism' to professors and graduate students of health and nutrition fields.

(Data gathered from the websites of these NGOs and through printed information leaflets in Greek which were gathered during the interviews)

Scientific Associations Initiatives

The aim of these organisations is to promote the scientific research and study of specific diseases like diabetes, metabolic diseases and heart-diseases which are related to nutrition and obesity. Their target audiences are doctors and other professionals who are systematically involved in their area of interest, governmental institutions with direct influence over the formation of public health policy in Greece and the Greek general public. Their actions towards nutrition include:

Organisation and participation in conferences on their area of interest and about obesity and nutrition in general. For example, one of these organisations organised the Macedonian Conference on Nutrition and Dietetics and the Pan Hellenic Medical Congresses on Obesity. Other associations organise national conferences about Cardiology or about Diabetes.

Scientific Studies: For example, one association has carried out the 'First National Epidemiological Large-scale Survey on the Prevalence of Obesity in the Greek Population' with a nationwide sample of 35,386 persons. Another has undertaken researches on the relationship between nutrition and diseases and on the nutritional habits of Greek people.

Nutritional education through seminars and lectures: One association contributes with articles in journals, while another has developed in 2006 a programme of nutritional interventions in 100 schools in Greece in order to educate children 12-14 years old and their parents on healthy nutritional habits (Bouloutza, 2006). Finally, other associations inform children about obesity and NCDs issues through visits of their member scientists in schools. These programmes are supported by the development and distribution of educational material such as leaflets and booklets.

Advisory Committees Initiatives

There are many advisory committees that work along the State organisations but independently and consist of scientists with pertinent knowledge of the specific issue that the committee treats. In the nutrition sector, there are committees for all the emerging issues and food sectors, like for example the Dairy Committee, the Meat Committee and the Olive Oil Committee that represent Greece in the European Committee in order to promote the national preferences towards these products for the shape of the European Policies. Therefore, they participate in sub-committees related to these issues. At the same time these committees are consultants to the responsible Ministries and they diffuse knowledge about their sector development to anyone concerned in Greece through organisation of conferences, publishing of magazines and information leaflets. Finally they train producers and anyone involved in their sector production and distribution.

Consumer Unions Initiatives

In Greece there are three main consumer unions, which are independent, NGOs/NPOs. Their main objective is to handle consumers' complaints about any kind of product or commercial practice. Concerning nutrition and food, they all undertake research about nutritional and consuming habits, labels on foodstuffs and health claims in an effort to protect the consumers and highlight good and mal- practices. They also train consumers and especially children by sending educational material to schools for health promotion classes mentioned before. They advocate for specific policies to protect consumers' rights and health and participate in European Programmes like DOLCETA, which is a European online consumer education tool. Finally they pay attention to food safety and hygiene.

4.6.3.3 Food Supply Chain Initiatives

In the supply chain the main power is on retailers hands. Big retail stores like Carrefour-Marinopoulos, Lidl, Alfa Beta Vassilopoulos S.A., Sklavenitis I. & S. S.A. etc. play a major role in food decisions as they define food prices and food availability. In addition, the Greek food industry is the other main actor. Specifically, big food processing and distribution companies like Kraft Food Hellas, Unilever

Hellas, Vivartia, Coca-Cola 3E, Nestle Hellas etc. affect nutritional policies separately but also through their representative trade associations. The main initiatives of these agents are introduced in the following paragraphs.

Food Industry, Retailers and Caterers Initiatives

For this analysis, data were gathered from printed material and from the websites of the six most profitable food and beverages companies in Greece according to the Greek Financial Directory (ICAP, 2008b) and from the two food companies that were sponsors of the two Communication Campaigns on Healthy Nutrition 'Life has Colour' and 'Children's Weight/ A Weighty Issue'. Also from big retailers (supermarkets) and fast-food companies websites and printed material.

The food industry in Greece is a big actor which supports healthy eating habits through self-regulation, sponsorships of nutritional interventions and by promoting 'healthier' foods and recipes. The food industry adopts these actions in the context of corporate social responsibility in order to build its social profile and limit the consumers' distrust especially after the nutritional scandals and the debate that has been raised on obesity and 'unhealthy' foodstuffs. However, according to Hawkes (2007) and James et al. (1997), all these measures and self-regulations adopted by the food industry can be seen as an effort to avoid legislation and mandatory regulations.

Whatever the motives of the food industry are, in Greek food and beverages companies, especially the last years, a great movement for the development of a healthier and consumer-friendly profile has been observed. Greek food enterprises have adopted one or more of the following actions:

• *Clear labelling,* which includes the components of the product and the GDAs, has been adopted by many food companies and private brands of the super-markets. Also, a big fast-food chain, for example, has in its website a nutrition counter where customers can count caloric intake from its product consumption.

• *Health information in their websites.* All companies have a separate space in their website where people can be informed about nutritional issues, healthy recipes, tips and advises for healthy living, the components of the Mediterranean diet, the GDAs, the BMI calculation, the value of breakfast and energy balance and the

nutrition of children. Furthermore there are special web pages with games and quizzes for children in order to learn about healthy nutrition.

• *Health information on the packages.* In particular on packages of a specific company's products consumers can find tips for a healthy living and another prints the logo 'I choose what I eat' on every product that corresponds to international dietary guidelines about trans-fatty acids, sugar, salt and saturated fats.

• *Sponsorships in conferences* related to nutrition, obesity and other NCDs. For example, one food company was a sponsor in the 6th Euro Fed Lipid Congress that took place in Athens in September 2008 and another in the 9th PanHellenic Conference of Nutrition and Dietetics. Another food company was the Grand sponsor of the 3rd annual open event on Bulimia and Diet in Greece.

• *Sponsorships in nutritional interventions* implemented by the State or NGOs. Many of the food companies are members of the National Platform for Action on Diet, Physical Activity and Health, while three of them were sponsors of the campaigns 'Life has Colour' and 'Children's Weight/ A Weighty Issue which were mentioned before.

• *Production of healthier products*, i.e. light, no sugar added, less salt. For example, the biggest fast food company in Greece does not add salt to chips and it promotes salads inside the store. A big international food company has developed a low fat margarine that helps cholesterol reduction. Finally, another company has introduced corn flakes with less than 3% fat and another has launched smaller packages for lower caloric intake.

• *Development and implementation of nutritional interventions* and events for the promotion of healthy diet patterns. For example, a big food and beverages company has developed the Programme "Change Attitude, Get in Action" in which the educational Programme "Measure, Variety, Balance" is included. The Programme began in 2006 and addresses children 5-12 years of age in schools of the 7 big cities in Greece in order to promote healthy eating habits. It contains educational material lasting for 32 educational hours for children, teachers and parents. The Programme won the first prize in the International Beverage Awards in 2008. Considering another food company, it had established in 2001 the school educational programme called "Child & Nutrition" for children 9-11 years of age that lasted for 3 years. The Programme was attended by approximately 100,000 children and its aim was to

promote a proper diet and a healthy lifestyle. The Programme contained the publication and distribution in schools of the books "Building the Right Me", for children and "Teenager with Right Habits", for teenagers. Another dairy company organises cooking lessons for the public in the company building, while a competitor has a volunteer fresh milk delivery Programme for institutions and vulnerable social groups, called "Let's go Milk". In addition, an olive oil production company uses educational programmes for school children in order to promote the value of olive oil. Finally, a big supermarket implemented a campaign called "+ health" and includes leaflets that inform customers about the Mediterranean Diet and Healthy Nutritional Habits. This campaign now includes a magazine called "NutriLife" published 3 times per year and distributed inside the supermarkets.

• *Limited advertising and marketing interventions on children.* For example, one of these companies never puts its logo in its campaigns that target children, neither in the booklets that accompany these actions and prohibits marketing to children under 12 years old. Another one has developed its own Code of Marketing Principles for Food and Beverages that prohibits any advertising to children under six years of age and only allows advertising of products that meet strict nutritional criteria for children between 6-12 years of age.

Trade Associations Initiatives

There are trade associations of specific groups inside the Food Supply Chain. Such bodies exist for farmers, retailers, the food industry, the manufacturers and producers of specific foodstuffs like bread and confectionary products. Their main roles are to educate their member-organisations and individuals about the matters of their sector, to advocate for specific policies and many times to promote customer protection. For example, the trade association of the Hellenic Food Industry adopted in 2005 the Code of Principles for Diet, Physical Activity and Health. The Code is informed by 6 principles (SEVT, 2007):

1. Better education and training of food industries on nutritional topics
2. Information through labelling
3. A wider variety of available products
4. Consumer education and promotion of a healthy lifestyle and physical activity
5. Responsible advertising

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6. Collaboration with social partners

In addition, the responsible trade association for Bakers examines the issues concerning the salt in bakery products, especially bread and helps the development of the relevant legislation. Finally, the trade association of farmers fights for the reduction of deceptive labels where imported products are presented as Greek, and for the promotion of affordable prices of healthy products, like fruits and vegetables, for consumers. They are also trying to eliminate the power imparity between producers and retailers which is a disadvantage for the final consumer. Finally, they are trying to turn agriculture to a healthy nutrition and ecology oriented model of production.

4.7 Conclusion

This chapter reveals that the Greek Food Policy has a high orientation on food safety and hygiene while, concerning nutrition, it focuses mainly on agricultural production. Nevertheless, there are initiatives towards healthy eating from the other two sectors, i.e. Civil Society and Food Supply Chain. Nevertheless, the motives of the later are being questioned.

The main concern of the State is food safety and hygiene and the promotion of specific protected foodstuffs, organic products and some traditional Greek products. There are also nutritional initiatives that come under the E.U. directives but no sustainable actions.

Civil Society introduces nutrition-related initiatives through NGOs, scientific organisations and consumer unions. Moreover, advisory committees help to inform the current initiatives and food policies.

The Food Supply Chain tries to support healthy eating behaviours by writing health information and clear labelling on food packages, producing healthier products, sponsoring or developing nutritional interventions of the State or NGOs, self-limitations of advertisements and marketing to children. Nevertheless, these actions have been criticised by Hawkes (2007) and James et al. (1997) as an effort to avoid stricter control by the State.

The initiatives that have been presented in this chapter cannot promise spectacular results due to their informative character (Wallack, 2002), but they could comprise the first step of a range of actions according to the 'Stages of Change' behavioural model, which supports that the first stage in order to change behaviour or to adopt a new one, is knowledge (Prochaska et al., 1994).

Moreover, the proper adoption and implementation of nutritional policies, like those adopted by other European countries and highlighted in the National Action Plan for Nutrition, along with the cooperation of every concerning agent and consumer participation is vital for the promotion of healthy nutritional habits.

All these issues raised in this chapter will be discussed during the interviews with key stakeholders and will be presented in Chapters Seven and Eight.

Chapter 5: Methodology

5.1 Introduction

This study examines the role that social marketing can play in the improvement of the Greek situation as regards nutrition, as pictured in Chapter 2, in a food policy context. In Chapter three, the notion has been discussed that social marketing can (and should) have two dimensions, a downstream and an upstream one, therefore, in this study, social marketing theory (see Chapter 3) was used in order to investigate how the needs of the population in terms of eating and food might be used to inform policy makers and key actors in the proposed interventions in order to design effective initiatives. Because social marketing theory focuses on specific target audiences, and due to limited resources and time, undergraduate students were used as a case study in order to answer the research questions.

To cover these purposes, the research was divided into two stages. The first included focus groups of undergraduate students in order to understand their current eating habits, their opinion concerning healthy eating and the current food environment in Greece, what motivates their eating behaviour and what should change in order to adopt healthy eating patterns. The second stage included interviews with key stakeholders from the three sectors, i.e. State, Food Supply Chain and Civil Society, mentioned in Chapter 4. It also included interviews from the education institutes that the undergraduate students, who participated in the focus groups, belong to. The aim of the interviews is to discuss the findings from the first stage, to state their opinion about the current condition and suggest further initiatives for the improvement of the current nutritional situation. The wider purpose of these two stages of the research is to address and shed light on wider issues of food policy and social marketing.

In social marketing terms (Hastings, 2007), this study is about a formative research for the proposal of nutritional initiatives that could have a great potential to be effective because they will be based on the preferences of the target audience. The findings can be used to inform the policy making analysis. So, based on the Total Process Planning Model (NSMC, 2006), this is the scoping stage (Figure 5.1).

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Figure 5.1: Total Process Planning Model adopted for this Study

Scope → Develop → Implement → Evaluate → Follow-up

1. Focus Groups
2. Interviews with Key
   Stakeholders

Recommendations for Food
Policy about nutritional issues
(social aspect)
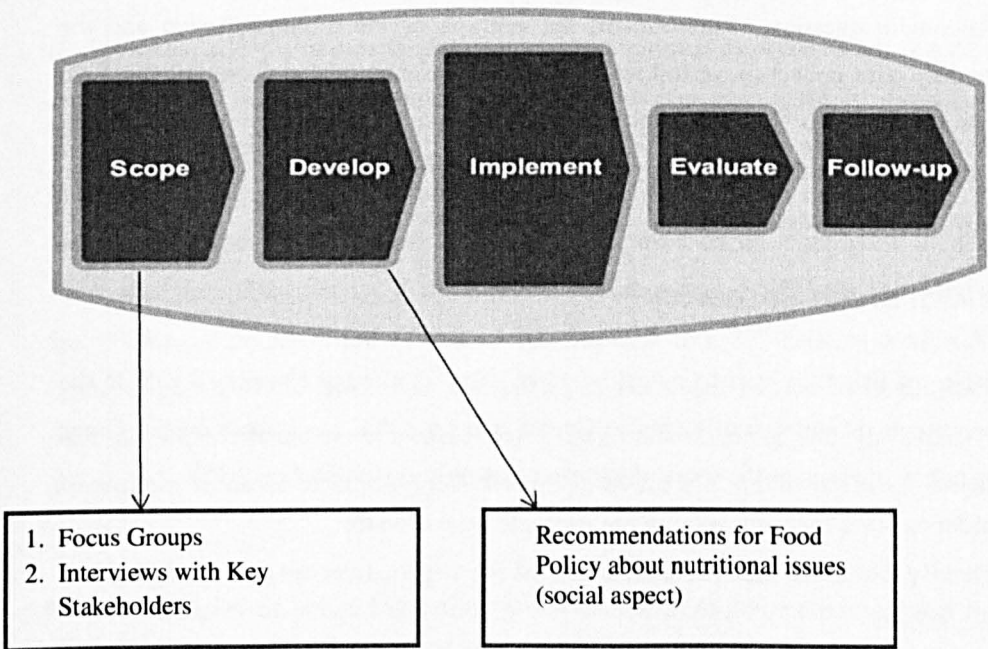
Source: Adapted to this study from the U.K. NSMC, 2006.

This chapter presents the methodology of the research used to address the research aim. Specifically, it explains the selection of undergraduate students as a target audience and the framework of the research design. It justifies the use of specific techniques in order to gather the data and shed light on data analysis in order to extract the research conclusions and answer the research questions.

The structure of this chapter is laid out thematically rather than sequentially in order to create a clearer layout for the reader, based on the literature about methodology structure (Creswell, 2003, Silverman, 2003, Denzin and Lincoln, 2008). So, first the aim of the study and the theories and conceptual models used for this research are presented. Secondly, the research design is introduced in order to support triangulation and lead to the different data sources, i.e. literature review, grey literature, archival data and primary data. The collection of primary data is analysed by presenting the target audiences that generated the research population and research samples and then by justifying the choice of quantitative and qualitative methods of

gathering these data. The research questions have been placed before the presentation of the research instruments in order to show the links between the research and questionnaire questions. Furthermore, the analysis of the research design and the secondary data collection is followed by the ethical approval process for the field research which was the final step before the beginning of primary data collection. Finally, the collection and analysis of the data from the focus groups and the interviews is presented in the two last separate sections.

5.2 Aim of the Research

The aim of the study was to reveal whether social marketing can play a role in the improvement of nutritional habits in Greece and how this can impact on the Greek food policy in terms of the social dimension of nutrition (see Section 2.15).

In order to cover this aim, appropriate methods were used to:

1. Identify the needs, motives and barriers of the target audiences concerning healthy eating habits.

2. Analyse the strengths and weaknesses of the current food system and the opportunities and threats that the Greek food system and policy faces now and in the future.

3. Discover the emerging role of the key stakeholders.

4. Reveal how food policy in Greece should evolve in order to embrace the efforts for the improvement of the nutritional habits of the Greek population.

For the purposes of the study and in order to answer the research questions given the limitations of time and budget for its completion, undergraduate students from education institutes in Athens, the capital of Greece, have been used as a case study. So, it is noteworthy that through the research with undergraduate students, a social marketing programme could be developed focused on them, but the aim of this study is to use the principles of consultation and fit the results into the policy processes.

5.3 Use of the Theory & Conceptual Models

According to Creswell (2003), there are several ways of using theory in research. The inductive method requires the formation of a theory based on the data gathered by the researcher, while the deductive method uses the theory as a base to inform the study.

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Moreover, there can be qualitative studies without any explicit theoretical orientation, like phenomenology.

In this study, a deductive methodology has been adopted in order to use the theory and models of Social Marketing (Chapter 3) and has been used to develop the research questions having as a purpose to reveal the contribution of social marketing in the Greek food policy for the improvement of nutritional habits in the country. The choice of the specific theoretical framework was based on the conceptual model of 'three nutritions' (see Section 2.15) analysed by Lang et al. (2009) who also support that '...the social dimension of food is essential for any 21st century food policy' (Lang et al., 2009, p. 224). This conceptual model raises the social dimension of nutrition which should be considered by policy makers, along with the other two dimensions, in order to develop effective policies for the improvement of people's health.

Hence, the theory of Social Marketing 'provided a lens' to guide the researcher as to what issues and who should be examined (Creswell, 2003, p. 131) in order to reveal the components of the social dimension of nutrition in Greece. This was achieved by the use of 'segmentation', 'targeting', 'exchange' and 'competition' concepts as they have been analysed in Chapter 3. Moreover, the upstream social marketing concept has been used to interpret the findings from the research into food policy implications.

Therefore, with the use of social marketing theory, the factors that affect people's behaviour could be understood and the tools that better influence people's knowledge, perceptions, and behaviour in relation to nutrition could be developed and provided.

5.4 Research Design

The study was informed by a review of the literature in order to address the problem, investigate the current situation in Greece, understand the theory of social marketing and develop the research questions.

During the main research, data was gathered from informal telephone contacts with people involved in nutritional interventions in Greece in order to provide a direction for the formal research and material, like legislation and archive documents. Through

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these sources, an overview of the current food system, its actors and the current nutritional initiatives was developed.

Moreover, data was gathered from undergraduate students in order to get insight into their needs and perceptions regarding healthy eating, as analysed previously in this chapter. In order to draw a complete picture of the feeding facilities of the Greek education institutes, data were gathered from people who work inside the Institutes. The purpose was to understand the current situation and to reveal opportunities for further improvement, as the first analysis of the undergraduate students' research showed dissatisfaction towards these facilities and the Institutional environment in general.

Finally, in order to understand the strengths and weaknesses of the current situation in the Greek food system and food policy, the relationships among the players of the key sectors involved in the food system, the opportunities and threats that affect the Greek food policy, and the margin for improvement, data from the main three key sectors were gathered.

5.4.1 Triangulation

According to Flick (2002), triangulation is the use of multiple methods or analysis in an attempt to ensure a better in-depth understanding of the phenomenon under examination. Furthermore, based on Stake's (2005, p.444) opinion about 'triangulation' as *"gathering data from multiple sources allowing for increased validity, clarifying meaning and verifying the repeatability of an observation or interpretation by identifying different ways the phenomenon is being seen"*, the research followed three different methods of gathering data. These included secondary data from archives and the internet, focus groups with undergraduate students and semi-structured interviews with key stakeholders.

In this context, data were gathered through interviews with people working inside the education institutes in order to compare the views of the students from the focus groups with the situation inside the Institutes and identify differences in perceptions of the current situation or reveal issues that the responsible agents may not want to mention. Also, to integrate this triangle of different methods of gathering information,

legislation documents and available archive data concerning the education institutes feeding facilities were gathered.

Concerning the analysis of the wider Greek environment, data were gathered from three different sectors of the food system in order to receive information from all opponent powers (data triangulation). Therefore, the interviews were with people from State organisations, Food Supply Chain entities and Civil Society individuals and organisations. Moreover, secondary data from the internet and archive documents were gathered.

Finally, during the literature review for the problem formation and the creation of the research questions, data were gathered through academic literature, grey literature as well as through informal interviews with employees from relevant organisations.

5.5 Literature Review

A review of the literature was completed in order to develop Chapters Two and Three of this study. The aim of the literature review was to address the situation about nutrition in Greece and to collect data about social marketing theory, social marketing application and its effectiveness, the role of social marketing in nutritional interventions and in shaping policy.

For the Second Chapter Pubmed, Web of Science and MedLine databases were searched, using combinations of the words and phrases: nutrition, nutritional habits, nutrition transition; Mediterranean diet; obesity, macronutrient intake, micronutrient intake, Greece, food, advertising, food industry, food retailer, caterers, food system. At the same time statistical data about demography, food, diseases and food system actors in Greece were gathered via the websites of FAO, Eurostat, ICAP, Data Food Networking (Dafne software) and the Hellenic Statistical Agency of Greece.

For the Third Chapter Medline, ISI Web of Knowledge and PsycINFO databases were searched using abstracted or in combination the terms nutrition, nutritional interventions, social marketing, health promotion, public health, school-based programmes, social behaviour, advertising, marketing, eating habits, obesity, food, Greece, scoping and formative research. Furthermore information was gathered through 'Social Marketing Quarterly', 'International Journal of Social Marketing' and

'Health Promotion International' journals, from social marketing books and through references from the supervisors.

The literature review revealed that there were no social marketing initiatives in Greece in order to investigate what has already been done that we can learn from, the researchers considered it very important to study the case of a social marketing programme about healthy eating. For convenience reasons, as there was past cooperation with people from the New Zealand Healthy Eating Programme, the case of New Zealand has been selected to be studied. As for the New Zealand case study, the author's personal observation and participation in the Programme facilitated the access to documentation and archival records and accommodated the clarification of non-illustrated issues.

5.6 Grey Literature and Archival Data

For the writing of the Fourth Chapter about food policy and nutritional interventions there was not much data in the academic literature about Greece. Therefore, for Chapter 4, data search was based on grey literature by gathering information via the websites of the food system actors in the public and private sector in order to draw the current food policy in Greece. The Google search engine was used and the search included the Greek terms of 'food policy', 'nutritional policy', 'nutrition', 'obesity', 'health promotion', 'social marketing programmes' and 'nutritional campaigns'. Moreover, the websites of international organisations related to food and health, like Europa, FAO, OECD and DEFRA, were used to summarise the global and European food policy. Also, references were gathered from the PhD supervisors about food policy and documentation for the food policy initiatives from the Ministry of Rural Development and Food and the Ministry of Health and Social Solidarity, after personal informal communication with involved employees. Concerning the nutritional interventions, documentation, archival records and data from the internet were collected from the Ministry of Health and Social Solidarity and involved NGOs after personal informal communication with their managers. Finally, data were gathered from the websites of major organisations of the Greek food system.

5.7 Target Audiences

As mentioned before, the first stage of the research was based on focus groups of undergraduate students, which have been used as a case study to the accomplishment of the study objectives.

The segmentation of the Greek population in order to decide about the target audience of this study was based on the review of the current situation, which was completed in 2009, and on informal interviews with the main health promotion agents and Ministries of the country in order to reveal the target audiences of current nutritional initiatives. The informal interviews and the literature search revealed that current and past national or local initiatives in Greece have the characteristic of targeting either children or adults based on age and place of residence (see Section 4.6.3). Furthermore, arguably, the groups with the biggest impact on their health due to the 'nutrition transition' are the younger generations (children and adolescents) and students (Hassapidou and Fotiadou, 2001, Papadaki et al., 2007). So, the segment 'adults' was further divided, based on their life stage, into those who study (undergraduate students 18-23) and those who have already finished their undergraduate studies and have probably joined the workforce (24+). There are also people who have decided not to continue their studies and joined the workforce earlier in their lives but these are not included in the study as it would have been difficult to approach them. Concerning the *"reachability"* (Kotler and Lee, 2008, p.128) of target audiences, children and undergraduate students can be targeted inside their education institute and this can make promotional efforts more effective and cost-efficient as some issues can be controlled which are not possible in other settings (Tsouros et al., 1998, WHO: Healthy Settings, 2011). The choice of the setting of an intervention has been proved to be a very important factor in the effectiveness of the intervention (Schuit et al., 2000, Pomerleau et al., 2005). Moreover, according to the registration archives in education institutes, undergraduate students aged 18-23 years old account for 547,000 which is around 5% of the total population of Greece (Department of Research and Statistics, 2010).

A decision was made that a group of the population should be chosen as a case study in order to understand the implications of social marketing for policy makers. Therefore, the research is going to target students between the ages of 18 and 23 who

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have finished school and continue their undergraduate studies in an education institute in Greece (see Section 6.2). This target group has also been chosen for the following five reasons.

Firstly, from the literature, only one study was found that examined the nutrition habits of this specific group (Papadaki et al., 2007). There are also other studies that include these age categories, i.e. the Attica study and the DAFNE Project but they do not focus on the specific needs of this target audience. Secondly, in this age category, students often adopt a new lifestyle, often away from their families, they start being independent and decide on their own life and this may lead to different nutritional habits from these they had before enrolment (Brevard and Ricketts, 1996, Huang et al., 2003, Beasley et al., 2004). Although it may be a transitory stage, they have been exposed to these eating habits and they may probably affect them for the rest of their lives. Thirdly, this is a period in some people's lives when they start taking care of their physical appearance, therefore they may be more interested in nutritional issues and probably they can be easier influenced by health promotion initiatives (Cohane and Pope, 2001). Fourthly, due to the students' lifestyle there is lack of time, in many cases lack of knowledge about how to prepare their own food, and peer-pressure that could promote unhealthy eating habits (Brevard and Ricketts, 1996). Finally, not only were there students that live away from their families who are adopting undesirable eating patterns but also those who live with their families have reduced the consumption of home cooked meals and they do not adhere to current recommendations of healthy eating, or to the traditional Greek diet (Papadaki et al., 2007).

For these reasons, there is a need of nutrition interventions in this population in order to promote healthier eating behaviours. However, in order for these interventions to be effective, there is a need to discover what should be included in order to be appealing to this target group by understanding their motives and barriers and their attitudes towards healthy eating. Thereby, this knowledge can be used to inform policy makers (secondary target audience) and affect them as regards the adoption of targeted food and nutrition policies. At the same time by asking the target audiences what kind of interventions they would prefer, we fulfil another objective: to increase

their commitment to this intervention (Hjelmar, 2005), by empowering them and making them feel that they participate in its development (Syme, 2002).

5.8 Methods of Gathering Primary Data

According to Punch (1998) there are two approaches in gathering data during a social research: quantitative and qualitative. These two approaches will be introduced in the following paragraphs in order to justify the decisions made about conducting this research.

5.8.1 Quantitative Methods

Quantitative methods are used in order to measure the value of a variable by using a sample of the population that we want to study (Creswell, 2003). According to Punch (1998, p.58), *"quantitative data are numerical; they are information about the world, in the form of numbers"*. So, quantitative methods should be used when the indicators under study can effectively be measured (Thomas, 2003).

Therefore, the instruments used to measure these data should be fully structured (Punch, 1998). Moreover, by gathering quantitative data we can make comparisons between different subjects and situations (Punch, 1998). The main methodologies used to gather data in quantitative research include experiments and surveys (Creswell, 2003)

In this study, quantitative methods could be used for the demographics of the participants (in order to answer the question 'how many participants...') and for example, in the case that we would like to measure the quantities of specific foodstuffs that the undergraduate students consume or how often they act in a specific way, but apart from the demographic data, the rest were not in the objectives of this thesis.

5.8.2 Qualitative Methods

According to Morse and Field (1995), the use of qualitative research is more appropriate when trying to describe an issue about which little is known. In the case of this study, little is known about what motivates undergraduate students' behaviour

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as there are very few studies about this group of the population in Greece toward healthy eating.

So it is important the use of qualitative rather than quantitative research methods. Furthermore, qualitative research is the best way to get familiarised with unexplored issues (Silverman, 2003) and according to Mariampolski (2001), the use of qualitative research methods gives the researcher the opportunity to investigate in depth a situation; hence it is advisable to use qualitative methods in order to cover as many aspects as possible of people's eating behaviour, motives and barriers.

Finally, while surveys repeatedly identify gaps between health knowledge and health behaviour, only qualitative methods, such as focus groups, can actually contribute to filling these gaps and maybe explaining why they occur. According to Denzin and Lincoln (2008, p. 35), *"qualitative researchers can isolate target populations, show the immediate effects of certain programs on such groups, and isolate the constraints that operate against policy changes in such settings. Action-oriented and clinically oriented qualitative research can also create spaces where those who are studied (the Other) can speak."*

Based on Creswell (2003), the choice between qualitative and quantitative methods depends on the nature of the problem, the background of the researcher and the target population. In this case, that the purpose is to understand the reasons for specific actions and get a deep insight into the experiences and beliefs of undergraduate students and key stakeholders and not to measure specific indicators about nutritional habits and other behaviours, qualitative methods are more appropriate.

From the different methodologies of qualitative research that include ethnography, observation, unstructured interviews with one person or a group (focus groups) (Denzin and Lincoln, 2005) two different qualitative methodologies were used for each stage; focus groups and semi-structured interviews (Figure 5.2) and the reasons for this choice are described in the following paragraphs.

5.8.3 Why Choose Focus Groups

In order to understand what leads students to choose their eating habits, it is vital to explore their knowledge and perceptions about healthy eating as well as their motives

and barriers in order to adopt a healthy eating lifestyle. According to Krueger and Casey (2000), focus groups are the most appropriate qualitative method in order to investigate not only people's knowledge, attitudes and experiences but also what people think, how they think and why they think that way, their perceptions, feelings and opinions and how those opinions are constructed. Their purpose is to uncover factors that influence opinions, behaviour and motivation and to provide insight into complicated topics and multifaceted behaviours like this of eating choices and they can generate more critical comments (Robinson, 1999).

Other important reasons for choosing focus groups as a method are that many nutritional decisions are influenced by a social context and often as a result of discussions with others, so focus groups are a method of obtaining rich information within a social context (Robinson, 1999). Furthermore, as motives that drive behaviours are very hard to discover and understand even for the individual, the assumption of focus group methodology that interaction and discussion with other participants probably could help them understand their own motives better than by using other methods provides an unchallengeable incentive for using this method. Group interaction can also identify cultural values of different age categories, for example between students in their first university year and those in their last (Robinson, 1999).

Patton (1990) states that focus groups contribute to fundamental theory and knowledge and facilitate a scoping study and that is exactly the nature of this research. Also, the researcher can seek clarification in the case of ambiguity and observe non-verbal gestures which may provide a more subtle interpretation of meaning (Robinson, 1999).

Finally focus groups are an effective method when there is a need for ideas to emerge from the group (Krueger and Casey, 2000) and in this case there is a need of brainstorming for suggestions to inform policy makers and design nutritional interventions. Finally, literature review (Thornley et al., 2007) shows that in many social marketing campaigns focus groups have been used for the purposes of formative researches, and they were considered to be very effective for data gathering.

5.8.4 Why Choose Semi-structured Interviews (with one person)

Interviews can be divided into structured, unstructured and semi-structured. According to Silverman (2003), relatively unstructured and 'open-ended' interviews are the best way to understand 'experience' and according to Fontana and Frey (2005, p. 705) *"they can provide greater breadth than other types of interviewing"*.

Therefore, at the second stage of the study, semi-structured interviews with key informants from the three sectors of State, Food Supply Chain and Civil Society and from education institutes were used. The aim of the interviews was to gain insight using the opinion of people who have experience on nutritional initiatives in order to understand whether the data gathered from the first stage can be implemented in the Greek reality under a food policy context, to what degree and under what circumstances.

Semi-structured interviews provide greater depth than other types because they combine structure and flexibility, thus, there is an opportunity to investigate a particular topic, and in parallel the participant can give additional information on resembling issues (Denzin and Lincoln, 2005). At the same time, semi-structured interviews with open-ended questions could help the researcher be guided by the interviewee who knows more on the particular issue and ask more and different questions than those included in a prepared questionnaire. For the above reasons, at the second stage of this research we decided to gain knowledge through in-depth semi-structured interviews with stakeholders from the examined fields.

To sum up, for the aims of the study, the methodology is presented in Figure 5.2.

Figure 5.2: Research Design Framework

Literature Review Update

Review of the literature about nutrition in Greece and social marketing theory to address the aim of the research

Development of the Research Questions

Focus Groups with undergraduate Students

Completed data analysis-Research findings reflecting the problem

1st stage

Overview of the current food system and food policy in Greece (internet, archive data and legislation documents)

Development of the Focus Groups and Interviews Guides

2nd stage

Semi-structured interviews with key informants from education institutes (micro-environment)

The emerging role of social marketing for the improvement of nutritional habits in Greece in a food policy context (Conclusions and Recommendations)

Identification of key Stakeholders of the Greek Food System

Semi-structured interviews with key informants from State, Food Supply Chain & Civil Society (macro-environment)

Research Framework
(Defining the problem)

Research Design &
Methodology

Data Collection
(Primary Research)

Data Analysis

Conclusions &
Recommendations

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5.9 Research Questions

The main problem that this study aims to address is the role of social marketing in the Greek food policy for the improvement of nutritional habits of the population. Therefore, the first research question is:

RQ1: How could social marketing contribute to a food policy to improve nutritional habits in Greece?

The social nutrition suggests that the social determinants of food choices should be examined. Moreover, social marketing theory involves the investigation of the motives and barriers of a target audience in an attempt to adopt healthy behaviours, which in this case are healthy eating habits. For the purposes of this study, undergraduate students were used as a case study. So the second research question that this poses is:

RQ2: Why do Greeks (using undergraduate students as a case study) act as they do concerning their eating habits? How do they perceive healthy eating and which are their motives and barriers in order to adopt healthy eating habits?

In the context of motives and barriers investigation, the wider environment where the target audiences live and evolve could not be omitted because, as it was also explained in Chapter 2, current eating habits have evolved under the influence of environmental factors. The third research question is:

RQ3: How can the micro-environment (family, friends, peers) and macro-environment (food industry practices, regulations etc) influence the choices of undergraduate students?

The food system of a country can also affect nutritional habits through the available foodstuffs that it produces and promotes. The food system is developed within the dynamics created between its key players and hence, there will be an attempt to clarify these relationships and the roles of the key food system actors through the fourth question:

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RQ4: What is and should be the role of each sector (State, Food Chain Supply, Civil Society) for the improvement of people's nutritional habits? What are/should be the relationships between the actors of each sector?

Finally, the last question will address all the initiatives that the food policy umbrella should include. Therefore, the last question is:

RQ5: What kind of initiatives should a future food policy for the improvement of nutritional habits of Greeks include?

During the focus groups and the interviews with key stakeholders these research questions were posed. The development of topic guides had the purpose of reflecting these research questions.

5.10 Instruments for Data Collection

In the following tables, it is shown how these research questions have been translated into questions for the semi-structured interviews with students' focus groups (Table 5.1) and key stakeholders (Table 5.2). Some research questions (RQ 2-5) will be answered through the students' focus groups and others (RQ 1,4,5) through the interviews with the key actors. It is noteworthy that the instruments were translated into Greek because all focus groups and interviews were conducted in Greek. Furthermore, for the development of the focus group topic guide, the instruments of the New Zealand Healthy Eating Programme were partially used as a pattern. These guides were given to the researcher when she was working as an intern for the Health Sponsorship Council (TNS, 2007a, TNS, 2007b).

Table 5.1: Topic Guide for the Focus Groups (Stage 1)

Research Questions	Focus Groups Questions
	The same base questions were used for every focus group but there were slight modifications according to the progress of the conversation and the interaction among the participants. **About You:** Name, Gender, Total household income category, Education Institute, Department, Year of studies, Age category, Hometown (select from provided locations), With whom do you live? *(Categories have been provided to the participants)*
RQ2: Why do Greeks (using undergraduate students as a case study) act as they do concerning their eating habits? How do they perceive healthy eating and which are their motives and barriers in order to adopt healthy eating habits?	**About Your Eating Habits:** • Which foods and drinks are particularly popular/unpopular in your diet? What makes them popular/unpopular? • What kind of foods do you try to consume/avoid? For what reasons? • Have there been any changes to your eating habits since you got in the University? What are the changes, and why has this happened? • Do you cook? Reason. **About Healthy Eating** • Is health important to you? What do you do in order to keep in good health? • What do you consider to be healthy eating? • What do you consider to be unhealthy eating? • When you eat and drink in healthy ways, what benefits do you think you get from doing that? • When you do not eat and drink in healthy ways, what problems do you think you get from doing that? • What level of concern, if any, do you have as regards healthy eating? • Can you describe what this concern is about? **Motives & barriers towards healthy eating** • Why do you think is the adoption of a healthy diet important to you? Which are your motives? • What are your barriers in order to adopt a healthy eating diet? What do you propose to eliminate these barriers?
RQ3: How the micro-environment (family, friends, peers) and macro-environment (food industry practices, regulations etc) can influence the choices of undergraduate students.	**Information about healthy eating** • Through which channels have you seen information about eating, nutrition and food in general? • Which sources/channels do you trust and which can influence your behaviour towards nutrition? • Do you pay attention to recommended healthy eating guidelines? Why ? • Do you pay attention to the labels of the foods that you consume? Why ? **About the influence of external factors** • Who can affect your eating habits by doing the shopping/cooking or select place of eating or in other ways? • What environmental factors can affect your eating behaviour? In what way? • Do you find the current environment in Greece (education institute) supportive to the adoption of healthy eating habits? If not, what do you suggest should change?
RQ5: What kind of initiatives should a future food policy for the improvement of nutritional habits of Greeks include?	**Initiatives that a Nutritional Strategy should Include** • Are you aware of any initiatives to encourage healthy eating in Greece? If yes, what is your opinion about them? Do you have any suggestions for their improvement? • I'm going to read out some suggestions that people have made about food promotion. Please discuss in general terms whether you support or oppose each suggestion and if such initiatives could influence your eating habits: Food taxation , Food labelling, Food advertising regulations/elimination, Food marketing regulations/elimination, Education institute canteens healthy options • Do you have any other suggestions for the development of future actions that could influence your nutritional habits?
RQ4: What is and should be the role of each sector (State, Food Chain Supply, Civil Society) for the improvement of people's nutritional habits? What are/should be the relationships between the actors of each sector?	**Key Players in Nutritional Interventions** *(the triangle model along with key actors from each sector will be given to the participants)* • What is your opinion about the role of the three main sectors in the promotion of healthy eating habits? • Do you have any suggestions for future improvements?

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Table 5.2: Semi-Structured Guide for the Interviews (Stage 2)

Research Questions	Interviews Questions
	The same base questions were used for each sector, but the questionnaire was slightly different for each player. **About You:** Name: Contact Details: Company/Organisation: Position/Area of Work:
RQ5: What kind of initiatives should a future food policy for the improvement of nutritional habits of Greeks include?	**Initiatives that a Nutritional Strategy should Include** • What kind of nutritional interventions has your organisation developed? • What is your opinion about them? • Would you modify any of the programmes or policies if you could? If so, how, and for what reason? • What is your opinion about the current food policy and what are your suggestions for the future?
RQ4: What is and should be the role of each sector (State, Food Chain Supply, Civil Society) for the improvement of people's nutritional habits? What are/should be the relationships between the actors of each sector?	**Key Players in Nutritional Interventions** *Show the triangle of key players in Food System:* • What is your role in nutritional interventions? • In your view, what has been the role of the key players to date? • What do you see as the strengths of each of the players that you work with? • What do you see as the limitations of each of the players that you work with? **Relationships between Key Players** • Can the relationships between the key sectors affect (positively or negatively) the effort for the improvement of nutritional habits? In what way? • Do you have any thoughts about ways to improve the relationships between the Key Players in order to facilitate the promotion of healthy eating habits?
RQ1: How could social marketing contribute to food policy to improve nutritional habits in Greece?	**The Role of Social Marketing** • What is your opinion about the use of social marketing? • Do you think that social marketing initiatives should be included in a national strategy for the improvement of nutritional habits in Greece? Why? *If the answer is yes in the last question move on to the next. Otherwise conclude and thank.* • What do you consider as facilitators and barriers for the implementation of social marketing initiatives? • What key player should adopt a social marketing strategy?

All the individual and focus groups interviews were conducted and analysed in Greek. At the final stage they were translated in English to be included in this document.

5.11 Ethical Approval

Ethical approval for this research was sought from the Research Degrees Committee at City University London and from the ethics committee of the National and Kapodistrian University of Athens since the research took place in Greek education institutes with Greek participants and therefore there was a need for all the documents to be translated into Greek. So the questionnaires, the explanatory sheets and the consent forms for both the focus groups and the interviews were accurately translated into Greek.

Participation in the study was voluntary, and participants might have chosen not to participate in part or the entire project, or withdraw at any stage of it without having any disadvantage. These details were included in the information sheets (Appendices 1 and 2) and the consent forms (Appendices 3 and 4) and were clarified to the participants prior the interviews. Also, in the explanatory sheets it was highlighted that anonymity was warranted since participants' names would not be included in any reports of the completed study and would not be published or shared with any other organisation. Both focus groups and interviews were recorded with a digital recorder, and data were stored in accordance with ethics standards outlined by City University. Respondents also completed consent forms to participate in the study and were assured of anonymity.

5.12 Focus Groups

5.12.1 Focus Groups' Guide Pre-testing

The focus groups topic guide was pre-tested with one group of undergraduate students from the college where the researcher works, for its clarity and the content of the questions. The data from this group were not included in the analysis. The aim was to omit or reconstruct questions that may confuse the participants, to see if the discussion was very long and boring so that appropriate modifications could be made and to familiarise the facilitator with the gathering of non-verbal data in the specific context. This first pilot test showed that there were some questions repeated in different words in different sections of the questionnaires. So the questions with the same meaning were omitted. In particular, the question: 'During a typical week and

weekend day, what do you eat and drink? Describe in terms of food categories, type of cooking and type of meals' was omitted because it was covered by three other questions about cooking, popular/unpopular foods and foods that they try to consume or to avoid. The question 'How many servings of fruits and vegetables (fresh, frozen or canned) do you eat per day (average)' was also omitted because the pilot focus group revealed difficulties in recalling these data. Finally, the questions 'Who encourages you to adopt a healthy diet?' and 'Who can influence you to adopt a healthy diet?' were merged in one question 'Who can affect your eating habits by doing the shopping/cooking or select place of eating or in other ways?'.

The pre-testings for both focus groups and interviews were also very useful as a practice for the researcher in order to use the specific instruments and their main purpose was to increase content validity (Leech, 2002).

5.12.2 Data Collection

The first stage of the research took place between October and November 2009. This included nine focus groups of 5-8 undergraduate students aged 18-23 years old. The participants were from eight different education institutes in Athens, three Universities, two IEK, two TEI and a Private College.

Table 5.3: Focus Groups

Focus Group Number	Duration	Number of participants		
		Total	Female	Male
1	1h 25'	7	5	2
2	1h 20'	6	4	2
3	1h 05'	6	2	4
4	1h 10'	7	5	2
5	1h 30'	7	3	4
6	1h 22'	8	4	4
7	55'	5	5	0
8	1h 17'	7	6	1
9	1h 16'	6	0	6
Total		59	34	25

The participants have been selected from the main education institutes of Athens, the capital of Greece, where the facilitator is based, and there was an effort to pick interviewees coming from different departments (i.e. health sciences, social sciences, business and finance, theoretical sciences, arts etc.). Their selection was based on the

purpose of having a mixed sample in order for a wide range of opinions to be provided (Robinson, 1999). Since the characteristics of the population were not used to form the focus groups, we cannot talk about a representative sample (Arber, 1993).

Nevertheless, in order to increase the degree of representativeness, during the recruitment there was an effort to balance the following factors: gender, educational year (cover all 4 years) and living with or without the family, so in some cases we had to exclude some of the volunteers. According to Krueger and Casey's (2000) advice, the groups were mixed in order to share different opinions and provide a variety of thoughts and reactions. The aim was for the groups to picture the real situation where people from different backgrounds react with each other and influence their opinions and behaviours in the education institute context and thus we used mixed focus groups. Furthermore, we were based on Stake's (2005, p. 451) opinion that *"...choose the case from which we feel we can learn the most. That may mean taking the one most accessible or the one we can spend the most time with"* and the idea of *"purposefully selected individuals"* (Creswell, 2003, p. 185), who will help the researcher gain insight about her study and the research questions.

5.12.3 Recruitment

The explanatory and consent forms were given to the participants prior the focus groups in order to give them opportunity to accept their invitation to participate, understand its purposes and be prepared for the session. These documents were first sent to the head professors of the departments or to the universities' deans in order to gain approval for conducting the research. Those who were interested in participating in the research had to inform the researcher and a place and time of meeting were arranged.

More specifically, for the first focus group, the researcher visited the University B, department of Statistics, after having come in contact with a Professor and informed the students inside a class about the research and their prospective participation. At the end of the lesson, 8 students showed an interest to participate, and as there was no other lesson in the specific class for the next 3 hours, the focus group took place at this time. One potential participant decided that he did not want to participate and he left the group prior to the beginning of the conversation. Furthermore, the participant

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1.6 left the group in the 65th minute of the meeting due to personal reasons; nevertheless her opinions have been included in the analysis.

The details of the first focus group are shown in Table 5.4.

Table 5.4: Synthesis of Focus Group 1

Focus Group 1						
Number of Participant	Gender	Year of Studies	Living with family	Education institute	Annual Income of family	Place of Residence before studies
1.1	Female	1	no	University B	€10,001- €25,000	Small city
1.2	Male	1	no	University B	€10,001- €25,000	Large city
1.3	Female	1	no	University B	Up to €10,000	Town
1.4	Female	1	no	University B	Up to €10,000	Town
1.5	Male	1	no	University B	€10,001- €25,000	Small city
1.6	Female	1	yes	University B	€10,001- €25,000	Small city
1.7	Female	1	yes	University B	€10,001- €25,000	Large city

For the second focus group (Table 5.5), the researcher, having the approval of the responsible Professor, assembled the students in a class of University A, Nursing department, informed them of the aim of the research and nine of them showed interest in participating. With eight of them, a meeting was set for later in the same day in a class inside University A, while one person who was not able to be present in this meeting gave her personal telephone number to the researcher in order to contact her for another meeting. In the meeting for the focus group, six out of eight persons showed up. Moreover, the participant 2.6 left the group in the 50th minute due to personal reasons; nevertheless his opinions have been included in the analysis.

Table 5.5: Synthesis of Focus Group 2

Focus Group 2						
Number of Participant	Gender	Year of Studies	Living with family	Education institute	Annual Income of family	Place of Residence before studies
2.1	Male	4	yes	University A	Up to €10,000	Large city
2.2	Female	2	no	University A	€10,001- €25,000	Town
2.3	Female	1	yes	University A	€10,001- €25,000	Town
2.4	Female	1	yes	University A	€10,001- €25,000	Large city
2.5	Female	2	yes	University A	€10,001- €25,000	Large city
2.6	Male	1	no	University A	€10,001- €25,000	Small town, community or village

Concerning the third focus group, participants were gathered from many education institutes. Prior to this meeting, the researcher visited the Management department of the Private College, the Economics department of TEI A and the Graphics and Design department of IEK B. From the Private College, letters were given to the students of one class from the Management department and eight of them showed interest in participating, seven of them participated in a focus group that took place inside the College and one of them was able to participate in the third focus group. From the TEI A, department of Economics, the students of one class were informed about the project and six of them were interested in participating. Two of them participated in focus group 3, one person was not able to participate in any of the following meetings and the remaining three participated in other meetings (see Table 5.6 & Table 5.9). From IEK B, department of Graphics and Design, again the students of one class were informed about the project and only two of them showed interest in participating and both showed up during the third focus group. All these participants along with a woman from University A (see the analysis for the second focus group) were reached through their personal telephone numbers in order to arrange the meeting. The composition of the third focus group is shown in Table 5.6.

Table 5.6: Synthesis of Focus Group 3

Focus Group 3						
Number of Participant	Gender	Year of Studies	Living with family	Education institute	Annual Income of family	Place of Residence before studies
3.1	Male	2	no	TEI A	Up to €10,000	Small city
3.2	Female	4	no	TEI A	Up to €10,000	Town
3.3	Male	1	no	IEK B	Up to €10,000	Town
3.4	Male	1	no	IEK B	Up to €10,000	Town
3.5	Female	1	no	University A	Up to €10,000	Small city
3.6	Male	3	no	Private College	Up to €10,000	Town

The fourth focus group was again conducted inside University B, with students from the Marketing department, following the recruitment process of the first focus group. In this case nine people were interested in participating in the study, eight of them were available to attend the meeting set for the next day and one gave his personal data in order to participate in a following meeting (see focus group 6). One person did

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not show up in the arranged meeting so the composition of the fourth focus group is as shown in Table 5.7.

Table 5.7: Synthesis of Focus Group 4

Focus Group 4						
Number of Participant	Gender	Year of Studies	Living with family	Education institute	Annual Income of family	Place of Residence before studies
4.1	Female	4	no	University B	Up to €10,000	Large city
4.2	Female	4	yes	University B	€10,001- €25,000	Large city
4.3	Female	4	yes	University B	more than €25,000	Large city
4.4	Male	4	yes	University B	€10,001- €25,000	Large city
4.5	Female	4	yes	University B	Up to €10,000	Small city
4.6	Female	4	no	University B	Up to €10,000	Town
4.7	Male	4	yes	University B	Up to €10,000	Large city

The fifth focus group (Table 5.8) consisted of Private College students as it has been analysed before. All seven participants who were interested in participating showed up for the meeting that took place in a class inside the college.

Table 5.8: Synthesis of Focus Group 5

Focus Group 5						
Number of Participant	Gender	Year of Studies	Living with family	Education institute	Annual Income of family	Place of Residence before studies
5.1	Female	2	yes	Private College	€10,001- €25,000	Small city
5.2	Male	3	yes	Private College	more than €25,000	Large city
5.3	Male	3	yes	Private College	more than €25,000	Large city
5.4	Male	3	no	Private College	€10,001- €25,000	Town
5.5	Female	3	yes	Private College	€10,001- €25,000	Small city
5.6	Male	2	yes	Private College	Up to €10,000	Large city
5.7	Female	2	yes	Private College	Up to €10,000	Large city

The sixth focus group was also a mixed group where the participants were contacted through their personal phone numbers. Before this meeting, the researcher visited two more education institutes. Letters were given to a class of the Engineering department of University C again with the permission of their Professor. Four people were interested in participating; one of them was available for the sixth focus group and the

remaining three for the ninth focus group. Also, the researcher visited the IT department of TEI B and gave letters in a class with the permission of the Professor. At the end of the lesson, ten people wanted to participate in the focus groups. Four of them were available to participate in the sixth focus group, two in the ninth and four of them were not able to participate in any of the following groups. So, the sixth focus group, which took place inside National & Kapodistrian University of Athens, had the form shown in Table 5.9.

Table 5.9: Synthesis of Focus Group 6

Focus Group 6						
Number of Participant	Gender	Year of Studies	Living with family	Education institute	Annual Income	Place of Residence before studies
6.1	Male	1	yes	University B	€10,001- €25,000	Small city
6.2	Female	1	yes	TEI A	Up to €10,000	Town
6.3	Female	3	yes	TEI B	€10,001- €25,000	Town
6.4	Male	2	no	TEI B	Up to €10,000	Small city
6.5	Male	2	no	TEI B	€10,001- €25,000	Large city
6.6	Male	5	yes	University C	€10,001- €25,000	Small city
6.7	Female	1	yes	TEI A	€10,001- €25,000	Town
6.8	Female	2	yes	TEI B	Up to €10,000	Town

For focus group number seven the researcher invited the students of a class from the Marketing department of IEK A, having the permission from the IEK's Director. At the end of the lesson seven people wanted to participate, but for the meeting, that took place the following week inside the IEK, two of them did not show up. Table 5.10 shows the composition of the seventh focus group.

Table 5.10: Synthesis of Focus Group 7

Focus Group 7						
Number of Participant	Gender	Year of Studies	Living with family	Education institute	Annual Income	Place of Residence before studies
7.1	Female	2	yes	IEK A	€10,001- €25,000	Large city
7.2	Female	2	yes	IEK A	€10,001- €25,000	Small city
7.3	Female	2	yes	IEK A	€10,001- €25,000	Large city
7.4	Female	2	yes	IEK A	more than €25,000	Large city
7.5	Female	2	yes	IEK A	€10,001- €25,000	Large city

The researcher also visited another class of the Economics department of University A and using the same methodology recruited seven participants who showed up in the eighth focus group. There were also three more students willing to participate but they were above the age limit of the study and hence they were excluded. Other volunteers, who in the previous visits had given their contact details in order to be included in oncoming meetings, were also contacted to participate in either focus group seventh or eighth but none of them was available for the specific dates. Therefore, the synthesis of the eighth focus groups is available in Table 5.11.

Table 5.11: Synthesis of Focus Group 8

Focus Group 8						
Number of Participant	Gender	Year of Studies	Living with family	Education institute	Annual Income	Place of Residence before studies
8.1	Female	4	yes	University A	€10,001- €25,000	Large city
8.2	Male	3	yes	University A	€10,001- €25,000	Large city
8.3	Female	4	yes	University A	€10,001- €25,000	Large city
8.4	Female	4	no	University A	€10,001- €25,000	Town
8.5	Female	4	no	University A	Up to €10,000	Town
8.6	Female	4	yes	University A	€10,001- €25,000	Large city
8.7	Female	4	no	University A	Up to €10,000	Small city

Finally, there was a final meeting for the volunteers who were not able to participate in one of the previous meetings and had given their contact details to the researcher during the recruitment process. Nine people replied but two of them from University C finally did not come to the meeting. The composition of this last focus group is in Table 5.12.

Table 5.12: Synthesis of Focus Group 9

Number of Participant	Gender	Year of Studies	Living with family	Education institute	Annual Income	Place of Residence before studies
				Focus Group 9		
9.1	Male	5	yes	University A	Up to €10,000	Small city
9.2	Male	2	yes	University C	€10,001- €25,000	Large city
9.3	Male	5	yes	University A	more than €25,000	Large city
9.4	Male	5	yes	TEI B	more than €25,000	Large city
9.5	Male	5	yes	TEI A	Up to €10,000	Small city
9,6	Male	5	yes	TEI B	Up to €10.000	Small city

In conclusion, from 75 undergraduates who had shown interest to participate, 59 (78.7%) finally turned up to participated in the focus groups (Table 5.13).

Table 5.13: Focus Groups Participants Approached and Participated

Education institute	Interested in participating	Participated	Unable to participate
University A	21	16	5
University B	17	15	2
University C	4	2	2
IEK A	6	5	1
IEK B	10	6	4
TEI A	7	5	2
TEI B	2	2	0
Private College	8	8	0
Total	75	59	16

5.12.4 Conduct of the Focus Groups

The focus group facilitator was the author. There was special attention concerning the following issues that Denzin and Lincoln (2008) highlight:

- The interviewer established rapport, as she was close to the participants' age, wore casual clothes like them and introduced herself as a student, therefore the participants were more likely to feel comfortable to speak.
- The interviewer kept one or more persons from dominating the group
- The interviewer encouraged renitent respondents to participate
- The interviewer obtained responses from the entire group

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- The interviewer was neutral and did not intervene in participants' opinions

The discussions were double tape-recorded and the groups did not exceed eight people in order to avoid any information loss due to high participant number. Therefore, the focus groups consisted of five to eight students, as the literature suggests (Krueger and Casey, 2000).

The participants demographic data were gathered separately right before or after the main session. The participants had the opportunity to use a nickname instead of their name in order to feel comfortable concerning their anonymity.

At the end of the focus groups there was time to give the participants the opportunity to speak to the researcher individually as Robinson (1999) suggests.

Focus groups took place in education institute rooms where the participants study in order to accommodate their participation and ensure lack of noise that may disturb the discussion and degrade the content of the digital recording. In the case of focus groups where the participants came from different Institutes, the meetings took place in classes of the University that the researcher cooperates with, i.e. National and Kapodistrian University of Athens, with the permission of the building's administrator. Refreshments and snacks were provided to further establish the desired environment.

5.12.5 Data Analysis

Right after every focus group, in order to impress the non-verbal reactions of the participants, the discussion was transcribed verbatim by the researcher into Greek. All the analysis of the data was made in Greek and the translation into English was made at the final stage in order to include the findings in this thesis. The translation was made in such a way as to reflect any meanings that could be perceived in a different way between the two languages and in order to make sense in English. For this reason, two persons, the researcher and the external supervisor, translated the data separately and then compared the translations.

For the transcripts, a word processor was used. When all data from focus groups were gathered, there was a coding process. The aim of this process was to identify common

issues concerning the four different question areas (see Table 5.1). So, all the transcripts were read by the researcher in order to get separated into four different word documents using the four research questions as headings. A second reading facilitated the separation of the data in more categories within the main four research questions based again on common themes and words. A second experienced researcher was used as a second coder to pursue inter-coder reliability (Silverman, 2003). The second coder assessed 200 randomly selected items from all the focus groups which had already been coded by the researcher and the agreement between the researchers was calculated with the use of Cohen's Kappa coefficient to 0.92 through SPSS. For conflicting views there was a discussion between the researchers in order to conclude into the areas of interest that the quotes belong to. This process revealed the following areas of analysis:

- Views about health and eating habits
- Reported eating habits
- Influences on their eating habits.
- Sources of information about food and nutritional issues.
- Motives and barriers for the adoption of healthy eating habits.
- Impact of the external environment on the adoption of healthy eating habits.
- Views about current initiatives towards healthy eating
- Views about the role of the key sectors (State, Civil Society and Food Supply Chain) towards nutrition.
- Suggestions to improve the current situation

For the presentation of the findings (see Chapter 6), the sub-sections are based on this categorisation and it is also very important that great care was taken to ensure that the meaning from the Greek quotes was interpreted in English in such a way as to ensure that the meaning of what the interviewee was saying was not lost. For this purpose, an experienced researcher examined the Greek quotes along with their English interpretation in order to make corrections. Moreover, to preserve the anonymity of the participants, the interviewees have been numbered randomly in every focus group and so were the quotes inside the text; only the number of the participant is indicated. Finally, the results from the focus groups discussion were integrated with the data from the interviews with people from education institutes and with other research data as analysed in the Triangulation section.

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5.13 Interviews

Undergraduate students can be influenced by the environment that they live in. This environment can be separated into the micro-environment that includes the factors that affect them directly because it is closer to them like the family, their peers and the educational institute where they study. On the other hand, there is also the macro-environment which is the wider environment where undergraduate students and all Greek citizens live and includes the food system actors in a national and international level that affect their nutritional habits (Dahlgren and Whitehead, 1991). Based on this separation, the interviews were with people from the direct environment of the undergraduate students, i.e. their educational institutes, in order to reveal how the feeding facilities can affect their eating behaviours, and with people from their wider environment, i.e. the Greek food system and include key stakeholders from the State, the Civil Society and the Food Supply Chain. For both kinds of interviews the interviews guide pre-testing and the analysis process were the same and it is described in section 5.13.1 and 5.13.4 respectively. Nevertheless, the data collection process has been separated in order to reveal this distinction between the two different environments.

5.13.1 Interview Guide Pre-testing

Concerning the interview guide, the interview questions were general and probably could not reflect the differences between the four main sectors. Hence, the first interview from each sector (total of four interviews) was a pilot interview in order to see on what points the interviews should differ between the stakeholders from different sectors. The findings from the pilot interviews were, in fact, included in the data analysis. The pilot interviews revealed what Denzin and Lincoln (2008) also present, that more (and better) data were gathered when the interviewer did not intervene with specific questions and used only general topics, thus allowing the interviewee talk (almost) uninterrupted. Therefore, for the following interviews the interviewer intervened only in order to ask the questions or to clarify any issues that the interviewee had raised. Nevertheless, the interview questions can change at any time as the researcher learns during the process how to better approach the subjects and what to ask in order to reveal more complete information (Creswell, 2003), and this is what happened in some interviews for this study.

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5.13.2 Data Collection

Interviewees from education institutes were selected based on their involvement with the feeding facilities of the education institutes and there was an effort to involve people from all kinds of education institutes that the undergraduate participants came from.

Specifically, there were a total of six contacts with people from two Universities, one IEK and a Private College. There was no contact with TEIs because the legislation about the feeding facilities is the same as in Universities. The contacts were made either by phone or by email and the explanatory and consent forms were sent via email to those who responded in order to decide if they would participate in the study, to be prepared and to allow their organisation to consider their participation and receive participation approvals that may be needed.

From these contacts, everyone responded. Table 5.14 shows the interviewees from the education institutes.

Table 5.14: Interviews with Key Stakeholders from the Education Institutes Feeding Facilities

Sector of the Food System	Sub-group	Interviewee Code
Education Institutes (E)	University Dean.	27
Education Institutes (E)	IEK Assistant Director.	31
Education Institutes (E)	University Feeding Services, responsible for the restaurant	28,29
Education Institutes (E)	University Feeding Services, responsible for the Canteens	30
Education Institutes (E)	Canteen Owner	32

The interviewees were encouraged to choose the date and the place of the interview for their convenience and they could choose between face to face interviews in a place of their choice, or over the telephone. Five interviews were conducted face to face and only one through the telephone. The interviews took place between March and June

2010. The interview length ranged from 15 to 25 minutes. Table 5.15 shows these details.

Table 5.15: Details about the Interviews with Key Stakeholders from the Education Institutes

Interviewee Code	Type of Interview	Date of Interview	Duration of Interview
27	Face to face	06/5/2010	18'
28	Telephone	10/5/2010	21'
29	Face to face	12/5/2010	15'
30	Face to face	1/6/2010	25'
31	Face to face	16/3/2010	16'
32	Face to face	24/4/2010	15'

Interviewees from the Greek food system were chosen based on their involvement in key initiatives and policy formation that were mentioned in Chapters 2 and 4 of the study. There was an effort for a balance between the data that were collected for each sector and the fact that there are more interviewers from the Food Industry is mainly due to the fact that many people from the Civil Society refused to participate in the study.

Specifically, there were a total of 35 contacts with people and organisations of the three main sectors (State, Food Supply Chain and Civil Society). The contacts were made either by phone or by email and the explanatory and consent forms were sent via email to those who responded in order to decide if they would participate in the study, to be prepared and to allow their organisation to consider their participation and receive participation approvals that may be needed.

From these contacts, nine did not respond, i.e. four consumer unions, a hypermarket, a State organisation, a member of a food industry trade association, a nutritionists union and an advertising company. Regarding these organisations, any available data were gathered through their official websites.

The remaining 26 included eight interviews with people from State organisations, eight from the Civil Society and ten from the Food Supply Chain, as shown in Table 5.16

Table 5.16: Interviews with Key Stakeholders of the Greek Food System

Sector of the Food System	Sub-group	Interviewee Code
State (S)	Ministry Civil Servants	01, 02, 05, 06, 07
State (S)	Civil Servants from governmental bodies for control and advising	03, 04, 08
Civil Society (C)	Nutritionist	09*
Civil Society (C)	NGO	10, 11,
Civil Society (C)	Social Marketing Programme contractor	12
Civil Society (C)	Members of Scientific Associations	13*, 14, 15
Civil Society (C)	Member of Advisory Committee	18*
Food Supply Chain (B)	Member of food production trade association	25
Food Supply Chain (B)	Member of food industry trade association	19, 26
Food Supply Chain (B)	Food industry managers	20, 21, 22, 23, 24
Food Supply Chain (B)	Retailer	16
Food Supply Chain (B)	Food outlet manager	17

These interviewees are also University Professors.

The interviewees were encouraged to choose the date and the place of the interview for their convenience and they could choose between face to face interviews in a place that the participant chose, or if there were difficulties, over the telephone. Fourteen interviews were contacted face to face and eleven by telephone. The interviews took place between May and October 2010. The interview length ranged from 10 to 75 minutes. Some of the interviews were shorter because the interviewees had less to say on some of the subjects covered in the interview or because they had a busy work schedule. These details are displayed in Table 5.17

Table 5.17: Details about the Interviews with Key Stakeholders of the Greek Food System

Interviewee Code	Type of Interview	Date of Interview	Duration of Interview
1	Face to face	21/6/2010	75'
2	Face to face	21/6/2010	40'
3	Face to face	9/6/2010	27'
4	Telephone	24/6/2010	13'
5	Face to face	28/5/2010	10'
6	Face to face	24/6/2010	45'
7	Face to face	20/5/2010	42'
8	Telephone	30/6/2010	11'
9	Face to face	2/10/2010	39'
10	Face to face	9/6/2010	63'
11	Face to face	3/9/2010	22'
12	Face to face	18/6/2010	32'
13	Telephone	23/8/2010	12'
14	Telephone	17/6/2010	32'
15	Telephone	25/5/2010	17'
16	Face to face	8/6/2010	25'
17	Telephone	15/6/2010	15'
18	Face to face	16/6/2010	38'
19	Telephone	29/6/2010	22'
20	Telephone	17/6/2010	27'
21	Face to face	31/5/2010	40'
22	Telephone	15/9/2010	11'
23	Telephone	8/9/2010	18'
24	Telephone	31/8/2010	19'
25	Face to face	14/6/2010	43'
26	Telephone	24/6/2010	13'

Furthermore, it is important that despite the fact that individuals were interviewed, questions were asked in such a way as to elicit organisational responses. Archive data and legislation documents that were available were gathered from the organisations (see Section 5.4.1)

The interviewer in all cases was the researcher because of her prior experience in conducting semi-structured interviews. There was special attention concerning the following issues that Denzin and Lincoln (2008) highlight:

- The interviewer avoided getting involved in a real conversation where she could reveal her own opinion about the topic
- The interviewer did not judge the opinion of the interviewer and her reactions were neutral

5.13.3 Data Analysis

Right after every interview, in order to capture any non-verbal reactions of the participants, the discussion was transcribed verbatim by the researcher into Greek. The analysis of the data was made in Greek and the results were translated in English at the end, in order to be included in this thesis. The translation was made in the same way as with the data from focus groups (see section 5.12.5). For the transcripts, a word processor was used. When all data from interviews were gathered, there was a coding process. The aim of this process was to identify common issues concerning the three different question areas (see Table 5.2). So, all the transcripts were read by the researcher in order to get separated into three different word documents using the three research questions as headings. A second reading facilitated the separation of the data in sub-categories within the main four research questions based again on common themes and words. A second PhD candidate was used as a second coder to safeguard inter-coder reliability (Silverman, 2003). The second coder assessed three interviews from each sector category which had already been coded by the researcher and the agreement between the researchers was measured with the use of Cohen's Kappa coefficient to 0.87 through SPSS. For conflicting views there was a discussion between the coders in order to conclude into the areas of interest that the quotes belong to. This process revealed the following areas of interest:

- The current situation about feeding facilities inside the education institutes
- Opinions for improvements concerning feeding facilities inside the education institutes
- The Role of the State in Food and Nutritional Interventions
- The Role of the Food Supply Chain in Food and Nutritional Interventions
- The Role of Civil Society in Food and Nutritional Interventions
- Strengths and Weaknesses of the Food System Actors
- Relationships between the Food System Actors
- The Role of Social Marketing
- Proposals about the Improvement of Nutritional Habits

For the presentation of the findings (Chapters 7 and 8), the sub-sections are based on this categorisation and it is also very important that great care was taken to ensure that the meaning from the Greek quotes was interpreted in English in such a way as to ensure that the meaning of what the interviewee was saying was not lost. For this

purpose, an experienced researcher examined the Greek quotes along with their English interpretation in order to make corrections. Moreover, the interviews were integrated with other research data as analysed in the Triangulation section. Furthermore, to safeguard the anonymity of the participants, the interviewees have been numbered randomly as shown in Tables 5.13 and 5.14 and as for the quotes inside the text, the letter indicates the sector that the interviewee comes from (S for State, E for Education Institute, C for Civil Society and B for Food Supply Chain) and the code number of the interviewee (i.e. S03 shows the answers given by the participant number 03 from the State)

5.14 Secondary Data Analysis

The analysis of the documents gathered at all stages of the research was based on the advice of Peräkylä (2008, p. 353), who states that an informal approach can be adopted *"especially in research designs where the qualitative text is not at the core of the research but instead is in a subsidiary or complementary role...".*

5.15 Primary Data Analysis with the Use of Microsoft Word & Microsoft Excel Processors

Advances in technology provided the researcher with specialised statistical software for the analysis of qualitative data like CAQDAS and NUD*IST. All these software programmes require firstly the transcription of data into a word processor and from then on they can facilitate the data analysis. Nevertheless, for the specific study, Microsoft Word functions were used to detect common words and themes among the data of focus groups and interviews. We selected this method for two reasons:

- Silverman (2003, p. 162) states that *"clearly word processors can do some of the things done by specialized packages"*.

- The researcher was not experienced in the use of specialized software programmes but in the use of Microsoft Word and Office and thus time could be saved.

Therefore, data were transcribed into a Word processor and then, after the first coding, in Microsoft Excel (it is easier because quotes are divided into different cells creating tables) in order to reveal sub-categories for the coding of the data based on common words and themes.

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Chapter 6: Findings from Focus Groups with Undergraduate Students

6.1 Introduction

People's behaviour is a combination of rational decisions and complicated and hidden emotions, so, in order to increase the chance of creating an appealing offer, social marketers and policy makers need to discover not what people do but also the reasons for their actions. In order to reveal these inner impulses, the use of qualitative research with in-depth questioning is inevitable (Hastings, 2007). Therefore, in this study, focus groups of undergraduate students were used as a case study to explore the inner motives for their attitudes and behaviours in order to help them change their behaviour towards healthy eating and hence to inform the policy makers. By knowing the advantages that people believe that they get when acting in an unhealthy way and the degree of supportiveness of the education institute environment, the development of a healthy offer which can provide the same benefits under the current situation can be facilitated. For example, if it is found that the benefit of unhealthy eating behaviours is quick preparation, we should promote healthy foods that are easy to prepare or show that it does not take more time to prepare healthy food or to devise recipes which are easy and fast to prepare. Moreover, in-depth interviews with people involved in the feeding facilities of the education institutes were used for the understanding of the current system and the improvements that could be made (see Chapter 7).

This can give insight into the changes that could occur in the environment to support any suggested initiatives.

This chapter presents the findings of research questions two to five.

- Why do Greek undergraduate students act as they do concerning their eating habits? How do they perceive healthy eating and which are their motives and barriers towards adopting healthy eating habits?

- How can the micro-environment (family, friends, peers) and macro-environment (food industry practices, regulations etc) influence their choices?

- What is and should be the role of each sector (State, Food Chain Supply, Civil Society) in the improvement of people's nutritional habits? What are/should be the relationships between the actors of each sector?

- What kind of initiatives should a future food policy for the improvement of nutritional habits of Greeks include?

Thus, focus groups of undergraduate students should help us understand their current eating behaviour and their influences towards healthy eating. Specifically, the following categories have been identified through the analysis:

- Reported eating behaviour.

- Sources of information about food and nutritional issues.

- Views about health and eating habits

- Motives and barriers towards the adoption of healthy eating habits.

- Influences on their eating habits.

- Impact of the external environment on the adoption of healthy eating habits.

- Views about current initiatives towards healthy eating

- Views about the role of the key sectors (State, Civil Society and Food Supply Chain) towards nutrition.

- Suggestions to improve the current situation

This chapter presents the focus groups findings based on this categorisation. Prior to this, there is a short introduction to the layout of the education system in order to understand the various levels of undergraduate studies that are provided in Greece.

6.2 An Introduction to the Education System of Greece

At the age of 18, students have the option to continue their studies in a state or private education institute (Figure 6.1). According to their marks obtained through national exams following completion of high school, potential undergraduate students can enter tertiary education and attend a University or a Technological Education Institute (TEI) both of which charge no tuition fees. In addition, for weaker students there is the option of the Vocational Training Institutes (IEK) and the ones who can afford to can attend a private College (Dynot Dynamic Onlinetool for Guidance).

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Figure 6.1: The Greek Education System
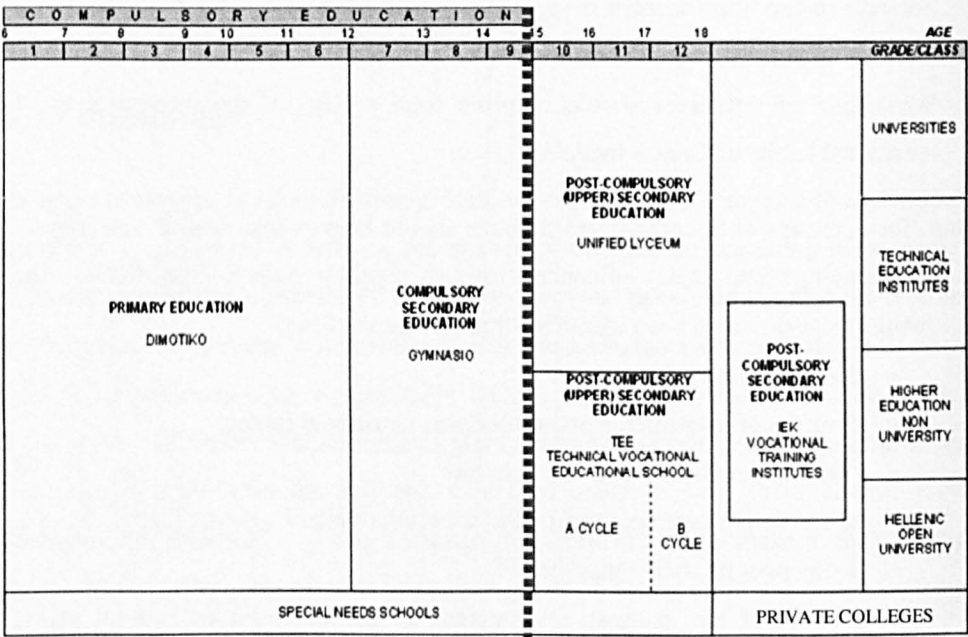
Source: Adopted by Dynot Dynamic Onlinetool for Guidance

For this study, undergraduate students from all these sectors were approached as it is shown in Figure 6.2. Thirty-three were studying at a University, eleven at a TEI, seven at an IEK and eight at a private college.

Figure 6.2: Type of Education Institute of the participants

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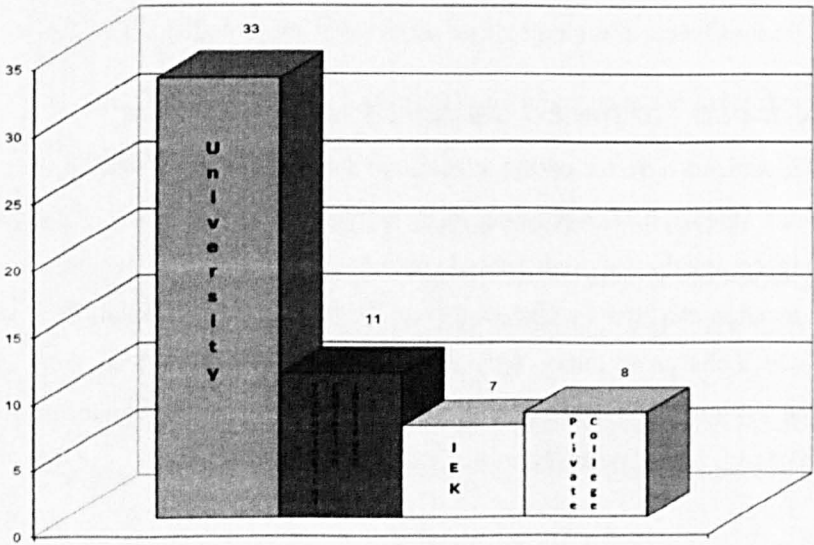
6.3 Focus Groups Demographics

At the beginning of the interviews, a structured questionnaire was handed out to the participants in order to fill in their personal data including gender, ethnicity, income, education institute, education institute department, year of studies, age, place of residence before their undergraduate studies and living status. The results are summarised in the following figures. There were 34 female participants and 25 male (Figure 6.3).

Figure 6.3: Gender of the participants
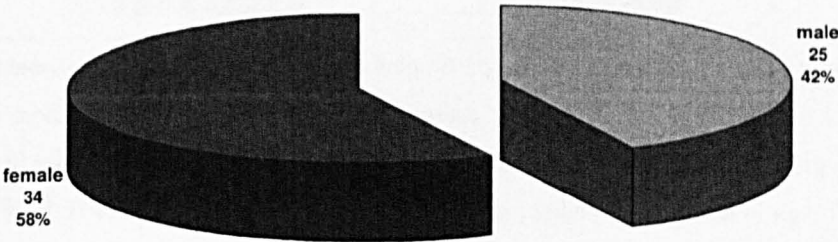
The participants also came from different income categories. Twenty-three participants have an annual family income of less than 10,000€, thirty from 10,000€ up to 25,000€ and six above 25,000€ (Figure 6.4).

Figure 6.4: Income Categories of the Participants
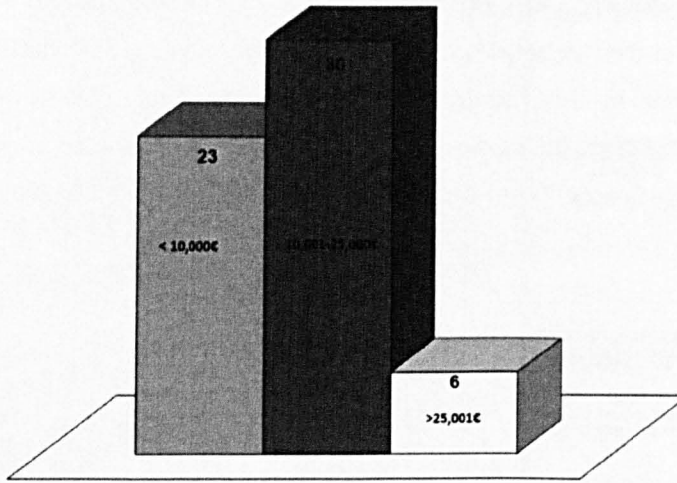
Concerning the year of studies, the participants were from all years of studies and covered the whole range of the age category, i.e. 18-23 years old. So, there were sixteen participants in their first year of studies, fifteen in their second, seven in their third, fifteen in their fourth and six in their fifth or higher year of studies (Figure 6.5). In addition, the participants came from varying areas of study, like marketing, management, engineering, statistics, nursing, graphics and design, IT and economics.

Moreover, at the time of the study, nine were eighteen years old, eight were nineteen years old, fourteen were twenty years old, fifteen were twenty-one years old, two were twenty-two years old and eleven twenty-three years old (Figure 6.6).

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Figure 6.5: Year of Studies of the Participants
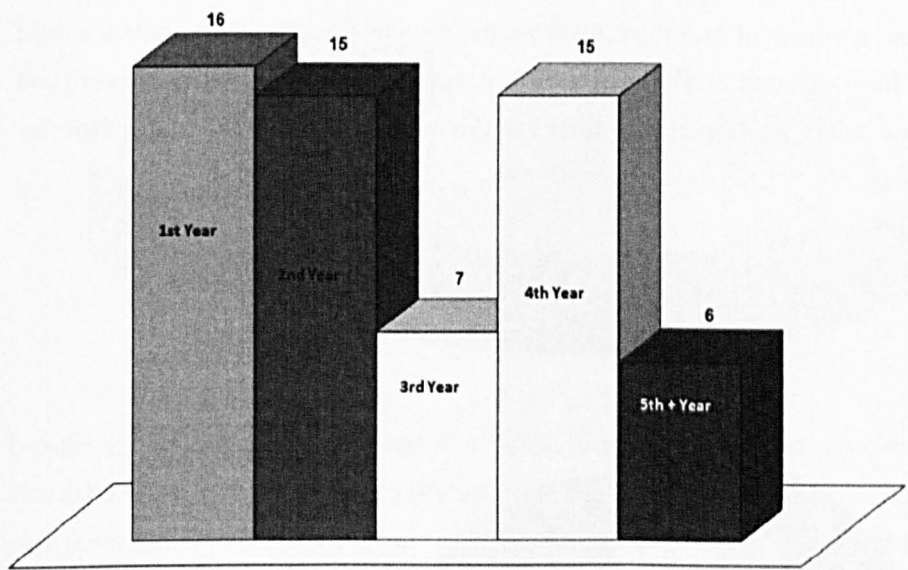
Figure 6.6: Age of the Participants
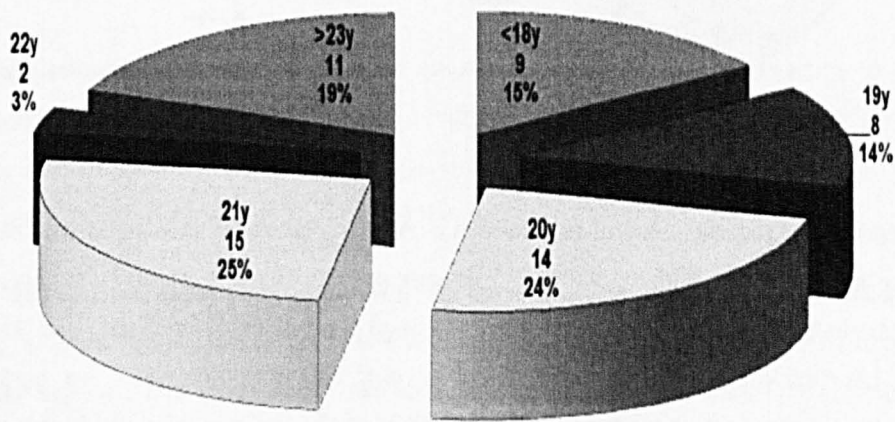
It was also important to see the region of Greece that the participants came from in order to make sure that people from other places participated and not only people who live in Athens. This could increase the representativeness of the study. Twenty-six

participants were from a big city of more than 100,000 people, sixteen from a smaller city of 10,001 to 100,000 people, sixteen from a town of 2,000 to 10,000 people and one from a village of less than 2,000 people (Figure 6.7). So, the sample included people from different areas of Greece where the eating habits of the population and food availability would probably differ and this could lead to different answers during the discussions.

Figure 6.7: Place of Residence of the Participants before Studies
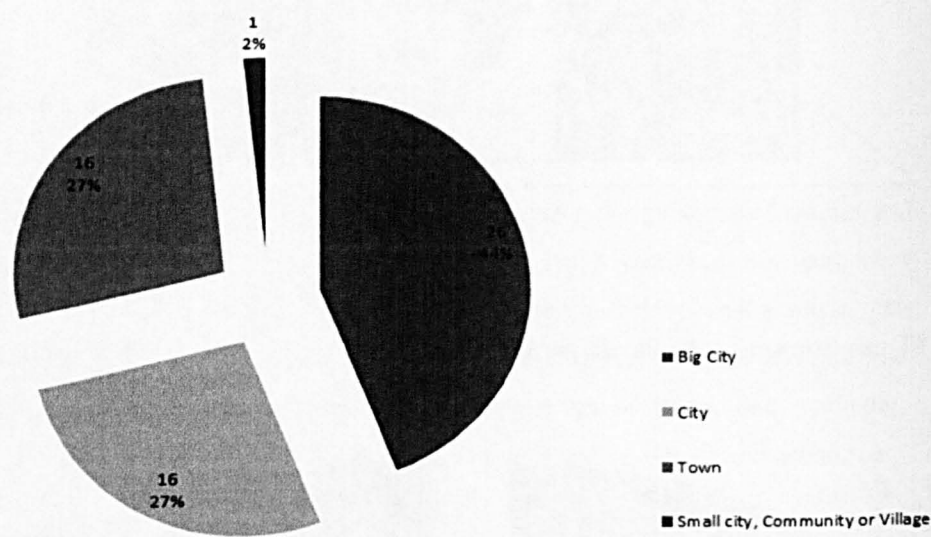
Concerning the current place of residence, i.e. Athens, there was interest in whether the participants lived with or without their parents and relatives as this can reveal whether undergraduate students who have changed their place of residence and live alone have maintained their eating habits or not. On the other hand, we could understand if there are changes in the eating habits of the students who still live with their family because of the new student lifestyle. Twenty-one focus group participants lived without their family, while thirty-eight lived with their parents (Figure 6.8).

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Figure 6.8: Living Status of the Participants (with or without their family)

Without Family
21
36%

With Family
38
64%
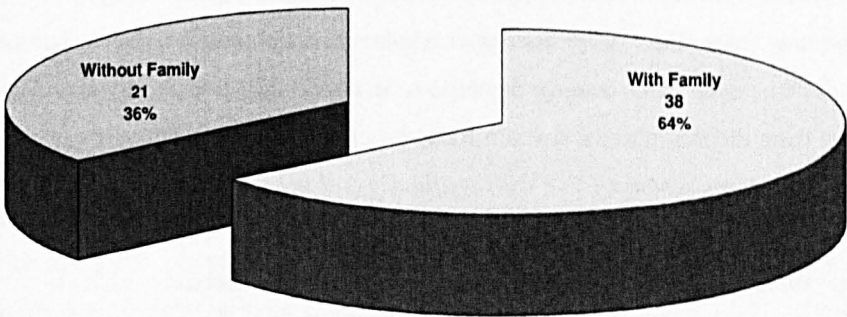
To sum up, the sample had members of different residential and economic status and covered all five years of studies in education institutes of every category. Also, there were participants who live with their family and participants who live away from their parents or relatives. These differences of demographic data help the extraction of conclusions from students with various backgrounds in order to present a more realistic picture of the undergraduate student population of Greece. The code for the following analysis is in Appendix 5.

6.4 Exploration of Eating Habits

The first area of exploration included questions in order to help understand what the undergraduate students' eating habits involve concerning foods that they consume or avoid, if they cook or prefer take-aways, if their eating habits have changed since they started their undergraduate studies and the reasons for their actions.

In this context, there were questions about their favourite foodstuffs, which food they try to avoid or to consume and the reasons for their choices. There were participants who reported that they prefer fast food and other kinds of foods that are easy to prepare or to find, as in the case of one female respondent who said:
"I eat a lot of pasta because it is easy to prepare" **(participant 8.5).**
Also, another criterion for their choices was taste as a woman from the first focus group reveals
"I often eat junk food because it is tasty" **(participant 1.5)**

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These two factors of food choice are also reflected by another male participant who said:

"I eat what I like and what I can find because I live alone" **(participant 3.1)**

Concerning fruits, there were participants who reported that they have fruits during their day but these were mainly the ones who lived with their family like these two women from the first and the seventh focus group who reported that:

"I eat everything because I live with my family and my grandmother is chasing me to eat fruits" **(participant 1.1)**

"If my mother prepares the fruits for me, I will eat them" **(participant 7.4).**

So, the role that the family can play in the adoption of healthy eating patterns was highlighted by other respondents like a woman of the sixth focus group who said that *"family plays an important role in what we eat"* **(participant 6.3)**, and a woman from the second focus group who raised the issue that *"In order to have a balanced diet, you must have someone to prepare the food for you"* **(participant 2.2.)**, a statement which met with the agreement of the rest of the group. Moreover, this was reflected by a woman from the first focus group who said that *"Because we observe fasting days in our family I eat legumes every Wednesday and Friday"* **(participant 1.1)**.

On the other hand, there were participants who reported that they did not consume fruits and vegetables because of lack of time to prepare them and representative of this is the quote of a woman of the fourth focus group who said that *"When I come back home from the University late at night I will skip fruit and have only dinner"* **(participant 4.6)**. There were also participants who fail to wash and prepare the fruits and vegetables like a woman from the seventh focus group who said *"oh...come on...I hate washing fruits, it is the most boring thing in the world..."* **(participant 7.2).**

Moreover, another reason for low fruit and vegetable consumption is that they do not like them, as characteristically reported by a man from the third focus group *"I prefer to have a chocolate rather than a fruit"* **(participant 3.3)** and a woman from the eighth focus group who said that *"I would prefer to eat less meat if I have a health problem rather than eat more fruits"* **(participant 8.3)**.

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Another reported reason was that they are expensive. This was highlighted by a woman from the third focus group *"Now that I am a student and live away from my family I can't afford to eat fruits all the time, they are too expensive!"* (**participant 3.5**). The same issue was raised in the eighth focus group where a woman reported that *"Unfortunately, healthy foodstuffs are very expensive and you have to think of it in order to buy them"* (**participant 8.1**).

Moreover, the fact that they cannot find them when they want them was another reason for low fruit consumption. The following quotes from two women and a man respectively were typical of the responses:

"I eat (fruits and vegetables) when I am at home" (**participant 6.3**).

"If I buy fruits they rot because I don't often eat at home" (**participant 2.2**)

"I don't have them when I want them" (**participant 4.4**)

On the other hand, in every focus group there were participants who said that they do not consume as many fruits and vegetables as they like but they would like to consume more.

There were also respondents who were trying to consume healthy foodstuffs for health and appearance reasons like a man from the fourth focus group who said that *"I try to eat different foods every day so that I can take all the nutrients I need"* (**participant 4.4**), and because this is the way that they have been taught since they were young like a woman in the fourth focus group who reported that *"I avoid fast food, pizza and pies. I like them but my parents taught me not to buy these things and I have learnt to live like this"* (**participant 4.3**).

On the other hand, there were respondents who do not care about their health or appearance because they are still very young, like a man from the ninth focus group who said that
"I am not going to pay more attention to this (referring to healthy eating) at my age" (**participant 9.1**)

Furthermore, it is encouraging that during their conversation, there were people who reported that they have a healthy option for breakfast like milk with breakfast cereals,

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fruits, yogurt or bread with honey and only a few said that they eat pies, croissants and confectionary products. Nevertheless, there were some participants who skip breakfast for the same reasons that participants neglect having fruits and vegetables, and a representative response is the quote of a man from the first focus group who reported that

"I don't eat breakfast because I don't have time or there is nothing at home as I live alone" **(participant 1.5)**

The next question, in order to explore their eating habit changes since they entered a higher education institute and therefore to understand the need for interventions in this group of the population, was to discuss whether there have been any changes in their eating habits since they started studying and what kind of changes. All focus groups concluded that the transition to the student lifestyle and the move away from the family played a major role in the alteration of their eating habits, by adopting an unhealthier way of eating. Representative of this trend is what a woman from the fifth focus group said *"there are no healthy alternatives (in the education institutes), so we don't have the chance to eat what we want"* **(participant 5.1)**, a man from the third focus group who said that *"I eat unhealthy food because I eat out of home more often"* **(participant 3.3)** and a man from the ninth focus group who said *"I have take-aways a lot"* **(participant 9.2)**.

Only one participant said that she is eating healthier now, a woman from the third focus group who reported that *"Now that I live alone I eat healthier because I can prepare my food by myself"* **(participant 3.5)**.

So, eating habits have become worse, as the common practice is more fast food, less cooked food, irregular meals and low consumption of fruits and vegetables.

The reported reasons for these habits are unstable module hours because students are at the education institutes all day without a proper break for lunch. This was reported by a woman of the eighth focus group who said that *"There is cooked food at the University's restaurant but we don't have the time for a proper meal in between classes, so we will take something like a sandwich or bakery products"* **(participant 8.6)** and a man from the sixth focus group who said *"We don't have a schedule"* **(participant 6.6)**. They also reported that there are no healthy alternatives in the

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canteens and close to the education institutes and they cannot eat the same food every day. Characteristic was the desperate response of a man from the fourth focus group who was wondering *"how many low-fat sandwiches can you eat?"* (**participant 4.7**) implying that the only healthy alternative provided by his education institute canteen is a specific type of low-fat sandwich. Also, a woman from the second focus group reported that *"I eat junk when I am at the university"* (**participant 2.5**). Lack of time is another reason that they have changed their eating habits as a woman from the fifth focus group said *"We don't have the chance to eat something healthy"* (**participant 5.5**). Moreover, fashion reasons and peer-pressure were two more reasons that have been quoted by the focus groups. For example, a woman from the second focus group said that *"it is fashionable to eat burgers or souvlaki"* (**participant 2.4**) and a man from the third focus group said that *"if my friends consume unhealthy foods I want to do the same and not to feel like a stranger"* (**participant 3.6**) and a woman from the first focus group said *"When I am with my friends I will eat what they eat. I won't become a problem"* (**participant 1.1**).

Finally, the participants were asked to discuss whether they cook and the reasons for their choice of whether to cook or not. The majority of the participants reported that they do not cook due to lack of knowledge or due to lack of time as one woman from the fifth focus group said *"We want different things than what we do in the end. Many of us work and study at the same time, so there is no time to cook even if we want to eat a healthy meal; we are forced to take something on the go"* (**participant 5.7**) and another woman from the same group added that *"We would like to cook but we don't have time so we take something on the go"* (**participant 5.5**). Another reason is that those who live with their family have their parents cook for them and they consume fast food when there is no cooked food at home like a man from the ninth focus group who said that *"I consume fast-foods when there is no food at home"* (**participant 9.3**).

These factors explain the high consumption of junk foods that they mentioned before. So, most of the respondents reported that they do not prepare the food in their home to take with them, so they eat fast food and bakery products like pies and croissants when they are at the education institute, where healthy alternatives are not available. This shows the trends of the new generation, which chooses fast-foods rather than

home-made food whether they live with their family or not, because of the convenience it provides.

6.5 Views about Health and Eating Habits

The second area of analysis emerging from the data were the views of undergraduate students about health and healthy eating in order to reveal their opinion about healthy and unhealthy eating and their perceived relationship between healthy eating and health.

Firstly, there was a discussion about the importance of health and what they do in order to maintain good health. There was a range of answers. There were participants who believed that health is the most important thing in their lives like a woman from the first focus group who said that health "... *is the number one factor but most of the times we neglect it because we do not have problems yet*" **(participant 1.4)** and a man from the second focus group who said that "*If you are not healthy you have nothing*" **(participant 2.6)**. On the other hand there were respondents who were concerned about their health but did not want to avoid things that make them feel happy like the man in the first focus group who said "*I care about my health as long as it does not deprive me of my happiness*" **(participant 1.2)** or they do not want to get stressed by following a healthy lifestyle like a woman in the eighth focus group who said that "*I should be careful but not always because this stresses me out and that's why I am trying to avoid paying so much attention to healthy eating*" **(participant 8.6)**.

There were also a few participants who expressed no concern for their health at all. A man from the fifth focus group said that "*I am ok at the moment. If I notice something that I don't like, I will change*" **(participant 5.4)**, probably because they still have not faced any health problems like a woman from the seventh focus group who said that "*At my age I don't give a hang about health*" **(participant 7.4)** and a woman from the fourth focus group who said that "*I still don't give much attention because nothing bad has happened to my health*" **(participant 4.1)**. On the other hand, participants who faced health problems in the past, become careful in their eating habits like a man from the fifth focus group who said

"I faced the problem, I had high cholesterol and I was fat. Now, I am very careful in order to have good health" (**participant 5.2**).

Participants were also asked to express their opinion about healthy and unhealthy eating.

Their main views about healthy and unhealthy eating are summarised in Table 6.1.

Table 6.1: Participants Opinion about Healthy and Unhealthy Eating

What do you consider to be healthy eating	What do you consider to be unhealthy eating
Balanced meals (there should be a schedule)	Eating fast foods
Lots of fruits, vegetables and water	Food not cooked at home
Adherence to the Mediterranean diet	Fats & butter of animal origin
No sweets- try to avoid sweets	Low consumption of fruits and vegetables
Try to avoid fast foods	Snacks
Combination of foods to take all the important nutrients	Fried foods
Small quantities of food	Sweets consumption
A good breakfast	Coca-cola, coffee and alcohol
It depends on the way of cooking (not fried, not lots of salt, creams and dressings) – cooking at home	Lots of meat

There were also participants who believed that whether the eating habits will have bad or good consequences on their health depends on the person. A man from the second focus group supported this opinion by claiming that *"If what I eat satisfies me and, at the same time, does not engender a problem, then this is for me healthy nutrition"* (**participant 2.1**) and a woman from the seventh focus group said that *"It depends on each one of us how s/he is going to go about her/his health"* (**participant 7.1**). Also, a woman from the fourth focus group stated her own experience by saying that:

"I have been through many things concerning eating and I have concluded that it is not only about eating chicken and fruits. We have to eat everything and if we eat

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something bad we can have some fruits the next day and our body returns to normal. I am trying to see it as a weekly not as a daily consumption. Undoubtedly, it is a personal matter" (**participant 4.5**).

The origin of the food was another criterion for healthy eating raised by a woman from the eighth focus group who said that *"It depends where it comes from. I prefer the products from my village and my garden"* (**participant 8.5**).

Finally, the substitution of unhealthy options with something more healthy has been raised in the eighth focus group when a woman said that *Whatever we can't avoid, we should substitute with something less unhealthy, for example instead of sweets to have a piece of dark chocolate* (**participant 8.4**).

In order to survey their knowledge concerning the benefits and negative consequences that people may have when they eat healthy and unhealthy foods (based on what they believe to be a healthy or unhealthy diet) the participants were asked to discuss the perceived benefits and problems they face when they eat and drink in healthy and unhealthy ways. The main benefits and problems mentioned by the participants are illustrated in Table 6.2.

Table 6.2: Participants Opinion about Benefits of a Healthy Diet and Problems of an Unhealthy Diet.

Benefits you get when eat and drink in healthy ways	Problems you get when you do not eat and drink in healthy ways
Better socialisation	Obesity
More energy	Cardiovascular diseases
Avoid obesity	Psychological problems
Feel good physically and mentally	Appearance problems
Better mood	Cholesterol
Live longer	Lack of vitamins
Hair, nails and skin look good	Fatigue
No heart diseases	Insomnia
No cholesterol	Headaches
Beautiful body	Lack of energy
Balanced blood pressure	

There were also participants who highlighted the overall benefits of a healthy way of eating like a man from the first focus group who said that people who eat healthily *"Win in every aspect of life"* (**participant 1.2**) and a woman from the same group who said that *"You can earn respect. When you eat healthily you respect yourself and your body"* (**participant 1.4**).

On the other hand, there were also people who see no benefit in following healthy eating habits like a man from the fifth focus group who said that *"The environment has been destroyed so I am not sure if I am going to gain something by eating healthy food"* (**participant 5.3**) or they only link healthy eating habits with their appearance like a woman from the second focus group who supported that *"Only to improve my appearance would I change my diet, which is now really unhealthy"* (**participant 2.2**).

The concern towards healthy eating was the next area of discussion, which revealed that the majority of the participants expressed a concern about healthy eating like a woman who said that: *"I am careful because I see my parents who are 50 years old and they visit doctors all the time"* (**participant 5.7**), or a man participant who said that: *"I used to eat a lot take-aways until I realised that something was wrong, I was becoming fat. And I reduced it"* (**participant 6.1**).

There was a range of responses about the expression of this concern towards healthy eating. Some participants said that they prefer healthy alternatives and representative of these responses are the quotes of a man from the third focus group who said that *"When I have a healthy alternative I prefer it"* (**participant 3.4**) and a man from the fourth focus group who said that *"When I don't have time I won't get stressed out trying to eat something healthy. I will try to avoid the worst"* (**participant 4.7**). There were participants who ate a variety of foods like a man from the fourth focus group who said that *"I try to include all kind of foods in my meals"* (**participant 4.4**) and home-made foods like a man from the sixth focus group who said that *"I am not obsessive with what I am going to eat, but I'm trying to eat home-made food"* (**participant 6.1**). Other participants are careful of the quantity that they consume like a woman from the sixth focus group who said that *"I watch what I eat, the quantity. I eat less in the evening"* (**participant 6.8**), while there were participants who reported that they are on diet like a woman from the third focus group who said that *"I am on a*

diet with the help of a dietician" **(participant 3.2)** or that they eat many vegetables in their effort to adopt healthy eating habits like a woman from the eighth focus group who said *"I eat very healthily, I consume a lot of vegetables. I take with me as snacks small bags with carrots, lettuce leafs and cucumbers"* **(participant 8.1).**

On the other hand, there were participants who reported that they do not care about healthy eating. *"I don't care. I just eat to stay on my feet"* **(participant 2.2)** said a woman from the second focus group and a man from the sixth focus group said that *"I eat everything hoping that there's something healthy included"* **(participant 6.6).** Another reason for this behaviour is that they do not want to strain themselves and therefore they do not worry about their eating habits like a woman from the seventh focus group who said that *"I want to be healthy but I find it worse to forfeit something. I put pleasure first"* **(participant 7.1).** Against this opinion was the view of some participants who suggested that people can get pleasure from food but at the same time they should try to have healthy alternatives in their nutrition, like a man from the ninth focus group who said that *"I am trying to have a healthy nutrition during the week without avoiding something"* **(participant 9.4).**

Finally, some respondents reported that their concern is impermanent like a man of the second group who said that *"It depends on my mood"* **(participant 2.6),** another man from the fourth focus group who said that *"I care but I won't die trying"* **(participant 4.7)** and a woman from the same focus group who added that *"I care but I usually do not do anything about it because I am lazy"* **(participant 4.1).**

For those who still do not care about their eating habits, the answer to the potential health problems was that if and when they face a health problem their nutritional habits will change. Representative of this view was the quote of a woman from the first focus group who said that *"I believe that someday I will be fed up with fast food and I will turn to healthy food. I will gradually adapt to it"* **(participant 1.4).**

6.6 Views about current Initiatives to Support Healthy Eating Habits

At this stage of the study, there was a need to see if undergraduate students were aware of current initiatives towards healthy eating and this could work as a gauge to

estimate their effectiveness. Therefore, the participants were asked to recall what they had heard and seen about eating and food in general. Their responses showed that the participants had mostly seen advertisings on the TV about obesity and healthy eating but these were very rare and the participants could hardly recall them. A man from the third focus group remembered *"I have seen one advertisement on TV about obesity. I think there was this fat kid and they were telling us to try to keep the weight of children down"* (**participant 3.1**), while a woman from the eighth focus group said that *"I have seen advertisements on TV about child obesity, but these help only those who pay attention to them and these people are not many"* (**participant 8.6**). Also, a woman from the fifth focus group (**participant 5.1**) recalled the TV advertisement "life has colour" (see p.104).

Moreover, the participants had seen TV shows on healthy eating, especially on state channels, but they complained about the inconvenient hours of broadcast, i.e. noon or late at night.

"They are on at noon or late at night when very few people watch TV" (**participant 2.1**) complained a male participant. Furthermore, there were participants who were aware of the attempt to provide fruits at schools and to ban unhealthy foodstuffs in school canteens, like a woman from the third focus group who said that *"Healthy products in the school canteens are obligatory by the authorities. But there are no strict controls so the owners go back to unhealthy fare"* (**participant 3.5**). Also a male participant reported *"giving [healthy eating] advises in schools"* (**participant 5.3**).

The packaging of the products has also been reported as another source of information, as a woman from the first focus group said *"I have seen advice for healthy eating and lifestyle on the products"* (**participant 1.7**). There were also participants, like everyone in focus group 6 and 7, who were not aware of any initiative.

It is noteworthy that none of them had taken any notice of organised initiatives to promote healthy eating in Greece, like a man from the ninth focus group who said: *"they can have no impact when they are abstract..."* (**participant 9.6**). So, they suggest that *"there should be more messages in more places"* (**participant 1.6**) about healthy eating as suggested by a female participant from the first focus group.

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6.7 Sources of Information about Food and Nutrition

Following the discussion of current initiatives, the next area of exploration was the sources through which the participants had received information about food and nutrition related issues. In this context, the participants were asked to discuss the sources that they get information from, the sources that they trust and the role of labelling on foodstuffs as a source of information.

So, firstly the participants were asked to discuss the channels that they get information from, the channels that they trust and the reasons for their preferences. The channels through which they get information about healthy eating and the channels that they trust are summarised in Table 6.3 in a priority order.

Table 6.3: Sources of Information

Sources from which the participants have heard or seen information about Nutritional Issues.	Sources of Information that Participants Trust to Get Information About Nutritional Issues
TV	Scientists like nutritionists and dieticians
Internet	Internet
Magazines & newspapers	TV shows where there is a scientist and not advertisements
Radio	Friends and family
Friends and family	
Scientists like nutritionists and dieticians	
Nowhere	

Despite the fact that the participants individually received messages through different sources (see table 6.3), the focus groups revealed that they have had common preferences on the sources that they trusted and they would like to receive information in order to accept them as trustworthy. In this context, undergraduate students reported trusting the media sources when the person is a scientist and especially broadcast by the State Channels. For example, a man from the fourth focus group reported that *"State TV is more trustworthy"* **(participant 4.7).**

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They also trust TV shows where there is a scientist, as was stated by a woman from the sixth focus group who said that *"if I watch on a TV show the results of a bad or a good diet, I am influenced"* (**participant 6.8**). The participants also agreed that they do not trust advertisements but there was also an opinion that *"...not everything is bad on TV as long as you filter the information."* (**participant 6.1**) coming from a man from the sixth focus group. They also trust the internet *"because you can compare unlimited information."* (**participant 5.4**) as a man from the fifth focus group said.

On the other hand, there were people who do not trust the media but the person who communicates the information. Representative quotes of this view from three male participants were:

"I do not trust the media. They only want to sell." (**participant 5.6**).

"I trust the person, not the channel." (**participant 9.4**).

"I am critical towards the media." (**participant 9.3**).

In the same context, the participants trust those friends and people from their family who did something and got results, like a man from the ninth focus group who said *"I trust anyone who did something and I can see the results."* (**participant 9.1**). Finally there were participants who do not trust anyone like a woman from the seventh focus group who said *"I don't trust anyone apart from my personal experience. Many people went to doctors and got no results."*(**participant 7.2**) and participants who preferred to compare information from many sources in order to be sure of their reliability, like a man from the ninth focus group who said: *"I compare information from many sources."* (**participant 9.5**).

Next, the participants were asked to discuss the reasons why they read the information (GDAs and ingredients) on the package of the foodstuffs that they consume. Concerning information on the product labels, the main opinion was that they did not read the GDAs and ingredients on the package.

Those who did not read them stated that they did so because they didn't care, like a man from the third focus group who said *"no, I don't care about them if I like the product. I only check the expiry date."* (**participant 3.1**) or because they don't

understand them. For example, a woman from the eighth focus group said *"I don't do it because I haven't been taught to. I would like someone to show me what I should read and why."* (**participant 8.3**) and a man from the first focus group suggested that *"GDAs must be more precise and visible. Not for 100gr, I am not willing to calculate."* (**participant 1.2**).

On the other hand, those who do read them reported the following reasons:

- they are curious about the ingredients
- to see the ingredients when a product is new
- to see if it is healthy. For example a man from the fourth focus group reads *"the saturated/unsaturated fats ratio"* (**participant 4.7**) and a man from the first focus group the existence of preservatives *"E presence"* (**participant 1.4**)
- to know how much sugar, fats and calories are contained
- to compare products.

6.8 Motives & Barriers for the Adoption of a Healthy Diet

In order to understand the reasons that force or discourage undergraduate students to adopt a healthy diet, the respondents were asked to discuss their motives in order to adopt healthy eating habits and the barriers that they face in their effort to eat healthily. Table 6.4 summarises the predominant answers of the participants, as they have been grouped through the coding process (see Section 5.12.4).

Table 6.4: Participants Reported Motives and Barriers in an Effort to Adopt a Healthy Diet

Motives	Barriers
Be healthy	Lack of time to prepare healthy meals
Have a good appearance / avoid being obese	Fast food as temptation (they taste good and they are everywhere)
Feel good (psychological factors)	Friends and other people who eat unhealthy food
It improves our socialisation	Refusal to try
We show respect to ourselves	Lack of knowledge to prepare healthy meals

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Apart from these predominant views, there were also other opinions presented by the participants. More specifically, concerning the benefits, a man from the first focus group said that *"When I eat healthily, I feel confident in myself"*, a woman from the eighth focus group reported that she wants to eat healthily because she wants *"to have healthy children"* (**participant 8.5**) and another woman from the fourth focus group said that her *"motive is to adopt a culture that I can pass on to other people and make them better"* (**participant 4.2**).

On the other hand, other barriers raised by the participants included the fact that there were not many healthy alternatives and this in combination with the predominance of fast-food outlets leads to unhealthy eating. This opinion was reflected by a woman from the fourth focus group who said that *"There are no healthy alternatives in the University"* (**participant 4.6**) and another woman from the first focus group who said *"It is easy to find fast foods everywhere. If fast foods were not so easy to find, we would have taken something homemade"* (**participant 1.6**). Also, psychological factors like emotions, greed and stress were perceived as barriers for the participants like the woman from the fourth focus group who said that *"When I am under pressure or in a bad mood I cannot control what I eat"* (**participant 4.5**). Moreover, there were participants who believed that they cannot feel full when eating healthy food like a man from the ninth focus group who said that *"Healthy food does not provide me with the calories I need for my everyday activities"* (**participant 9.1**). Finally, it was notable that there were participants who did not want to try because healthy food was something that they did not like; therefore a man from the fifth focus group said that he wants to eat junk food because he *"wants to have fun"* (**participant 5.3**).

6.9 Influences to Adopt a Healthy Diet

For the development of a nutritional intervention, social marketing suggests that we must understand who could influence, in terms of people and media, the target audience to adopt the expected behaviour. This means detecting the important others and the channels that the target audience get information from, because these two factors can have a bigger influence on them. These sources are the most appropriate to relay the messages for the adoption of the desirable behaviour to the target audience (Hastings, 2007).

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Firstly, there was a need to understand if the subjects find it easy or hard, based on the current situation in Greece, to adopt healthy eating behaviours. Even if there were individuals who believed that it is either very easy or very hard to adopt healthy eating habits, in all the focus groups the predominant view was that it is not very easy to do so.

The second step was to understand who can influence the participants in their eating habits, so the participants were asked to discuss whether there are people who can influence their eating behaviours, who these people are and in what way these people can influence them.

The family seems to have an impact on influencing the respondents. This is because they cook for them like a woman from the fourth focus group who said *"my mother cooks for me as healthily as she can. Little fat, variety of foods, so she influences me to eat like this every day."* (**participant 4.5**).

Also, the family can influence them because they shop for them, like a man from the fourth focus group who said the shopping was done by *"my father who is obsessed with fruits and vegetables"* (**participant 4.7**). Furthermore, a woman from the seventh focus group indicated that her family can influence her because she needs *"someone to force me"* (**participant 7.4**).

Another channel of influence by the family is by transferring the culture of a healthy diet and this was reflected by a woman from the first focus group who said that *"My mother has taught me what I should eat since I was kid and this is still an influence for me"* (**participant 1.1**).

Also, friends are another influence because people feel "cool" when they eat the same as their peers and as a male respondent said *"it is fashionable to eat fast foods"* (**participant 8.2**). *"If my friends were eating healthy foods, this could influence me"* said a woman from the first focus group (**participant 1.4**).

Furthermore, they are influenced by others, who, when they have healthy eating habits, can be a motivation, but on the other hand they can be a barrier to adopting a healthy diet when they prefer junk food. A man from the ninth focus group raised this view by stating that *"Other people who care about their diet can influence me because I see the results on them and this is an incentive for me"* (**participant 9.4**).

Also, a man from the sixth focus group said that *"My co-athletes can influence me because I see their achievements and I want to be like them"* (**participant 6.4**).

Moreover, there were participants who said that they are influenced by nobody. These participants also reported in their previous answers that they don't care about healthy eating habits, like for example a man from the fifth focus group who said that *"Only if I realise that I have a problem will I change"* (**participant 5.6**).

Furthermore, participants reported that sources such as doctors, nutritionists and dieticians can influence their eating habits, as it was also presented earlier in the sources of information section. Representative of this view were the quotes of two women from the fourth focus group who said that they can be influenced by *"a doctor, who after some tests would tell me that I have health problems"* (**participant 4.5**) and *"a dietician"* (**participant 4.2**).

Remarkable were also the quotes of a man from the sixth focus group who said that *"my family can have an influence on me, my friends usually have a negative influence and a specialist can help me if I first take the decision to visit him"* (**participant 6.1**) and a woman from the same group who said *"I will be influenced by those that I trust...friends...specialists...someone who has knowledge on the issue"* (**participant 6.8**). These quotes show that the influence towards the formation of eating habits can come from different sources and this can also lead to tensions of conflicted information.

6.10 Impact of the External Environment on Nutritional Habits

The next area for discussion was designed to elicit their beliefs about the external environment and its impact on their nutritional habits.

In this context the participants were first asked to discuss the environmental factors that could have an impact on their behaviour towards healthy eating.
The environmental factors reported to affect undergraduate students eating behaviour are mainly fast food outlets and food products rich in sugar, salt and fats which are everywhere around them. This was supported, for example, by two people from the sixth focus group who said

"Woman: I am influenced by the food outlets that I see around me" (**participant 6.7**)

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Man: I agree, also the pictures of the foods inside the stores can influence me..."
(participant 6.4).

Also, the existence of these products and their marketing can affect more or less everyone as it was highlighted by a man from the sixth focus group
"Ads influence me as well as the fact that fast food stores are everywhere around me"
(participant 6.6)

This is also reflected by the discussion between three women from the second focus group:
"-Advertisements can influence me... **(participant 2.3)**
-Yes, when I see Lacta [chocolate brand name]...I can't resist...what can I do..?
(participant 2.5)
-Right...hmm..." **(participant 2.2)**

A woman from the sixth focus group also indicated that *"to some degree I can be influenced by everything around me"* **(participant 6.2.).**
On the other hand, there were focus groups, like the fifth and the ninth that concluded that they are not influenced by the advertisements of unhealthy foodstuffs.

The participants were asked to discuss their views about the supportiveness of the environment in their education institutes in order to help them adopt a healthy eating behaviour. Their reactions were mostly negative in terms of the quality of the food provided from the feeding facilities of the education institutes. A man from the first focus group said: *"We don't know the quality of the foods provided by the university"* **(participant 1.5).** A woman from the seventh focus group said: *"We don't trust the canteen to provide healthy alternatives"* **(participant 7.1).**

Also, they complained about the type of food provided which is mostly unhealthy and the healthy alternatives are limited. *"Tuesday and Thursday there is pizza on the menu"* **(participant 1.2)** said a man from the first focus group and a man from the third focus group complained that *"There are few healthy alternatives so it is inevitable that you pick the unhealthy options as well"* **(participant 3.4).**

The inconvenient hours of the classes that do not allow enough time for a proper meal was another factor and it was reflected by a woman from the eighth focus group, who

complained that *"The hours of the lessons are not convenient! We don't have a big break between classes, so we have snacks all day"* **(participant 8.6).**

Another factor reported by the participants was the food outlets that are close to the education institutes that do not provide healthy options. A woman from the seventh focus group said that *"All food outlets that are close to the university provide fast foods"* **(participant 7.3)** and another male participant said that *"Many university canteens are outlets of fast food chains"* **(participant 6.1).**

Moreover, there was a tension concerning the food provided by the restaurants of the Universities and TEIs. For example in the eighth focus group the following discussion took place:

"Man: The food in the restaurant is like hospital food. I don't like it at all **(participant 8.2)**

Woman: Yes, also the portion is small...a person needs more food to feel full **(participant 8.3)**

Woman: "Nooo...I don't agree...it is very good! It includes fruit and salad, the best for a healthy diet" **(participant 8.5)**

On the other hand, there were participants who believed that the current environment in the education institute can be supportive but there is no effort to promote healthy initiatives, as a man from the sixth focus group said

"The university canteen is 'in' while the restaurant is not. The canteen provides mostly bakery and junk food. So we must promote the restaurant of the University, which provides good food (salads, fruits etc.)" **(participant 6.5).**

Finally, the participants were asked to talk about the supportiveness of the wider food environment in Greece. Again, as in the case of the education institutes, there was a negative reaction from most participants, though we should not ignore the views of some individuals who believed that the environment is supportive but people do not have the will to try. High prices of healthy foods and low prices of unhealthy fare is the first problem raised by the participants. For example, a woman from the eighth focus group exclaimed *"Very enticing prices!! You can buy a burger for one euro"* **(participant 8.1)** and another woman from the same focus group added *"I used to follow a healthy diet and it was really hard to cope with that because of the cost. If*

you add gym expenses you can't imagine..." **(participant 8.2)**. *"It is the easy solution"* said a woman from the second focus group and she added *"You can find unhealthy foods everywhere and the cost of healthy options makes them prohibitive for a middle class person"* **(participant 2.4)** introducing the second factor of the availability of unhealthy foodstuffs everywhere. *"We are the America of the Balkans. Everywhere you can see ads and fast food outlets and the State does nothing, it doesn't provide incentives to adopt a healthy diet"* **(participant 1.3)** said in an ironic tone a woman from the first focus group. *"It is hard to come by a healthy food outlet"* **(participant 8.1)** said another woman from the eighth focus group and this was also reflected by a man from the ninth focus group who said that *"It is not easy to find a healthy alternative, even the salad has dressing and you don't know the quality"* **(participant 9.5)**. Moreover, a man from the first focus group drew a more general picture, pointing out the fact that fast-food outlets are everywhere, thereby reflecting a trend of the Greek society where *"Whoever knows how to wrap a souvlaki, opens a souvlaki outlet. This is the easy way"* **(participant 1.5)**.

On the other hand, the supporters of the current wider environment in Greece stated that there are healthy options and warnings about unhealthy eating consequences, so it is a matter of individual will to change their eating habits. For example, a man from the fifth focus group said *"You can find something healthy if you search"* **(participant 5.4)** and a woman from the third focus group embraced the same opinion by saying *"If someone wants to adopt a healthy diet she can do it. We can see many warnings around us"* **(participant 3.5)**.

In the same context, there were participants who claimed that despite the fact that the environment is somewhat supportive, the culture of the people would lead them to the same unhealthy choices, as was reported by a woman from the fourth focus group who said that *"It is our culture's fault. When children bring an apple to school other kids may make fun of them"* **(participant 4.3)**, and a woman from the seventh focus group who said that *"Even if there weren't fast food outlets, people would look for the easy way at home"* **(participant 7.5)**.

6.11 Views about Potential Initiatives to Support Healthy Eating

The next step was to inform the participants about other initiatives/policies that are being used or are about to be applied in other countries, in order to see if these could be appealing to Greece. These include:

1. Reduction of taxation on healthy foods in order to render them cheaper and affordable for low income people.

2. Increase of food taxation on unhealthy food in order to minimise their appeal.

3. Regulations on marketing.

4. Elimination of unhealthy foodstuffs marketing.

5. Guiding stars on labels (as used in the U.S.A.)

6. The provision of healthy alternatives in education institutes' canteens.

The participants were asked to discuss these proposals and the reasons for their opinions.

Concerning taxation, there was tension between the participants. There were participants who were against taxation because they believed that it will not lead to a different behaviour, like a woman from the second focus group who said that *"If someone wants it he will buy it even if it is expensive"* **(participant 2.5)** and another female participant who said that *"The problem is in our mentality, so taxes will not have any effect in Greece"* **(participant 5.7)**. Others were against taxation because of the problems that this may cause for employment like a man from the third focus group who said that *"I don't like taxation. Food companies are going to close and there will be a lot of unemployment"* **(participant 3.6)** and others because they were worried about the consequences of this initiative, like the increase of fruits and vegetables with chemicals in order to cover the demand, as reported by a male participant from the fourth focus group: *"If the demand increases, in order to supply the people, we will be eating chemicals"* **(participant 4.7)**. Finally, there were participants who believed that measures like taxation are against people's free will, like a woman from the fifth focus group who said that *"Taxes are oppressive, so it is better to focus on education and advertisements"* **(participant 5.2)**.

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On the other hand there were people who were for taxation because "... *we are students and our purchasing power is low*" (**participant 6.5**), as put by a man from the sixth focus group. Also, these participants did not feel that taxes work against the free will of the people as stated by taxation's opponents, like a woman from the first focus group who characteristically said "*I don't feel that taxes on food limit freedom because the most important freedom is the right to a healthy life*" (**participant 1.3**). There were also participants who were for taxation under some conditions like a man from the first focus group who said that "*I would support taxes on food if I knew that the government would give the money for health issues*" (**participant 1.5**) and a man from the ninth focus group who said that "*I would like to see balance in prices between healthy and unhealthy fare so that everyone could buy whatever they like*" (**participant 9.1**).

Concerning the guiding stars, again, the views diverged. There were participants who were against food labels, like a man from the fourth focus group who said that "*Concerning labels, the companies will react negatively*" (**participant 4.4**) and a man from the sixth focus group who said that "*I hate labels, it is an unthinkable measure. I also worry about the technical details. How are we going to classify the products?*" (**participant 6.6**). On the other hand, there were participants who were for the introduction of guiding stars, like a man from the sixth focus group who said that "*Visualisation (referring to labels) is a very good measure*" (**participant 6.1**).

Concerning the regulation or elimination of food marketing they reported that it is not very important because they feel mature enough to judge marketing techniques, they have already shaped their personality and they are not so vulnerable to these. So, they reported that they would like to see an increase in healthy food advertisements because unhealthy food advertisements are more attractive and predominant. This was stated by a woman and a man from the first focus group respectively:

"*Increase healthy food ads so that they can compete with unhealthy foods*" (**participant 1.4**)

"*Ads are very misleading. You see the burger and you want to eat it, but when you see it in the outlet it is totally different*" (**participant 1.5**)

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Also, they reported that there should be some control on advertisements of food but not elimination, like a man from the first focus group who said that *"Someone must control the ads"* (**participant 1.2**), and a man from the third focus group suggested that *"Advertisements of unhealthy food remain but there must be cautions (like in tobacco)"* (**participant 3.2**).

On the other hand, they believed that marketing targeted on children should be regulated. In this context a woman from the fourth focus group reported:
"Marketing can influence kids, not us anymore" (**participant 4.5**)

Finally, there were people who said that the reduction of marketing of unhealthy foodstuffs cannot have any effect because fast-food outlets are everywhere, as it was stated by a woman from the sixth focus group who said that *"Marketing reduction cannot change anything because they are everywhere. If you go out you can see them at every corner."* (**participant 6.2**).

Concerning healthy options in education institutes' canteens, this was the most appealing initiative and this is reflected by the quote of a woman from the sixth focus group who said that *"All products provided in the University should be low in fat because they are addressed to young people"* (**participant 6.3**).

It is noteworthy that those who were against this measure mainly worried about product quality and the role of the State through controls. This reaction is not unjustified because the same happened at schools in Greece. There is a ministerial decision (FEK 1183B/2006) that prohibits specific foodstuff, like foods high in salt, sugar, fats and trans-fats, from school canteens. However, State inspection was very poor; hence, there were many cases of unhealthy foodstuffs provided illegally by school canteens and this situation continues up to nowadays. Representative quotes voicing this concern are the following quotes from two men and a woman respectively:

- *"It isn't in their interest to provide healthy foods in the university because they decompose easily"* (**participant 1.5**)
- *"No one will buy healthy food from the canteen so the owner will not provide them"* (**participant 9.6**)
- *"If there is control I am for the healthy alternatives in the canteens"* (**participant 7.1**)

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In general, the respondents who were against these initiatives believed either that it will not work or that such measures are against their free will. Some of their comments included the views of two women and a man respectively:

- *"With regulations you can't teach a kid what to eat. There must be education"* **(participant 4.2).**

- *"First education and then taxes and regulations"* **(participant 8.3).**

- *"All these measures should be followed by the appropriate advice in order to reduce the negative reactions"* **(participant 6.5).**

Therefore, they were against extreme measures like marketing elimination and more open to measures that promote people's free will, like balance between healthy and unhealthy food alternatives and their promotion.

Finally, there was a segment of undergraduate students who reported that these initiatives will never work because of Greek culture, like a man and two women respectively who said:

- *"Greeks resist prohibitions, so it is a matter of culture"* **(participant 3.4)**

- *"I know what is unhealthy and I still eat it"* **(participant 4.1)**

- *"Greeks want to go against the law. So when the guidelines say "don't do this", they will do it"* **(participant 8.3)**

6.12 Views about the Role of Key Actors of the Food System

Lack of initiatives in Greece, illustrated through the literature review, can spring from various sources and the key agents of the Greek food system are responsible for this situation. So, participants were asked to criticise the role of the three main sectors in the promotion of healthy eating habits. The three sectors are the State, the Food Supply Chain and Civil Society (Figure 4.1) and they have been introduced, in the form of the Triangle Model of Food Policy (Lang, 2005a, p.126), to the participants prior the conversation.

Concerning the State, the participants believed that its role is almost non-existent. A woman from the fifth focus group said that *"The State is absent and the results of its actions are invisible. It has failed!"* **(participant 5.1)**, a woman from the seventh focus group said that *"I don't trust the State"* **(participant 7.5)** and a woman from the fourth focus group complained that *"The State does not care about what we eat.*

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We must learn from our family. They do not care, not even in schools, so we don't have role models" **(participant 4.2)**

As for the Food Supply Chain, the participants reported that their work is based on demand and profits and therefore, *"can deceive us in order to make profits"* **(participant 6.3)**, as stated by a woman from the sixth focus group. This view was also reflected by a woman from the eighth focus group who said that *"The Food Supply Chain is powerful and someone has to arbitrate"* **(participant 8.7)**.

Concerning Civil Society, the participants reported that it tries to do things but there is no satisfactory support from the government. As characteristically mentioned by a woman from the eighth focus group, *"All the advertisements and the initiatives I have seen till now have been from non-governmental, not-for-profit organizations"* **(participant 8.1)** and a woman from the sixth focus group said that *"The motives of Civil Society are pure"* **(participant 6.7)**. But they also see room for improvement, like the woman from the eighth focus group who said that *"Concerning Civil Society, nurses and doctors must also educate people- something that they don't do yet"* **(participant 8.6)**.

Finally, based on the respondents, if the State does not intervene or Civil Society does not reduce the demand for unhealthy foodstuffs, then the Food Supply Chain will continue to produce and promote unhealthy foodstuffs.

The next question, in this area of discussion, was "to discuss how big or small a role do you think that each of these groups should have, to make healthy food and drink more accessible to you". In this discussion, there was a range of views which are summarised in Tables 6.5, 6.6 and 6.7.

More specifically, many participants believed that the State should play a major role and through regulations and education should influence people to change their behaviour and culture towards healthy eating (Table 6.5).

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Table 6.5: Main Different Views about the Role that the State should have for the Promotion of Healthy Eating

Role of the State
"The State should protect the people from the food industry which provides products that can harm our health." **(participant 1.2)**
"The State should organise initiatives to promote healthy eating" **(participant 1.6)**
"Some foods are expensive, like fish, so the State must ensure that these products are available inside the education institutes at reasonable prices or free, if this is possible, for the students who have a low income" **(participant 1.3)**
"If the State educates the people the culture will change and they will not look at me as if I'm an alien when I am eating a banana or an apple at school/University" **(participant 3.5)**
"The State must intervene so that fast food outlets not to outnumber stores that sell healthy foodstuffs" **(participant 4.4).**
"The State must control the middlemen because they increase the prices and it should support the producers to produce pure products, so that the consumers could buy healthy products at reasonable prices" **(participant 6.1)**
"In the past, the family had time to educate the children. Nowadays, parents do not have time so the State should undertake this role and change the culture of future generations towards healthy eating" **(participant 6.6)**
"The State must make it more difficult to open a fast-food store and facilitate the establishment of healthy food outlets" **(participant 8.4)**
"The State must administer subsidies to producers" **(participant 9.6)**

Others thought that Civil Society should play a major role because its motives are more pure and it can influence the State through advocacy (Table 6.6).

Table 6.6: Main Different Views about the Role that Civil Society should have for the Promotion of Healthy Eating

Role of Civil Society
"The State can influence, but the main influence comes from Civil Society and the culture we have" **(participant 2.3)**
"Civil society must influence the State" **(participant 2.1)**

They also believed that the Food Supply Chain can play a major role only if incentives are provided by the State or Civil Society, otherwise there is no motivation to change (Table 6.7).

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Table 6.7: Main Different Views about the Role that the Food Supply Chain should have for the Promotion of Healthy Eating

Role of the Food Supply Chain
"The food companies should produce healthy foods at low cost and the State should support this effort" **(participant 1.4)**
"Food companies must take the initiative to produce healthy products" **(participant 5.2)**
"The Food Supply Chain will produce what brings profits. The main thing is what Civil Society and the State will do" **(participant 1.1)**

The participants also believed that there is a need for cooperation between these three sectors. More specifically, a woman form the eighth focus group said that *"Cooperation is needed between the State and the Food Supply Chain in order to have better prices on healthy foodstuffs"* **(participant 8.6)**, a man from the same focus group said that *"Civil society needs to have State support, otherwise it cannot work very effectively"* and the same opinion was reflected by a man from the second focus group who said that *"There should be cooperation between the three sectors"* **(participant 2.1)**. Finally, a man from the ninth focus group urged said that *"We need to see a little more interest in the people by everyone involved in the food and nutritional system"* **(participant 9.4)**.

6.13 Undergraduate Students Suggestions

At the end of each session and during the interviews, participants were encouraged to make suggestions for future improvements. Their suggestions included a range of opinions. From drastic measures like reduction of advertisements: *"External stimuli like TV advertising should be reduced"* **(participant 3.1)**, or closing down fast food outlets: *"Fast foods should close"* **(participant 3.6)**, as it was reported by two men from the third focus group.

On the other hand, there were moderate reactions like those participants who were for education provided by the family at an early age like a woman from the first focus group who said that *"The family's eating habits are important so there must be advice*

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passed on to its members" (**participant 1.7**), and for the improvement of the taste of healthy food, like a man from the second focus group who was wondering:

"There are also taste factors and these cannot change unless they improve the taste of healthy products...can this happen?" (**participant 2.1**)

More specifically, the participants suggested the following

1. Healthy alternatives to be provided and promoted in education institutes, but only if there are strict controls of the quality of the provided products. This was reflected by a man from the ninth focus group who said that *"I am for healthy alternatives only when they are combined with strict controls that will ensure product quality"* (**participant 9.2**).

2. Education to be provided by dieticians/nutritionists in all education institutes, as it was proposed by a woman from the first focus group who suggested *"Nutritionists in the Universities should inform the students"* and another woman from the sixth focus group who proposed *"Lessons in schools and Universities"* (**participant 6.8**).

3. As there were participants who complained that *"We don't have time to eat a proper meal"* (**participant 7.2**), like a woman from the seventh focus group, better class schedules that will provide time for a proper meal was another suggestion. This was also stated by a woman of the eighth focus group, who proposed *"To set a specific hour when we can go to the University restaurant and have a proper meal without stress"* (**participant 8.3**).

4. Qualitative and quantitative increase of healthy food marketing in order to encourage a culture of healthy eating. *"Healthy alternatives are a solution for those who care about healthy eating, so they must be combined with marketing of healthy foodstuffs in order for the rest to change"* (**participant 9.5**) suggested a man from the third focus group, while a man from the ninth focus group commented on the content of the messages by saying that what is needed is an *"Increase of healthy eating advertisements with smart messages that can influence people"* (**participant 3.6**). The same opinion was reflected by another man from the sixth focus group who said that *"The State must promote healthy eating using the same techniques that food companies do to*

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promote unhealthy foodstuffs. People need brainwashing!" (**participant 6.1**). Finally, a woman from the seventh focus group talked about the quantity of the messages about healthy eating by saying that *"If I keep hearing everywhere 'eat healthy food' I will"* (**participant 7.5**).

5. Motives for the development of healthy fast-food outlets which will provide tasty and cheap food were extensively discussed in the fifth focus group and reflected also by a woman in the seventh focus group who proposed *"Delivery of healthy and tasty food at good prices"* (**participant 7.3**). In the same context, there were participants who demanded the closure of fast-food outlets close to the education institute, like a man from the third focus group who said that *"They must shut down fast food outlets that are close to education institutes. It works effectively in other countries"* (**participant 3.4**)

6. The State must develop a specialised body on healthy eating to inform people and organise targeted initiatives, as was proposed by a man from the second focus group who said that *"The State must develop a specialised body on healthy eating to inform people of the benefits and the ways to eat well"* (**participant 2.1**).

7. Show to people what can happen when they do not consume healthy foods (like anti-tobacco campaigns), through advertisements, education and conferences. This opinion was reflected by some participants like a woman from the second focus group who said that *"They must show us what can happen to us in order to scare us...like in the case of tobacco"* (**participant 2.5**)

Many respondents also proposed a combination of measures like a man form the second focus group who said that *"A leading policy must be created in order to improve eating habits, which will include advertisements for healthy foodstuffs and the development of governmental organisations which will promote healthy eating"* (**participant 2.1**)

Because of the big debate that exists on the effectiveness of advertisements and the use of the mass media in order to affect behaviours and lead to behavioural change (Wellings and Macdowall, 2000) and in order to draw conclusions about the

objectives of the specific research, the participants' opinion was asked specifically about advertisements. Their views about the advertisements were that they could help only those who have a concern on the issue. So, they suggested that advertisements need to be combined with other initiatives like education and advice and in order to work properly they should be persistent. Moreover, respondents proposed that the State must reduce or prohibit the promotion of unhealthy foodstuff in order to create a balance between healthy and unhealthy food promotion. There were also people who believed that advertisements are better than other means of information like TV shows, like a woman from the first focus group who said that *"It is better to promote healthy eating through advertisements rather than through TV shows because the latter last long and people do not have the time to watch them. Advertisements are short"* (participant 1.3).

On the other hand, there are respondents who believe that all these measures that have been discussed during the focus groups could have little or no effect and the only thing needed is personal initiatives. *"No measure can work as long as I don't have time to prepare a healthy meal. I will buy fast food"* (participant 7.2) said a woman from the seventh focus group and a woman from the eighth focus group also agreed *"It is too late. We need an interior motive"* (participant 8.4). Finally, many respondents believe that regulations can work and should be combined with other initiatives like advertisements and mostly education. On the contrary, the rest of the respondents do not want regulations because this will constrain citizens' free will and because Greek culture is to be against the law as a man from the sixth focus group implied *"I am very pessimistic. There were so many laws and nothing has changed yet"* (participant 6.4). Finally, there were participants desperate with the current situation who believe that nothing can eliminate the current barriers, like four women who reported that *"Considering the current conditions we must try to eat as well as we can"* (participant 1.7) or that *"There is no way to eliminate the barriers"* (participant 2.4), that *"It is a personal matter. I have to fight against myself"* (participant 3.5) and that *"We can't do anything to change the fact that we don't have time, because of long school and working hours"* (participant 5.7).

6.14 Conclusion

Many different views have been reported by the participants about the main issues asked during the focus groups. Nevertheless, a big picture has been drawn from these findings in response to the research questions.

Their reported eating habits changed after enrolment and in most cases have become worse especially for those students who moved away from their family. Their decisions about eating are based on a complex grid of emotions, influences from the family and friends, prior eating habits, time constraints and health and appearance worries.

Nevertheless, the factor of beliefs and knowledge seems to play a minor role on their final decisions because despite the fact that they are aware of the negative consequences of unhealthy eating habits, they still consume unhealthy foodstuffs. This happens because of the structural constraints provided by the environment of their education institutes and of Greek culture in general.

Consequently, they have reported that they consider these environments not supportive for their efforts to adopt healthy eating habits, because there are no healthy alternatives, there are fast-food outlets and marketing of unhealthy foodstuffs everywhere and the State does not sufficiently promote healthy eating behaviours.

Specifically, the participants judge the current initiatives towards healthy eating as inadequate to promote healthy eating behaviours. They believe that the State is absent and there is lack of control on the available foodstuffs. For these reasons, they trust scientists and NGOs to influence their nutritional habits and their health. Nevertheless, they find it very difficult under the current circumstances to adopt healthy nutritional habits.

Concerning the role of the Food Supply Chain, they do not believe that the initiatives of food industry organisations are based on their interest about citizens' health, therefore, they do not trust them and the students demand governmental interventions in order to protect them.

They suggest that the State should create the conditions for the development and implementation of Civil Society and Food Supply Chain actions. In this effort, Civil Society can play an important role and there should definitely be cooperation between all these sectors.

It is also noteworthy that contradictory views were reported about the increase of food taxation on unhealthy food in order to minimise their attractiveness, regulations or elimination of unhealthy foodstuffs marketing, guiding stars on labels (like in the U.S.A.). But the majority agreed with initiatives like the provision of healthy alternatives in education institutes' canteens and reduction of taxation on healthy foods in order to render them cheaper and affordable for low income people.

Hence many suggestions have been made by the participants, the majority though ask for structural changes to create supportive environments inside and outside their education institutes.

The environment inside the education institutes will be further analysed in the following chapter.

Chapter 7: Findings from Interviews with people from Education Institutes' Feeding Facilities

7.1 Introduction

The previous chapter presented the reported beliefs of undergraduate students about the current situation inside the education institutes concerning food. This chapter presents the current situation inside the education institutes concerning their feeding facilities based on the reports of the employees in these facilities.

Therefore, this chapter includes the findings from the interviews with employees from the education institutes where the undergraduate students came from, in order to understand the current situation and the margins for improvement.

These findings were based on research questions three and four which include:

- How can the micro-environment and macro-environment influence undergraduate students' choices?
- What is and should be the role of each sector (State, Food Chain Supply, Civil Society) for the improvement of people's nutritional habits? What are/should be the relationships between the actors of each sector?

The data gathered through the interviews with employees and managers of the feeding facilities of the education institutes have been divided into the following subject areas based on the questions that have been raised during the interviews: (see Table 5.2)

- Role of the key players
- Strengths of the current system
- Weaknesses of the current system
- Proposals for future initiatives

The main issue, concerning these interviews was that most of the data were about the current situation and the way of operation for the feeding facilities inside the education institutes, as they will be introduced in Section 7.2.

Almost all the interviewees were unwilling to share their opinion about the current situation, nevertheless, a general idea of the main strengths and weaknesses and the

role of the key sectors was generated. Before the analysis of the findings, an introduction to the current system of feeding facilities inside the education institutes will be presented based on the legislation and grey literature data gathered during the interviews with people who work in these facilities.

7.2 The Situation of the Feeding Facilities in the Education Institutes

In every public tertiary education institute campus, i.e. University and TEI, there is a canteen and a restaurant. These feeding facilities belong to the education institutes but operate under the responsibility of individuals who offer the best proposal following an open national competition announced by the education institute. IEK and Private Colleges have only canteens that can provide foodstuffs to the students and staff. These canteens are also operated by individuals who meet the requirements that the education institutes set.

7.2.1 Universities and TEIs

Presidential Decrees 387/1983 (FEK 141A) and 265/1985 (FEK 99) state that, in every University and TEI, restaurants and canteens must operate for the students. Based on these documents, the meals in the restaurants should be provided free of charge or for a small amount of money for students in need. A Committee of the Students Club is responsible for the regulations guiding its operation and the duties of the personnel. Every University and TEI, through the responsible committee, creates every 4 years its own proposal in order to select the caterers based on the requirements stated in the law 2286/95. In this proposal, apart from the requirements, there is a mandatory menu that the potential caterer should provide. The menu is developed based on the Mediterranean diet model in cooperation with qualified scientists of the education institute.

For example, the following are the basic, minimum requirements for the menu provided by a University in Athens in its proposal:
1. Mincemeat must be fat free (fresh or frozen).
2. Fishes must be of high quality (fresh or frozen).
3. Vegetables must be fresh. The use of canned vegetables is prohibited.

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4. Oil must be of high quality, acidity 0-1. For the salad olive oil must be used. For fried food seed oils can be used but they should be replaced and cannot be used for a second day.

5. Yogurt can be low in fat or normal but not substitute.

6. Legumes must be of high quality.

7. Alcohol is prohibited.

8. Food must be prepared only inside the restaurant.

9. Foods that are not consumed cannot be served the following day.

10. Side dishes must include salads, fruits, sweets, creams, jell-o, yogurt and feta cheese.

11. There should be a choice of two first dishes, of four main dishes, three salads and two fruits.

12. Sweets, bread, cream and jell-o should be available daily.

13. Yogurt should be provided once a week and cheese 4 days a week.

14. Portions must meet the requirements set by the market decrees (7/2009, FEK 1388/ B').

The restaurant provides daily lunch and dinner (and in some education institutes breakfast) only for the students of the education institute based on the weekly menu. In order to secure the provision of appropriate services there are two kinds of inspections. The first is by the responsible governmental bodies and the second by a control committee of the education institute which consists of:

1. Teachers.

2. Students.

3. Members of the Students Club Committee.

4. Administrative employees of the education institute.

Concerning the canteens in Universities and TEIs, based on Decree-laws 715/1979 (FEK 212A) and 34/1995, every four years an open national competition takes place for the assignment of canteens operation.

There are restrictions only on the prices of the provided products, the hygiene of the place and product safety and quality, but not on the type of the products. Specifically the product list includes hot dogs, coca-cola, sweets, coffees and bakery products as well as "light" products and dairy.

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There are also directives concerning the portions and the ingredients of the products based on the Greek Codex for Foodstuffs and Drinks and the CMD 487/2000 (FEK 1219B).

7.2.2 Vocational Training Institutes (IEK)

IEKs are located in schools and operate during the evening. So the canteen that provides pupils with foodstuffs also serves students who attend the IEK.

Foodstuffs provided by the canteens inside schools are regulated by the MD 73828 (FEK 1183/31-8-2006 B) which describes in detail:

1. The type of products, i.e. sandwiches, bakery products, yogurt, fresh & dry fruits, milk, creams, fresh juices without added sugar, honey and sweets made from honey, dark and milk chocolates, tea and water.

2. Sandwich components, which include only tomato, mayonnaise or butter and turkey instead of ham.

3. Trans fats, sugar, sodium, total fats and saturated fats content. For example, trans fats cannot exceed 2% of the total fats.

4. Package size which cannot exceed 60 gr. for bakery products, 30 gr. for chocolates, 50 gr for sweets, 250-330 ml for milk and juices and 150 ml for creams.

Finally, they recommend, but do not enforce, "light" products.

Other products that are not included in this catalogue cannot be provided by school canteens. At the same time, some of the reported products can be excluded based on the judgement of the canteen owners. These products are included in an effort to "protect students' health" (MD 73828, FEK 1183/31-8-2006 B).

In addition, through a ministerial decision (93828/31-7-06) the top prices of the products distributed by canteens have been defined and include 0.5 euro for a half litre bottle of water, 1.5 for a sandwich, 1.0 for cheese pies etc. These prices are low in order to be accessible for pupils.

Controls of canteens operation are undertaken by a school committee which consists of:

1. the head teacher of the school
2. a member of the parent association

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3. a member of the school committee that accredits canteen owners
4. a member of the student community
5. a teacher

This control committee has as a responsibility of inspecting the normal operation of the canteen and the type of the products and if something is wrong to propose the cancellation of the contract with the specific canteen owner. Also, the State, through the responsible prefectural bodies, conducts periodic controls about the hygiene and the products of the school canteens.

7.2.3 Private Colleges

Concerning private colleges, there is no specific legislative document to determine the foodstuffs that canteens can provide, apart from alcohol. So, the foodstuffs provided by these canteens are based on demand so that the canteen owner can have a profit. Individuals can rent canteens in colleges and the decision is taken by the President of the college.

7.3 The Role of the Key Players

The main responsibility for the current situation inside the feeding facilities of the education institutes in Greece lies with the Ministry of National Education, as well as the responsible bodies in every education institute and the canteen owners.

Concerning the State, its main responsibility is the controls of the feeding facilities in terms of hygiene and observance of the directives' implementation. An interviewee stated that *"There are spot-checks by the State" (interviewee E27)*. Nevertheless, a research that took place in December- January 2010 revealed that 57% of school canteens sell also foodstuffs that are not included in the State directive and this happens because State controls are not strict (Apogevmatini, 2010). There are, however, examples of State bodies that try to reverse this situation like the Prefecture of East Attica, which, in cooperation with an independent authority called "the Greek Ombudsman", has developed and distributed in every school of the area an educational leaflet about healthy eating.

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Moreover, the State provides the main directives for the operation of the University and TEI restaurants and canteens and school canteens where the IEKs operate. *"There is also a ceiling on the prices of foodstuffs in public education institutes' canteens which has been set by the Ministry of Health. Especially for children there are unbelievable restrictions"* *(interviewee E31)*. So the selling price of the foodstuffs inside the education institutes is another responsibility of the State. Furthermore, another measure to protect students from exposure to outlets that can influence them to adopt an unhealthy lifestyle is law 3463/2006, which states that cafés, fast food outlets, convenience stores and bars must be at least 50 metres away from schools and any kind of education institute. This measure has been criticised by an interviewee who said that: *"It is obvious that the distance is not very considerable but it is a satisfactory first step for the adoption of stricter regulations"* *(interviewee E31)*. The body which is responsible for the implementation of this directive is the municipality that the school belongs to.

Concerning the role of the responsible bodies inside the education institutes, they are developing the menu provided by the restaurants *"we are developing the menu that is included in the proposal based on the Mediterranean Diet, but there are no scientists responsible for this. Still, I believe that we are following the guidelines for a healthy diet"* *(interviewee E28)*.

Furthermore, the Deans and Principals of the education institutes can intervene in order to modify a situation in case of complaints or if they believe that something is not working properly. This was highlighted by all the interviewees. For example interviewee E31 said that *"the Principal can intervene if he judges that he has detected some things that need to change or if there are complaints from the students"* and interviewee E27 said that *"We are willing to change things but the Ministry should support and guide us"*.

On the other hand, canteen owners, who are responsible for the products provided by the canteens, include products that can create profit. *"We are enterprises with a view to profit"* said an interviewee and he added that *"the provided alternatives are based on profit and only if students ask for healthy foodstuffs can these be included in the product list"* *(interviewee E32)*. Moreover, another interviewee supported the same

opinion and she also complained about the lack of consideration of other key informants like the civil servants of the responsible Ministry and the students.

"Regarding foodstuffs (in canteens), there are no specialists to decide about them. People who work in our department decide about this based on their own knowledge. The problem is that there is no directive or proposal from the State or any recommendation by the students" (interviewee E30).

Finally, food outlets have played a role in this issue. As was revealed by an interviewee, in IEKs, that are based in schools and there are limitations about the provided food because it is destined also for children, the canteens cannot have a high profit margin because there are restrictions concerning the provided foodstuffs. Therefore, big food chains do not want to own a school canteen. On the other hand, there are no restrictions on the foodstuffs provided in other education institutes where adults study, hence, big food chains, like "Grigoris", own canteens in order to promote their products.

"Most of the big fast food chains want to own canteens in Universities and TEIs but not schools because they can't promote their products due to regulations. Unfortunately, in other education institutes junk food can be offered and fast-food chains take advantage of this" (interviewee E31).

7.4 Strengths of the current system

The current feeding system inside the education institutes has some advantages which were revealed by the interviewees.

Based on the interviewees' views, its main strength is the quality of the provided products and the healthy alternatives in IEK canteens, and Universities and TEI restaurants. The interviewee from the IEK claimed that due to the regulations in foods and prices, since the canteen provides foodstuffs to children too, *"IEK students have the opportunity to select a healthy alternative from the canteen at an appealing price" (interviewee 31).* In the same context, those responsible for the restaurants in Universities state that the menus are based on scientists' findings about healthy eating and as a result the participants in the competition for the contract of the restaurants try to create healthy menus in order to correspond to the proposed criteria.

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"The menu (of the University restaurant) has been developed based on the Mediterranean Diet Pattern that has been provided to us by the department of Hygiene and Technology of our University. Moreover, we focus on qualitative criteria in order to choose a contractor. Most of the times the participants of the contest create their own menu with the help of nutritionists, based on our restrictions and suggestions, in order to correspond to the proposed criteria" **(interviewee E29).**

The same opinion was stated by an employee of another University who said that:

"The menu (in the restaurant) is very good and healthy" **(interviewee E28)**

Another ambiguous strength is the controls. The focus groups and the literature review have revealed that controls are not very reliable. On the other hand, the interviewees stated that *"there are spot checks by the State"* **(interviewee E27)** and that they *"are satisfied by the services and the controls"* **(interviewee E28)** referring to the University and TEI restaurants.

Specifically, controls for the Universities restaurants have been described by an interviewee:

"There are random spot checks by the responsible State bodies. The University also develops committees which include professors, administrative staff, members of the Student Club and students and they examine the expiry dates, cleanliness, food distribution and storage...they enter the kitchen, taste the food...everything" **(interviewee E29)**

Moreover, another advantage is the flexibility of reaction. All the participants reported that they are willing to intervene and they have this responsibility when something does not operate in a right way without waiting for the responsible bodies to take measures:

"The Principal (of the IEK) can intervene, if he judges that he has detected some things that need to change or if there are complaints from the students" **(interviewee E31).**

"If there is a big problem we can terminate the contract immediately" **(interviewee E28)**

Finally, there is legislation (see Section 7.2) about the prices in all education institutes, which are lower than any other canteen or restaurant outside education institutes. This was highlighted by all the participants and especially by an interviewee who reported that *"an important strength of the system is the ceiling on food prices provided by the canteens inside the Institute. For example coffee costs 1 euro while in a café you have to pay around 5"* **(interviewee E31).**

7.5 Weaknesses of the current system

The main weakness of the system in terms of nutrition, as the interviewees have reported, is the lack of support by the State. The participants stated that they are willing to introduce initiatives to support healthy eating but there is no guidance and support from the State especially concerning healthy alternatives in canteens and healthy eating promotion issues. Specifically, concerning the type of foodstuffs available by the canteen there is no specific directive by the government, and the students unions do not press in this direction and this was reflected by an interviewee who stated that *"If there were proposals from these (State) agents we would be glad to include them in our competition declaration"* **(interviewee E30).** So, due to lack of legislation, the current foodstuffs provided by the canteens of the Private Colleges, Universities and TEIs are mainly *"bakery products like pies, croissants and doughnuts, snacks high in sugar, fats and salt, coffees and there are also some "light" products, juices and turkey sandwiches."* **(interviewee E32).** Also, they reported that the State does not support the promotion of healthy eating inside the education institutes and this was pointed out by an interviewee who said that *"this is a matter for the responsible Ministries. If they send the material we are more than willing to hand it out to the students"* **(interviewee E31).**

Another important weakness of the inspections is the issue raised by one interviewee that in the canteens, the directives for their operation are related to the portions and the ingredients of the products (see Section 7.2.1), so, *"any inspections are carried out to examine the issues included in the directive and not nutritional issues"* **(interviewee E30).** In the context of inspections, there was another issue that an interviewee raised and which supplements the views of the focus groups participants and the findings of the literature review that there are no strict controls inside the education institutes. He said: *"There is a law...from then on and as long as some*

products are profitable, they [the canteen owners] will have them [the unhealthy products in the canteens]" (interviewee E31).

Also, concerning controls on the Universities canteens, these have been described by an interviewee who said that:

"There are buildings' supervisors in the education institutes who are responsible for building matters as well as for the canteens in terms of cleanliness, adequacy of the buildings etc. These people, informally, examine whether the foodstuffs are good. If the terms of the proposal are not met, they make recommendations to the owners. If the owners do not comply, then the Deanery Council intervenes" (interviewee E30).

So the weakness is that there are no formal inspections inside the canteens concerning the quality and the nutritional value of the products, because there is no formal committee for this purpose. The same interviewee revealed that *"there was an effort to develop a committee but it was impractical to implement" (interviewee E30).*

Another weakness that has been pointed out by the interviewees from the Universities was the lack of funding in order to undertake their own initiatives, like the promotion of healthy eating. An interviewee characteristically said that *"There is no proper funding to support any further initiatives...we are paying lecturers from our own pockets because the Ministry delays the payments" (interviewee E27).* Finally, the lack of funding has consequences on shortage of employees who undertake healthy eating promotion and nutritional inspections. This was reflected by an interviewee who said that *"The Students Club, that is responsible for activities like seminars, sports, accommodation and feeding facilities, has only two people as administrative staff, so it is hard to think of improvements when we don't have time to do the daily work" (interviewee E28).*

7.6 Proposals for Future Initiatives

During the focus groups, participants have come up with proposals for the improvement of the current situation inside their education institutes which were then commented on by the Interviewees. These proposals included:
1. Advisory services to be provided by dieticians, nutritionists and psychologists in all education institutes

2. One hour breaks at lunch and dinner time so that students can have time to eat a proper meal.

3. Providing and promoting healthy alternatives in the education institutes and guaranteeing the quality of the products.

4. Banning fast food outlets from areas around education institutes

5. Providing only healthy products like low fat and "light" products.

Concerning the first proposal about the introduction of advisory services inside the education institutes, the main view is that something like that could be very useful, but at this moment it could happen only in the form of seminars and not held in Institute based facilities because there is a lack of funding as stated by people from Universities who said that *"The available budget is low for these services. There must be specific funding by the State for something like that"* *(interviewee E27)* and the IEK representative, who said *"It can happen only in cooperation with the school and the government due to lack of funding"* *(interviewee E31)* and continued *"Education by dieticians/nutritionists can be provided only in the form of a lecture. This is an initiative that the IEK administration should promote in order to take place every semester, where undergraduates can discuss with specialists about healthy eating"* *(interviewee E31).*

Another interviewee from a University proposed that the student unions that exist inside the education institutes should do something about it and she said that:

"Student unions can organise events with nutritionists with the cooperation of education institutes that have Departments of Nutrition" *(interviewee E29).*

On the other hand, private colleges seem to have already adopted initiatives like seminars in a context of Corporate Social Responsibility. The interviewee from the private college said: *"I know that we do this in our college in the form of seminars...hm...I have a poster here to show you about the...oh here it is...the psychological consequences of obesity. This was a seminar that took place last month..."* *(interviewee E32).*

The second proposal which includes one hour breaks for lunch and dinner so that students can have time to eat a proper meal seems to be easier to adopt in the case of IEKs and private colleges as an interviewee from the IEK said *"This is not necessary*

because classes take place only during the afternoon" (interviewee E31) and from the private college the interviewee said *"This is how it is in our college, I don't know what is going on in other colleges" (interviewee E32).* On the other hand, the problem in Universities and TEIs is the lack of classrooms as reported by an interviewee who said that:

"This can be promoted inside the education institute and the only major constraint is the lack of classrooms, therefore classes must take place all day and of course during lunch and dinner hours" (interviewee E27).

Concerning the offering and promotion of healthy alternatives inside the education institutes and the guarantee of the quality of the products, there is a distinction between restaurants and canteens, because, restaurants guidelines are more specific and strict than the ones about canteens (see Section 7.2). So, in the restaurant, based on the legislation documents and the interviews, there are healthy alternatives and strict controls as an interviewee also revealed:

"This is already happening (referring to controls) as the inspections are regular and the specifications are very strict concerning the quality and the hygiene of the products and their production" (interviewee E29). Concerning the canteens, because there is no strict legislation and no specifications about the kind of foodstuffs included in them, the interviewees claimed that only if the demand for healthy foodstuffs increases will they be included in the canteens, so it is a matter for the students and the people working inside the education institutes to deal with. The following quote is characteristic:

"The provision of specific products can be promoted only if the administration of the Institute and the students ask for it and the canteen owner feels that a profit will be made out of this initiative" (interviewee E31).

Another important issue is the fact that the legislation enforces controls; the interviewees said that there are strict controls and nevertheless, students ask for better control and do not trust the quality of the products inside the education institutes (see Sections 6.12, 6.13). Probably, this deliberation of the students' springs from lack of confidence towards everything governmental, which is also revealed through the

focus groups analysis and through other researches (Aristidis Daskalopoulos Foundation, 2008, European Commission, 2010).

For this reason, an interviewee suggested that *"probably, what the education institute can do is to promote the quality and the variety of foodstuffs provided by the restaurants" (interviewee E27)* in order to increase the demand for the provided food that is healthy.

Concerning the removal of fast food outlets that are around education institutes, this is anticipated by the law (see Section 7.2). *"Even though 50 metres is not a significant distance, it can be a good start to promote a stricter directive" (interviewee E31).*

Finally, the idea of providing only healthy foodstuffs like low fat and "light" products is rejected by the interviewees *"There are people who must not eat "light" products due to health reasons, so both alternatives must be provided" (interviewee E28).* Also, another participant raised another important issue, profit, by saying that *"if we force canteen owners to sell specific low demand products, in the end no one would like to run a canteen" (interviewee E32),* so students would go to food outlets outside the education institutes and this will not solve the problem.

Therefore, all participants agreed that if there is an increase in the demand for healthy foodstuffs, only these will be provided by the canteen owners. Under the current legislation context and in order to achieve such results there should first be education and culture change because now the majority of students do not care about their nutrition. A quote representing this view came from an interviewee who said that *"first the students should ask for these products and if they do so, the canteen owners will sell them to increase their profits. Unfortunately students don't care about this issue but about other issues which are becoming pressing" (interviewee E30).*

7.7 Conclusion

The employees of the education institutes gave a different view from the students concerning the controls inside the restaurants and canteens of the Institutes.

On the one hand, undergraduate students complained about the lack of controls inside the education institutes and they felt unprotected and unsure about the quality of the

products. The employees in the feeding facilities, however, reported that the controls are strict and frequent.

The challenge is to understand what has led to this tension and find ways to overcome it. If it is a matter of trust towards the State that leads students to believe that there are no controls, then there is need for information and transparent procedures to nurture this trust. If the employees of the feeding facilities have been afraid to reveal the truth about the controls and there are insufficient inspections, then there is a need for structural changes of the State bodies responsible for these controls.

The strengths of the current system of feeding facilities inside the education institutes are the flexibility of reaction that the responsible bodies have and can terminate any contract if the owner of the canteen or the restaurant does not adapt to the legislation and the rules of hygiene. Moreover, there is legislation about the maximum prices in canteens and restaurants inside the education institutes and this increases the choices for students of low income.

There is also another strength of the current facilities that concerns only the Universities and TEIs restaurants that provide healthy meals, with a variety of choices based on the Mediterranean Diet pattern. This was also supported by the majority of the undergraduate student participants (see section 6.10) who mostly complained about the size of the portions (very small) and about the lack of awareness about the quality.

Again this finding emphasises the need for transparent information from the government to the students.

Furthermore, there is a zone of at least 50 metres away from schools and education institute where food outlets are prohibited; this is not a very satisfactory distance.

The weaknesses of the current system of feeding facilities inside the education institutes include mainly the lack of governmental support in terms of funding and guidance to promote healthy eating behaviours inside the Institutes. This again shows the need for structural changes inside the education institutes and from the government's side too.

In this context, the reported opinions about the proposals of undergraduate students differed between the State institutes and the private ones. Private colleges are more flexible and ready to adopt these proposals as they have better funding and structures. On the other hand, in State education institutes, low budget, lack of structures and legislation pose difficulties for the re-structure of the current facilities in order to provide better module schedules, healthy alternatives from the canteens and to organise healthy eating education programmes.

Finally, in the case of education institutes canteens, where there is no legislation about the provided foodstuffs, the introduction of mainly healthy products may not be easy because the canteen owners would select those products that could increase their profits and these are mainly unhealthy.

Chapter 8: Findings from the Interviews with Key Stakeholders

8.1 Introduction

In this chapter, there will be a presentation of the findings from the interviews with key stakeholders from the State, Civil Society and the Food Supply Chain, as they have been introduced in the Methodology chapter (see Table 5.16).

Through the literature review and the interviews it was revealed that the State organisations which deal with food related issues can be divided into the responsible Ministries with their respective Directories and Departments, the governmental organisations responsible for control and advising and the Prefectures and Municipalities that undertake the implementation of the policies.

Civil Society in Greece can be divided into scientists like professors, doctors and nutritionists who fight for the promotion of healthy eating habits and the prevention of non-communicable deceases, non-governmental non-profit organisations and scientific associations occupied with nutritional issues and prevention of NCDs, consumer unions that fight for consumer rights and advisory committees that work mostly inside education institutes, whose objective is to influence current and proposed policies at a European and national level.

The Greek Food Supply Chain is divided into the food producers which in Greece are mainly small family businesses, middlemen and logistic companies that transport and store foodstuffs through the different stages of the food supply chain, food industry, food retailers which are either small regional grocery shops or big retail companies like supermarkets, food outlets like fast food chains, restaurants and taverns and finally food promotion companies i.e. advertising companies.

The sub-sectors of food producers, retailers and industry are organised under trade associations, which fight for the rights of their members and coordinate their actions in order to promote their development. This disaggregation is presented in Figure 8.1

Figure 8.1: The Agents of the three Key Sectors of the Greek Food System

State

1. *Ministries (policy development)*

2. *Governmental Bodies for Control & Advising*

3. Prefectures & Municipalities (local implementation)

Food Supply Chain

1. *Food Producers*

2. *Food producers trade association*

3. Logistics companies

4. *Food industry*

5. *Food industry trade associations*

6. Small Retailers

7. *Supermarkets*

8. Marketing companies

9. *Food outlets (restaurants, taverns, fast-food*

Civil Society

1. *Scientists like nutritionists, doctors, dieticians*

2. *NGOs non-profit organisations*

3. *Programme contractors NGOs*

4. *Advisory committees*

5. *Scientific non-profit associations*

6. Consumer Unions

*Interviews were conducted with people from the organisations in Italic letters

This chapter is divided into six subchapters based on the different question areas included in the interviews guide (see Chapter 5). These include the presentation of the reported role of the three sectors in terms of their current initiatives, the relationships between the key stakeholders, the strengths and weaknesses of the current system, the role of social marketing in Greece and their proposals for the improvement of the current situation.

8.2 The Role of the Key Stakeholders of the Food System and the Current Initiatives

In this section, the role of the stakeholders of the Greek food system and the initiatives that they have undertaken will be introduced as reported by the interviewees from all three sectors.

8.2.1 Legislation Involvement

According to a Ministry employee who has also extensive experience on food issues in many State organisations and departments, *"the role of the State organisations is to develop action plans about food and nutritional issues like safety and quality assurance, to implement the proposed initiatives and to control their application"* *(interviewee S01)*. This is probably why an interviewee supported that *"the issue of nutrition is political"* *(interviewee C11)*, as the main decisions that can affect the nutritional habits of the population, such as prices and the availability of specific foodstuffs and the promotion of healthy eating behaviours, are mainly taken and guided by the Government.

For example, concerning the development and implementation of specific plans and initiatives, a participant talked about the National Strategic Plan of Agricultural Development which is based on E.U. regulations and it is the main Plan relevant to food policy in Greece, covering agricultural policy issues. The State employee briefly described this plan by saying:

"In Greece there is no such thing as food policy, we follow E.U. regulations. So, the National Strategic Plan of Agricultural Development was developed for the period of 2007-2013 and this is based on the CAP. This Plan was developed with the cooperation of the Ministry of Rural Development and Food, the European Commission, NGOs, social and economic partners and other competent agents for the achievement of social acquiescence (interviewee S01)

So, all the plans that the State agents develop and implement are based on EU regulations and this was also reflected by another State employee who briefly described the basis of her organisation's function.

"In the organisation where I work and all other fellow organisations occupied with nutritional issues, we follow the White Paper on Nutrition and Physical Activity, so all the plans and the initiatives that we undertake are based on these guidelines. The proposed actions are general and every country tries to specify the initiatives based on the unique situation of the country. Also, the European Union creates some regulations about foodstuffs which every member must follow" (interviewee S03)

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There are also organisations of the Food Supply Chain that follow the EU regulations as for example reflected by an interviewee from a fast-food outlet, who reported that:

"We are following the European legislation because this outlines the State interventions and we don't want to face any problem with the State agents who inspect our services and products" **(interviewee B17).**

But it is not only the EU that defines the adopted policies. The nation States of the member countries can legislate within the confines of the EU law. So, there are agents of the Greek system that try to influence the Greek policies and sometimes the European decisions too.

State organisations work on the development of policies and support this task with data from their research and inspections. This was reflected by a State employee who reported that:

"Our target is to scientifically document control and the development of policies up to the point that the Ministry allows us to go. So we propose guidelines for the development of policies about foodstuffs" **(interviewee S03).**

This is not only the role of the State organisations and Ministries. Trade associations of the organisations of the Food Supply Chain also intervene to influence policies in order to promote their members' rights and sometimes to protect consumers. This was reflected by an interviewee of a trade association who said that:

"Our organisation records the prices of the agricultural products and makes publications about the margin between the producers' prices and the final price at which supermarkets sell the products. We discuss and comment on the source of these differences and suggest policy measures. So we suggest policies such as stating the place of origin of the foodstuffs in order to inform the consumers about the origin of the product and its packaging. We put pressure on not only Greek politicians but also Europeans because the decisions are nowadays taken at a European level... The role of the trade associations is to inform and push for measures and policies." **(interviewee B25).**

The same happens with some agents of the Civil Society that try to promote citizens' rights and affect Greek policies about food. This was reflected by an interviewee from an advisory committee who said that:

"We represent our country in Europe in order to promote some national preferences. We are also informal consultants for the Ministry of Rural Development and Food, so one of our major roles is to make suggestions concerning food policy" (interviewee C18).

Moreover, employees of NGOs and professors specialised in nutritional and health issues participate in policy development. This was reflected by a participant from a scientific non-profit organisation who said that:

"I am working in a non-profit scientific organisation which fights against obesity. In this context, some of our members have participated in the committee that was responsible for the development of a national nutrition policy" (interviewee C13).

Also, there are State organisations that are responsible for the development of a national nutritional policy and this was reflected by a State employee who said that:

"Our purpose is to create principles and rules of healthy eating for the population, namely, the development of a national nutritional policy which will have as an objective the prevention of chronic diseases related to nutrition in order to promote people's health" (interviewee S06)

8.2.2 Research

Another undertaking of many organisations of the food system is research in order to reveal the problems that the population and the stakeholders of the food system face. For example, the former was reflected by one State employee who said that:

"We are doing research to understand the problems and the needs of Greek consumers. We are about to start a PanHellenic research with the cooperation of the European Union" (interviewee S03)

In this context, another participant revealed that the problem in order to undertake these surveys that will help develop specific plans is lack of funding, an issue that will

also be presented in the following section about the weaknesses of the current system. He specifically said that:

"We want to undertake an epidemiological research for the sodium intake of the Greek population but it is not easy due to the economic crisis and the lack of resources" (interviewee S05)

Also, the organisations of the Civil Society often undertake researches on which to base their programmes and initiatives. This was reflected by all the participants and these are some representative quotes:

"We have done a PanHellenic epidemiological research with people from 5 to 65 years of age about obesity" (interviewee C13)

"Our objective is to promote healthy eating through research and education of the public. So the first thing that we do is research in order to report the current problems and we run two big researches about nutrition and physical activity of the children. These surveys are PanHellenic in a representative sample of the Greek population concerning gender, age and place of residence" (interviewee C10)

Finally, the food companies have research and development departments in order to develop new products that can have health benefits or low risk for customers' health, like products low in fat, salt and sugar. This was reflected by all the respondents of the food industry as was the case of one participant who said that:

"Our purpose is to develop products which would help the consumers to adopt healthy eating habits, so we have a big variety of products which include low in fat, sugar and salt alternatives and products with no preservatives and other chemical additives" (interviewee B23).

8.2.3 Information and Advising

Another role of the responsible agents is the information of the public and education. State organisations inform the population through specific health promotion programmes or through publications and their websites. A participant for example talked about the information campaign "Life has Colour" which was designed by the MoH. She said that:

"Ministries inform the population through some initiatives like the campaign "Life has Colour" that includes TV spots for obesity prevention" (interviewee S06)

This was also reflected by another State employee who talked about leaflets that have been developed by the MoH in order to inform the population about healthy eating and physical activity. He specifically said that:

"There are some leaflets to inform the public by the Ministry of Health but they are quite old" (interviewee S05)

Moreover, another State employee mentioned the programmes in schools about health promotion issues that include nutrition, which he considered to be very interesting but there are many issues to be covered and there is very little time for them, hence nutrition may be neglected in these programmes.

"The participants of health promotion in school based programmes have to select between many topics like protection of the environment, driving behaviour, injury prevention etc. So, it is a matter of selection...beyond this the work done there is very good in order to inform the students about different foods, the traditional healthy nutrition and the problems caused by unhealthy eating habits" (interviewee S07)

In this education, which is provided in schools through the health promotion optional lessons, non-profit, NGOs participate as reflected by one member of a non-profit NGO who reported that:

"We educate children, teachers and parents through seminars about healthy eating and food safety. These seminars are free and everyone can participate. They also call us to participate in the health promotion lessons that take place inside the schools" (interviewee C10)

Trade associations of the producers and the food industry inform their members and the consumers about the new developments in the food and nutrition sector. An example is what an interviewee from a trade association of the food producers said:

"We mainly inform the producers but we also inform Civil Society through our website about new developments in the agricultural sector. We also publish a monthly magazine and we organise seminars and exhibitions" (interviewee B25)

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Also, food companies do a lot of things concerning information of the consumer, despite the fact that there were participants who talked about wrong information, as it is going to be discussed later in this chapter. This was reflected by all the managers from food companies. For example one fast-food outlet manager said that:

"Our company is actively trying to inform consumers concerning the nutrition issues inside our outlets. Our target is to offer our consumers the opportunity of informed choice. This means that beyond our constant effort to expand our menu based on modern nutritional trends, we are maintaining the variety of our products so that the consumer can choose what is better for him" (interviewee B17)

The organisations of Civil Society also inform the public about food, nutrition and health issues as was reported by all the participants. Nevertheless, only an interviewee from a non-profit organisation reported that they separately inform undergraduate students by visiting them in their education institutes, showing that there is no precise targeting of specific groups from the responsible organisations. This interviewee said that:

"In order to approach undergraduate students we have gone into their education institutes and we have given lectures and this was also a good opportunity to survey their opinions too. We send our information leaflets to the education institutes and then the teacher comes in contact with us in order to talk to the students" (interviewee C10)

In the context of public information, all the participants reported that their organisations or they, as individuals, participate in conferences which also sometimes are organised by their organisations. A member of a NGO said that:

"We participate in conferences by giving speeches and also in initiatives by other agents, like for example the exhibitions of nutritionists associations. We also organise conferences." (interviewee C14)

Moreover, State organisations participate in conferences and this was pointed out by a participant who said:

"We participate in conferences in order to inform relevant agents and the public about the current food situation" (interviewee S03)

8.2.4 Corporate Social Responsibility

All the efforts by the Food Supply Chain organisations to support healthy eating are based on the concept of Corporate Social Responsibility. This was reflected by a fast-food outlet manager who said that:

"Based on our Corporate Social Responsibility we provide nutrition information like the ingredients and the GDAs of our products on the packages of our products and in our website" (interviewee B17)

The supermarkets follow the same approach as was reflected by the interviewee from a big supermarket chain, who said:

"We organise campaigns about health and nutrition. We give free magazines to our customers with the benefits of specific food products based on the Mediterranean Diet pattern and we have nutrition information about specific product categories on the shelves. Based on the season we promote legumes, fruits and vegetables by informing the customers about their benefits (interviewee B16)

The GDAs are also adopted by food companies despite the fact that this is not mandatory by law. This was reflected by a member of a food industry trade association who said that:

"We want to allow consumers to understand the nutritional content of their food choices, empower them to compose a balanced diet that they can adapt to their individual needs and lifestyle, therefore we provide GDA labelling on our foodstuffs" (interviewee B26)

Concerning the food industry, food companies also develop health promotion activities as reported by all the participants. Some important initiatives include the organisation of cooking lessons, promotion of the value of olive oil to children and programmes for the promotion of healthy eating. These were pointed out by three interviewees who said that:

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"Our company organises cooking lessons for the public in the company building"
(interviewee B23)

"We are running educational programmes for school children in order to promote the value of olive oil. These programmes take place inside the company where children are familiarised with olive oil and its production process" (interviewee B22)

"We have developed a programme for children 5-12 years of age in schools of the 7 big cities in Greece in order to promote healthy eating habits. It contains educational material for 32 educational hours for children, teachers and parents" (interviewee B21)

The difficulties that the food industry faces in the attempt to adopt these initiatives was reflected by a manager of a food company who said that:

"The food industry tries to reduce trans-fats and sugar but it is very difficult because we are dependent on the suppliers" (interviewee B24)

On the other hand, a participant accused the food industry of not being trustworthy as it often does not take the promised action, by saying that:

"SEVT is good only in words but when they have to take action they do not have a clear position" (interviewee S06)

8.2.5 Health Promotion Activities

Another way to get involved into the nutrition initiatives for Greece is the participation in European programmes about health promotion in Greece. This was reflected by a member of a non-profit NGO who talked about the organisation that she works for:

"We respond to calls to participate in European programmes and represent Greece. These programmes are mainly about health, nutrition and health promotion settings" (interviewee C11)

There are also programmes that focus locally on a municipality level and this was brought up by a participant who said that:

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"...the programme refers to children 0-12 years of age in order to prevent childhood obesity. This programme is implemented at a local level in municipalities of Greece" **(interviewee C12)**

8.2.6 Monitoring and Control

Another role mainly of the State is the control of the foodstuffs and the current initiatives about food and nutrition. This was reflected by two employees of the governmental control organisations who said that:

"We take all the necessary steps to protect consumers from misleading practices and food fraud. We are also the national contact point of the European Union for the management of the RASFF and for Codex Alimentarius" **(interviewee S03)**

"The protection of public health and the environment, the protection of health and interests of consumers and the support of the proper function of the market is our responsibility" **(interviewee S04)**

On the other hand, there were participants who believe that the current situation is not very well controlled. This was reflected by a participant who reported that labels on foodstuffs are misleading and imported products are sold as Greek. He specifically said that:

"Imported foodstuffs, mainly from third world countries, are provided in the marketplace with ambiguous labelling, the consumer gets confused with the label and buys something that is not what it claims to be" **(interviewee B25)**

Based on the previous indication of the reported role of the participants of the Greek Food System, it is obvious that there are common initiatives undertaken by organisations from more than one sectors, by many organisations of the same sector and also initiatives where different organisations need to cooperate in order to achieve their objectives. Therefore, in the following section, the relationships among all these agents will be introduced based on the interviewees' views as they have been reported during their interviews.

8.3 Relationships between the Key Sectors

Concerning the cooperation between the responsible agents, the participants reported that for specific issues they cooperate with organisations from other sectors. A participant from a big supermarket reported that they cooperate with nutritionists and non-profit organisations and the State when they ask for their support in health promotion activities. She specifically reported that:

"As regards the nutritional aspects of our initiatives, we cooperate with Universities and nutritionists. Also, non-profit organisations and the Ministry of Health have approached us in order to have us support their initiatives for healthy eating promotion and we support them because our mission is to support these actions" *(interviewee B16)*

Trade associations of the food business sector cooperate with the State in order to promote the interests of their members. This was reflected by an interviewee who said that:

"We cooperate with all the Ministries occupied with food because there is a need for synergy in order to create sound food policies" *(interviewee B25)*

Concerning the cooperation between non-profit organisations and the food industry there is some tension about the ethical issues when it comes to promoting healthy eating by organisations that sell, among others, unhealthy foodstuffs. The first view was that there is no problem because the funders that come from the food industry do not interfere with the programme and they do not promote their products during its implementation. This was reflected by a member of a no-profit organisation that uses food companies and supermarket as funders for an anti-obesity programme, who said that:

"The funding for the programme is private and comes from a supermarket and two international food companies. These funders, though, do not intervene in the content of the programme and it is clearly a matter of Corporate Social Responsibility, so they can't promote any of their brands and products." *(interviewee C12)*

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On the other hand, another member of a non-profit organisation believed that something like that is not good for the programme and may have negative consequences. She reported that:

"We don't work with companies as funders because our board of directors didn't want this in order to prevent us being accused of being influenced and of promoting their brand." (interviewee C10)

There is cooperation between the organisations and individuals from Civil Society and this was reflected by all the interviewees from this sector. Non-profit organisations cooperate with nutritionists, professionals and doctors to develop effective and scientific proposals to assist their initiatives. Among others, this was reflected by a member of a non-profit organisation who said:

"We cooperate with scientists...nutritionists, psychologists, doctors...they assess the messages that we promote through our campaigns based on international scientific guidelines." (interviewee C12)

And another member of a non-profit NGO who said:

"We cooperate with everyone involved with nutrition...Ministries, non-profit organisations, professional associations, customer unions, the food industry and museums in order to develop educational programmes, Universities, foreign Professors and with schools in order to promote healthy eating to the students." (interviewee C10)

Non-profit scientific associations cooperate with education institutes, with scientists and with the responsible Ministries in order to promote and support their initiatives. This was reflected by a participant who said that:

"We cooperate with TEIs and Universities in order to implement school activities about Mediterranean Diet and healthy eating promotion. We also cooperate with nutritionists and the Ministry of Education." (interviewee C13)

State organisations cooperate with each other on specific issues and projects. This was reflected by all the interviewees from the State. For example one participant said:

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"In order to create the sanitary arrangements for the school canteens we cooperate with the Ministry of Health with the Ministry of Education, with EFET and Ministry of Development." (interviewee S06)

Also, as reported by a State employee, State organisations cooperate with the food industry in order to facilitate the development of products of high quality by improving safety and hygiene during their production. The interviewee specifically said that:

"We work with food companies in order to help them improve their hygiene system and other issues that touch safety and quality of foodstuffs." (interviewee S03)

Moreover, an interviewee from the food industry revealed that the MoH cooperated with two food companies for the promotion of the latest communication campaigns. He specifically said:

"Two food companies...we were one of them...and other companies, I think a bank, were sponsors of the two Communication Campaigns on Healthy Nutrition "Life has Colour" and "Children's Weight/ A Weighty Issue" developed by the Ministry (of Health)." (interviewee B22)

Nevertheless, it has been revealed that there is informal competition between on the one hand the State and Civil Society organisations and on the other hand with the Food Supply Chain, especially with the food industry and big retailers. This was reflected by a participant from the State who reported that:

"There is competition between the food industry and the State and other organisations that promote healthy eating habits. This competition is uneven because the industry spends more money in order to promote its unhealthy products, while the State and other non-profit organisations have very small budgets. So we can't talk about a fair situation and the consumer is in the middle." (interviewee S02)

This is also proved by research which shows that this competition is uneven. In particular, the expenditure of the Greek food industry for the promotion of "unhealthy" foodstuffs is very high. For example, in 2010, only the Coca-Cola Hellas had a budget of €15.8 million for all types of promotion of its products (Coca Cola

Hellenic, 2010). On the other hand, for the same year the available budget of the Ministry of Health and Social Solidarity for any kind of advertising, publications and TV and radio programmes about health in general was €50,000 only (Hellenic Ministry of Economy and Finance, 2010).

Finally, tensions were also reported between the big retailers and super market chains that are not able to develop a trade association as was reflected by a participant who said that:

"There used to be a trade association of the supermarkets in Greece but because there were a lot of disagreements among the members it was abandoned and I don't believe that it is going to exist again in the future." (interviewee B16)

Whether the above actions have been developed, implemented and controlled in a proper way and whether the reported collaborations work effectively or not is going to be discussed in the next paragraph where the reported weaknesses of the current system based on the interviewees' opinions will be presented.

8.4 Weaknesses of the Current System

During the interviews with people that deal with nutrition and food issues, the interviewees were asked to talk about the weaknesses of the current system and there were many complaints about the way that the current system works.

The major problems highlighted by almost every interviewee is the way that State organisations work and the relationships with the other two sectors of the Food System, i.e. the Civil Society and the Food Supply Chain.

There were two main quotes that reflected this disappointment towards the State's function. The first was from a unionist of the food producers who said that:

"The structure and the function of the State are the cause of many problems." (interviewee B25)

The second was from a State employee who, when approached by the researcher, replied in exasperation that it is difficult to find what we are looking for in a State organisation because nothing works properly. He specifically said:

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"We don't have the service that you are looking for here, girl...if the Ministry sent you here, tell them that they know nothing...as you can understand you are dealing with a public service..." (interviewee S08)

Moreover, there were interviewees who complained that the State does not fully support current initiatives because of bureaucracy and unorganised structures. For example, this was reflected by an interviewee who said:

"The State does not support us, many times the reverse happens and we face problems with the Ministries. For example we have some issues with the Ministry of Finance...their processes are slow and antiquated." (interviewee C10)

Another interviewee also raised the problem of State support by saying that:

"...but there is lack of State support and the problem of our unfriendly cities where you cannot walk, cycle or jog is also very important." (interviewee C11)

In the same context, another interviewee from Civil Society underlined the problem of coordination due to lack of support by saying:

"There is a need for coordination by the State which at this moment is absent. There should be something like a pyramid, first the State and then all the others." (interviewee C14)

Beside the actors of Civil Society who complain about the lack of State support, there were also interviewees from the State who confirmed this situation, like for example a Ministry Civil Servant who said:

"In the Department where I work, we don't have a lot of work because we are waiting for the creation of steering committees in order to tell us what to do. This delay is due to the lack of political will and support...and lack of guidelines and therefore these Departments decline." (interviewee S05)

The interviewees also raised the issue of policy absence. All interviewees who are occupied with policy issues highlighted this fact like for example a Member of an advisory committee who stated that agricultural policy never existed and he is pessimistic as to whether it will ever exist:

"Agricultural policy, if it will ever exist, because it never did as it was made up of fragmented actions..." (interviewee C18)

Current policy has also been criticised by a State employee who reported that the State votes for laws in order to cover the current supply and demand for foodstuffs, specifically for products that are produced in big quantities instead of focusing on the nutritional and health needs of the population. He specifically said:

"At a population level, the promotion of olive oil, fruits, vegetables and other food types is segmented and short term and motivated by the profit of specific private food sectors rather than by public health incentives. Legislative measures for specific foodstuffs such as fresh meat, bread and cheese are based mainly on market regulation objectives rather than on the protection of consumer health." (interviewee S01)

Another interviewee raised the issue of lack of policy in terms of combating the problem of imported products that are marketed as Greek at the point of sale and this is a problem that the State has not solved until today due to policy absence:

"The State works using an obsolete and anachronistic model, cannot follow the trend and most of the times stays behind. Therefore there is a need for policies and modern standards in the agricultural sector... for example, at the level of national food policy implementation there is a vital problem of renaming foreign products as Greek products and there is no policy to see to it." **(interviewee B25)**

While on the topic of nutrition policy absence, a Ministry Civil Servant said:

"Most European countries have a plan and a policy about nutrition that works. Unfortunately there is no such thing here." **(interviewee S05)**

Also, another Ministry employee gave the example of the National Nutritional Policy Committee, which no longer exists, in order to justify the absence of a formal nutritional policy. She reported that:

"The National Nutritional Policy Committee which no longer exists, used to make suggestions about nutritional policy, but these proposals did not progress to a political leadership level and hence they remained proposals." (interviewee C09)

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Moreover, the lack of control towards the food industry that stems from lack of policy was reflected by another interviewee who said:

"The State cannot effectively control the food industry as there isn't the right legislative framework...we are still trying. " **(interviewee C13)**

Also, another interviewee raised the issue of nutritional information on foodstuffs packaging, which is not mandatory by law. This interviewee from a big food company said that:

"In our company, we have as a policy about our private brands to write GDAs on the packages despite the fact that there is no legislation about it. " (interviewee B20)

The fact that the State has failed to create a sound control mechanism regarding the Food Supply Chain was also reflected by another interviewee who reported:

"The main weakness of the State is the inspecting mechanisms. The market is not controlled at all. There are illegal practices that affect the revenues of the producers and small suppliers who supply the big retail chains with foodstuffs. These practices are financial blackmail by means of delaying their payments...they pay their suppliers in 200 days while the European days, or ...they increase the price in order to show that they offer discounts. So, the producer loses much of his income when the price on the shelf is extortive and suspect and the producer's earnings are devalued. Based on a recent study undertaken by our organisation, one out of two foodstuffs in packages offered in supermarkets deceives the consumer. " (interviewee B25)

The same view was reflected by another interviewee who said that:

"...there is no reliable mechanism which can secure what we buy, how it is produced and where. " (interviewee C18)

Lack of control in education institutes canteens, an issue also raised by the focus groups, was reported by an interviewee who reported that we cannot be sure that the products provided by these canteens are healthy and proper for children. She specifically stated that:

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"In Greece, children don't eat in the schools so there has been no emphasis on their nutrition. In school canteens, the existing regulations are not implemented and not controlled and the foodstuffs provided cannot be assumed healthy. The nutritional issue is political in terms of what kind of foodstuffs get inside the canteens and their promotion." (interviewee C11)

On the other hand, there was an interviewee who participated in the development of the school canteen regulation and she reported that despite the fact that canteen owners do not implement it, it is one of the best regulations that exist in Europe, so its failure is a matter of control and lack of implementation. She reported that:

"Concerning school canteens, the regulation is one of the best in Europe...it was a result of a two-year effort but exists only on paper. The State does not supervise its implementation and the canteen owners prefer to provide unhealthy foodstuffs to increase their profits." (interviewee C09)

Another weakness of the State organisations reported by the majority of the interviewees is the fact that the cooperation between the responsible State agents is not always very good. For example, an interviewee from a State Control Body admitted that they cooperate with many agents but there is a need for better cooperation on some issues:

"If the involved State agents could cooperate in a better way, things would be better in food and nutrition sectors." (interviewee S04)

The same view was reflected by two other interviewees who said:

There are structures but there is no management for sound cooperation..."
(interviewee S03)

"The problem is that there isn't a main body, a department or service, to coordinate the actions of every involved agent." (interviewee S05)

Also, another interviewee reported that there is lack of communication between the Ministries. She specifically reported that:

"There is no communication between the Ministries...the ministry of education develops health promotion programmes about nutrition and does not inform the Ministry of Health, neither asks for advice nor informs about the results of the programmes." **(interviewee S06)**

An example of lack of policy and cooperation was given by two other interviewees in order to support this view. The first gave the example of the management of olive oil production and promotion between Greece and other European countries. She said:

"In Greece many more things could have happened. But responsible agents do not cooperate as much as they should. We can see this very well in the case of olive oil...we should have caught up with Spain and France but they have policies and they can implement what we have only on paper. It is vital, to do things in sequence." **(interviewee C09)**

The second interviewee complained mainly about the subject of nutrition, which is divided between many agents and many times, people from cooperating agents do not participate in committees about nutritional issues. She specifically reported:

"The issue of nutrition is split into many responsible bodies and agents. We cooperate with all these agents on paper....but actually there is no communication. For example, when there is a crisis concerning food, our Ministry does not know what happened and how to deal with it. Also, the Ministry of Education develops health promotion programmes and does not inform us or ask for advice. Oh! and we also include people from other agencies in steering committees and many times they don't even appear at the meetings...pff" **(interviewee S06)**

In contrast, there was one participant who said that cooperation between the organization where she works and other agencies is very good and this is one of their strengths. She reported that:

"There is a multi-scientific approach concerning food safety as there is a responsible team of specialists from many fields and organisations. There is communication between most of the responsible agents and this is one of our strengths" **(interviewee S03)**

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This reported lack of sound cooperation between responsible agents has led to job overlap increase according to some participants. Specifically this was highlighted by a participant who said:

"There must be better relationships among the involved services. At this moment there is overlap, so there is a need for better work and division of responsibilities." (interviewee S04)

This was also reflected by another participant from a NGO who said that this does not happen only in State organisations, but lack of State administration leads to overlaps between NGOs too. She said that:

"Many times we have common objectives with other agents. In general, there are many agents who do different things on the same subject and maybe this results in higher expenditure. We are organising an exhibition and there are two or three more (organisations) that organise similar exhibitions too. If we cooperated, or if the State coordinated all these efforts the cost would have been lower." (interviewee C10).

There were also participants who raised the issue of personnel shortage in State organisations. These were participants from the State and they revealed that the personnel are insufficient in terms of the workload. They specifically said:

"There are so many issues, so few staff and so many involved agents. Along with nutrition, there are also different health issues." (interviewee S03)

"There's not enough staff. There should be a whole department on nutrition policy and now there is only one person. Also, there are committees that consist of scientists who have their own business and therefore they don't have a lot of time for these projects...so there should be something more permanent." (interviewee S06)

Finally, there were participants who lament the inconsistency of the implemented initiatives, which are short-termed, have no follow-up and no assessment of their results and their impact. Food Supply Chain and Civil Society representatives believe that the State is unorganised and implements short-term programmes, therefore the initiatives that organises fail to succeed. This was reflected by a participant who said:

"The State has done nothing all these years through an integrated programme. There were some efforts through specific persons but nothing organised." (interviewee C18)

Another participant reflects the same view by giving the example of a State initiative to promote the 5aday fruits and vegetables.

"The Ministry came to us to support the 5 a day. It was only informative. It lasted for a month and the cost was very high. It has no impact because it didn't last long." (interviewee B16)

The same opinion about the short-term initiatives from the State was also highlighted by a State employee who discussed the recent campaign "Life has Colour" and raised the issues of appraisal and continuity absence.

"Do you think that there is information made available to the people? For example, let's take obesity prevention... "Life has Colour"...nice campaign, impressive but are there any results? A serious programme must have measurable objectives...here they have given neither results nor impact measurements...if people implement these suggestions. Therefore, these are rituals that some Ministers like. They are not programmes." (interviewee S06)

Moreover, interviewees from NGOs supported the same opinion as the previous participants. Specifically the fact that the State runs some programmes in order to show the population that it undertakes initiatives about healthy eating promotion and not in order to create sustainable results was reflected by a participant who said:

"These (initiatives) are not very effective. Many times they do things in order to show that they have done something. Maybe there would be less money spent if they had intervened in a different way. In Greece the obvious does not happen. First we need to fix this." (interviewee C15)

Also, a nutritionist claimed that the lack of central policy leads to fragmented initiatives saying:

"There are many initiatives and most of them well-meant and very good but they are fragmented and not followed through. There is no central policy. There should be specific targets and schedules." (interviewee C09)

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Finally, another participant reported that there is no information about healthy eating because the State programmes and all other programmes are short-term and not well organised. In this context, she shows the case of the National Action Plan for Nutrition and Nutritional Disorders which has never been implemented as shown and in the following quotes. She reported that:

"Information about what we eat is very important and absent in Greece. Fragmentarily you can see things but there is no sequence. Fruits and healthy eating habits should be advertised more. There is no adequate information about the dangers of obesity. Here, I have a copy of the National Action Plan for Nutrition and Nutritional Disorders only to see some statistics in its early chapters. It is a very good plan but in order to be implemented there is a need of funding, organisation and people. It is a political problem that such initiatives are not implemented because there are initiatives that need a lot of money and others that don't. But even if the budget is high it will result in saving healthcare costs. Probably our politicians are not aware of these issues; they haven't understood the long-term economic benefits." **(interviewee C11)**

Concerning the National Action Plan for Healthy Nutrition and Eating Disorders (p. 102), some of its proposed actions have been implemented while the majority of its proposals have never been put into practice because, as the State interviewees reported, it has not been legislated. Specifically, a Ministry employee said:

"The plan developed by the Ministry of Health, is something phenomenal for Greek reality. However, it is common practice in Greece that a lot of initiatives start with so much enthusiasm and effort and are neglected in the end due to lack of funding or political changes The National Plan is not valid because it has not been legislated." **(interviewee S06)**

This view has also been validated by another employee of a State organization who said:

"There is no decision taken about the National Action Plan because this has to do with political will and funding. It has not been approved by the Government so it is just a proposal and we use it as a guide." **(interviewee S03)**

As for the current situation, the fact that weaknesses of the system are many more than the strengths, some participants blame the culture of the Greek people, especially the fact that Greeks try to serve their personal interests without caring for their fellow citizens. This was reflected by a participant who said:

*"In Greek society there is a culture of disregard for communal issues and focus on personal interest and people worry about their personal development and not the development of the country or their sector." (**interviewee C18**)*

Also, another participant believed that the culture of Greek people should change and this should start from the family and the school. The disadvantages of the Greek educational system are the cause of many problems as reflected by this participant who said:

*"We have a wider problem with our educational system. Children do not love school, so there is a deeper cultural problem." (**interviewee C10**)*

The problem of the educational system has been raised by another interviewee who believes that the State does not undertake a lot of initiatives to reverse the nutritional problem in Greece and also does nothing for the improvement of the educational system and structures in order to facilitate healthy eating promotion through educational institutes. She reported that:

*"My opinion is that we have the Mediterranean Diet and still we are behind other countries concerning healthy nutrition...we have among the highest obesity rates for women and children and there are not enough initiatives by the State. It is due to lack of information and structures and this is very acute in schools." (**interviewee C11**)*

Furthermore, the problems faced in education institutes partially stem from lack of funding as was highlighted by a Ministry employee who gave an example from the health promotion programmes that take place inside the schools.

"The funding specifically in the case of prefectural (health promotion in school) programmes is very low i.e. €70-80 per project and teachers' compensation. In the case of co-subsidised programmes the funds are higher and they could be up to €1,800 per project. Unfortunately, the subsidised programmes, which provide more

money for the support of each intervention, are limited. Also, the participation in the Health Promotion interventions in schools is voluntary. The choice of focus depends on teachers' and students' preferences. Another weakness of the programme is the fact that because of lack of funding the supportive material is old, not up to date but it still covers the main issues of nutrition. " (interviewee S07)

These funding problems were raised by all the participants in the interviews. Moreover, the way that the State deals with all these issues has led to its unreliability in the eyes of Civil Society. This was reflected by an interviewee who said:

"Based on our data there is low respect towards the State and high towards the family. " (interviewee C10).

Finally, a participant from a trade association of the food industry reported that due to the economic crisis, all the efforts of the State will be poured into debt payment and not into the development of the country and this will hit the food industry among other sectors of the Greek economy. He specifically said:

"The concern of the governors is how to find loans to pay our debts while they do not even talk about development. We are not told if this country has prospects. We are not told how to get out of this tunnel. What we hear daily is how much money they will cut from salaries, pensions and small businesses. " (interviewee B19)

So, the reported weaknesses can be summarised in Table 8.1.

Table 8.1: Weaknesses of the Current System as they have been Reported by Key Stakeholders of the Food System.

Reported Weaknesses of the Current System
Function of State organisations
Structure of State organisations
Lack of support from the State
Not always good cooperation and communication between the responsible agents
Lack of integrated national food and nutrition policy
Lack of control
Overlapping responsibilities'
Personnel shortage in some vital services
Short-term initiatives without follow-up
The culture of the Greek people
Inefficiency of politicians that led to this situation
Lack of funding

8.5 Strengths of the Current System

In the same context, the interviewees were asked to talk about the strengths of the current system. So, despite the weaknesses which have been reported by all the participants, there were some interviewees who reported that the current situation is not very good but there are strengths that we can take advantage of. The main strengths which have been revealed include the capabilities of our human resources and the fact that there are individual people and organizations that work effectively and this can give hope for the future.

One point, on which all participants agreed, was the existence of very capable scientists in the country. This, for example, was reflected by an interviewee who said:

"We have very capable scientists but there is no coordination." (interviewee C13)

There were participants from NGOs who admitted that there are some things that the State does well and that there are governmental bodies that work efficiently. For example, a supermarket manager said about a governmental body that makes inspections on foodstuffs that the supermarket provides:

"EFET [The Hellenic Food Authority] does a very good job concerning inspections for labels and storage of foodstuffs inside supermarkets. For example, they have fined us because we have not included in a product of our private labels that it may contain an ingredient. But there is nothing more." (interviewee B16)

Also, another interviewee from the State reported that the General Chemical State Laboratory works very well and covers the whole country through its cooperation with local agents. More specifically he said:

"The General Chemical State Laboratory was developed and covers almost all of Greece. It managed to evolve and become the most important product-quality control system in our country." (interviewee S02)

In the same context, another interviewee reported that the structures and the plans that the State develops are good but there is no organisation and management of the procedures in order to promote cooperation between the responsible agents. The interviewee reported that:

"The structure of the current services and the developed action plans are very good, if they were implemented in the right way there could be better results. But there is no management of the current structures in order to develop a sound cooperation between the different agents." (interviewee S03)

On the other hand, there were interviewees who supported that, the private sector as well as NGOs, work more effectively than the State. These cases were reflected by two interviewees who said that:

"In practice we have seen that private initiatives work better. And this is happening because the private sector has more knowledge on managerial issues and social marketing so they can use the available resources more rationally. I have seen this in other countries as well." (interviewee C12)

"Scientific agents and non-profit organizations work very effectively." (interviewee C13)

Another example of the Food Industry excellence is what another interviewee reported, the fact that the members of the Hellenic Food Industry Association follow

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some rules in order to promote their concern about consumers health by promoting the use of GDAs and consumer information about how to shop healthy and safe foodstuffs. She specifically said:

"The members of the Hellenic Food Industry Association are authorised (by the Association) to write GDAs on their packages and they do it." **(interviewee B26)**

Also, a participant from one of the biggest supermarkets in the country reported the same concern about the use of GDAs on the food packages of the private brands of the supermarket that she works for and the provision of fresh and organic products to the customers. About this issue, she said:

"Our policy is to write GDAs on our private brands, despite the fact that there is no legislation about this issue. We also have the widest variety of organic products, we focus on fresh foodstuffs and we don't sell only junk food." **(interviewee B16)**

Moreover, another participant praises the food industry's attempt to embrace the health claims upheld by the regulation (EC) No 1924/2006 on nutrition and health claims made concerning foods from the EU. *"A health claim is any claim that states, suggests or implies that a relationship exists between a food category, a food or one of its components and health"* (European Commission, 2010). Concerning health claims, an interviewee from a NGO said the following:

"Health claims that the food industry has recently promoted are a step in the right direction." **(interviewee C13)**

Also, a manager of a big food company claimed that nowadays all food companies try to produce more healthy products in order to meet the needs of the population for a healthy diet. He specifically said that:

"In recent years, a great movement for the development of a healthier and consumer-friendly profile has been observed in the majority of the food companies in order to develop products that will be appealing to the consumers who want to have a healthy, low-fat diet." **(interviewee B24)**

In the same context, an interviewee from a trade association of the business sector, reported what has already been inferred through the indication of weaknesses of the

current system, i.e. that private initiatives are more targeted and well-organised than those of the State. The interviewee said:

"We are one step ahead of the State because our antennas are more sensitive towards the market messages." (interviewee B25)

Concerning the merits of Civil Society and the initiatives from NGOs, the group of participants from Civil Society reported that the programmes that they undertake have more duration than the State initiatives and this is a factor of effectiveness. Characteristic of this view is what an interviewee from a NGO reported:

"It is important that our programme is divided into thematic units and it has continuity, therefore it can be more effective than the State programmes that last for a few months." (interviewee C12)

Moreover, the use of better methods to approach children and facilitate their involvement in the programmes about nutrition has been raised by another interviewee who said:

"In contrast to the Ministry's initiatives, we use interactive methods in our programmes. Through interactive methods children learn more things." (interviewee C10)

Despite the weaknesses that have been reported by the interviewees and have been presented in the previous section (Section 8.4), some participants perceive an improvement during the last years and under the surveillance of the EU. For example, a member of an advisory non-governmental committee highlighted that during the last years there is progress in Greece in many foodstuff sectors, like dairy products, mainly because of the progress of the industry in order to increase their profits and the pressure of the EU.

"There is progress in many sectors of the food industry during the last years with the help of the State but mainly due to the regulations and the directives of the European Union. In the sector of food trading, there are always improvements...labelling, attractive packages, new products etc." (interviewee C18)

Finally, the country per se has many advantages, as analysed in the second Chapter, which concern the climate, the productivity of the land and the variety of the products that can be cultivated under these conditions. The problem was that the people of this country did not take full advantage of these opportunities and therefore they now face all these weaknesses that have been introduced in the previous paragraph. This was reflected by one participant who reported that:

"I was talking with a farmer, some years ago, about the products that he produces in his field and he answered that this land is blessed. Whatever I sow will grow. This blessed land has been destroyed by careless policies...let's resurrect it!" **(interviewee B19)**

This was also reflected by another participant who reported that:

"It still needs a lot of work (for the improvement of the current situation), but in comparison to other countries we are in a better position because we have more fruits and vegetables and the capability to produce them compared with other countries. Therefore we need to make more efforts to take advantage of our assets." (interviewee C11)

Finally, another advantage reported by an interviewee is the fact that there is still a traditional character in many foodstuffs like for example bread. In Greece, bread is produced and sold in bakeries every day. There is also packaged bread in the super-markets but most people prefer fresh baked bread from the bakery for their meals. He reported:

"Nowadays, it is very good that there are many traditional small industries in our country, when at the same time the whole of Europe is trying to turn back to tradition." (interviewee B19)

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So, the reported strengths of the current situation have been summarised in Table 8.2.

Table 8.2: Strengths of the Current System as they have been Reported by Key Stakeholders of the Food System.

Reported Strengths of the Current System
Capacity and capability of Greek Scientists
Specific initiatives that the State organises well
Sufficient cooperation among specific agents
Good plans
Nutrition oriented initiatives by non-governmental organisations
Promotion of healthy eating from food industry in the context of Corporate Social Responsibility
Production of food with less fat, sugar and salt by the food industry
Advantages of the country like fertile soil and climate
Still some adherence to tradition

8.6 The Role of Social Marketing

Key stakeholders of the three sectors of the Greek Food System were asked to talk about social marketing in Greece and their opinion about social marketing practices in general. A social marketing definition was given to them, but during the interview they were asked to specify whether they were aware of social marketing as a term before.

Only one person from a NGO was fully aware of social marketing, the majority understood the meaning of social marketing through the provided definition and a small number of especially older participants asked for examples in order to talk about this issue. This is also a result of the fact there is only one social marketing initiative in Greece (and this can hardly be considered a social marketing initiative as it does not fulfil the benchmark criteria analysed in Chapter three) and the majority of the participants were not aware of it.

The first thing that was also revealed through the literature review was that only some of social marketing techniques have been used in Greek initiatives in the context of

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health promotion programmes and information campaigns. This was reflected by many interviewees like one who said:

"Without being marketing experts, we adopted some of its techniques in the past and still do in order to inform the population about the problem." **(interviewee C09)**

This was also reflected by another interviewee from a non-profit NGO who also insisted that social marketing can be adopted and work properly but not by the State due to financial crisis.

"I believe that social marketing exists in Greece. Organizations adopt its practices without knowing the theory. I am for the adoption of social marketing initiatives by private agents because there are no many resources in our country." **(interviewee C12)**

At this point there was a tension in terms of the kind of private organisations that would undertake social marketing initiatives. An interviewee from the public sector strongly opposed the idea that there may be food companies funding these initiatives. She said:

"It is not good when such initiatives are funded by food companies who produce and promote unhealthy products. The kid sees them and then considers them healthy. I don't care if they find money from other companies, like banks, but not food companies. This conflicts with the attempt to prohibit advertisements for children. In these cases EU and WHO should intervene in order to discourage this attempt." **(interviewee S06)**

Still, the need for food industry cooperation was highlighted by a civil servant who said:

Social marketing is very important and all the responsible State agents should get involved in this. I believe, though, that the food industry should get involved as well, otherwise nothing would change." **(interviewee S04)**

The absence of State interventions, which leads to the need for cooperation with agents from other sectors of the food system, was also reflected by another interviewee from a trade association who complained about the State's attitude in the

current situation. He claimed that only companies work efficiently in this direction and stressed, probably trying to provide emphasis, the fact that this is happening only in Greece. Specifically he said that:

"We are fanatically for the use of social marketing. Enterprises have started working on this issue and there are programmes at the European level, but there is no evidence that the problems that we have here can be solved with State help. For example we also need to inform the producer about health and nutrition issues in order to produce the right products and for this matter, the Ministry does nothing and this happens only in Greece." (interviewee B25)

On the other hand, there was a view that social marketing should be used in order to protect consumers from the food industry; therefore, this contrasts with the previous views about the need for food industry support. So, there was a participant who stressed the need for social marketing in order to avoid misperceptions driven by the food sector, which in order to have revenues can deceive the consumer. Specifically he said:

"In Greece there is no social marketing and if there is, it is happening in an unorthodox way. In the food sector, everyone wants to sell by any means; hence there is wrong information and the need for correct information through social marketing initiatives is very important." (interviewee C18)

Also, this was reflected by another participant from Civil Society who said:

"There is still room for improvement...the State must advertise good eating practices, because if there is always someone (from the food industry) telling you that such and such product is good for your heart and there is no one to say that olive oil is good for your heart, how should Greeks know what is good for their heart?" (interviewee C09)

The need for improvement of the current application of social marketing techniques was also stressed by all the participants. There were two more representative quotes about this need to change the way that things are done in Greece and these included proposals in terms of better coordination, sustainability and development:

"There is use of social marketing but it is uncoordinated. We have very capable scientists but there is no coordination." (interviewee C13)

"Social marketing is good, not in the form of a fanfare as it is in Greece, but as a long-term programme." (interviewee S07)

Moreover, there were participants who admitted the value of social marketing for the improvement of the current situation in Greece but they believe that this is important because Greeks do not have the proper education on these issues and hence they do not have the proper culture to avoid wiles by the food industry. For example, this was raised by an interviewee who said:

"Social marketing is something that anyone can use in order to find ways to approach the target audience effectively. If we were well educated and we had a different culture there would have been no need for social marketing because we would have the knowledge to judge what is good and what is bad for us. Now, it is very important to use social marketing." (interviewee C10)

In this context, a participant from a NGO reported that there are efforts to create a White Paper on Social Marketing in order to provide guidance to other countries who want to develop and implement social marketing programmes. The interviewee said:

"There was an attempt by the end of 2011 to create a White Paper in which directions would be provided towards social marketing programme development and implementation." (interviewee C12)

On the other hand, food industry interviewees reported that they support social marketing and other kinds of health promotion initiatives through their action of Corporate Social Responsibility (see also section 4.6.3.3) and therefore they are all for social marketing initiatives. This, for example, was reflected by a participant from the Food Industry who said:

"Social marketing is good and we have supported initiatives to promote healthy eating and we also have our own initiatives in order to promote healthy nutrition habits. You can see them in our website." (interviewee B21)

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Moreover, all the participants from the food industry reported that they produce and promote all kinds of products, so that the consumers can have the freedom to choose what is healthy and good for them. Therefore they do not feel that social marketing initiatives would damage their image or reduce their sales as they have a variety of products for every taste. A characteristic view was:

"We produce all kinds of products, what you consider healthy and unhealthy...I don't see it like that, there are people who need to drink milk with fat and others without, so the consumer needs to choose what is best for him/her. If you believe that social marketing can work in this direction then why not?...give them social marketing or education in schools...I don't know...Politicians know best...don't they?" (interviewee B20)

8.7 General Proposals to Improve Nutritional Habits in Greece

During the interviews, the participants were asked to make suggestions towards the improvement of nutritional habits in Greece in general and not only concerning undergraduate students.

The main suggestions were about the development of a formal food policy, the improvement of the current situation in State organisations like better cooperation, communication and controls, long term planning, improvement of personnel allocation. Also, they discussed restrictions on marketing, increase of social marketing initiatives, education and research methodology, adherence to the traditional Greek diet and better healthy food prices.

One of the main purposes of this thesis was to understand the role of a food policy for the improvement of nutritional habits in Greece. In the section about the reported weaknesses of the current situation, the participants revealed that there is no formal food policy in Greece; therefore, in their suggestions they included the need for food policy development and implementation. It is also very interesting that the participants used the terms nutritional policy, food policy and agricultural policy to refer to specific aspects of the policy about food.

There were four interviewees who unfolded the policy issue, a nutritionist, a ministry civil servant, a member of the food production trade association and a member of an

advisory committee. These four interviewees were also among the most competent participants to talk about this issue as their main responsibilities were to participate in policy development, implementation and advocacy.

The nutritionist used her own experience to support the need for a food policy. She said:

"I believe that everything is possible as long as there is realisation. The same happened to us (she means her work team)...at the beginning, when we were talking about healthy eating they looked at us as if we were nobodies and suddenly, a few years later, everyone wanted us to do something. They didn't even want to hear about nutritional policy, now they consider it a must. Therefore, I don't lose hope." *(interviewee C09)*

And she suggested that a food policy is very important and it should be long term in order to facilitate the development of stricter controls on food marketing and the better promotion of healthy foodstuffs. She reported that:

"There is a need for an enacted nutrition policy which will contain a bundle of measures, a structured long-term legislation. This should concern many agents like the ministry of health, of food, of education, of the economy, of development. There should be control of what is claimed by the food industry...and this could be redressed through a nutritional policy. Also, for example, food producers may not have money to promote their products, so there is a need for a nutritional policy to promote these specific products because they are good for our health." *(interviewee C09)*

The same need for food policy has been highlighted by an employee of a Ministry responsible for nutrition issues, who reported that there is no formal food policy, but there is great need to develop one in order to cover the current needs of the Greeks. He specifically said:

"The current initiatives are good but there is still a lot of effort needed in order to talk about a formal Greek food policy, but when it happens it is going to produce a lot of advantages. So it is vital to move along this way of creating a food policy based on the needs of Greek reality." *(interviewee S01)*

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Another advantage of a formal food policy, based on an interviewee's views, was that it could affect nutritional habits of the population. This could be through investments in the primary food production sector and through the nutritional orientation of food sales. In general, he agreed with the view that has been reflected previously by the nutritionist that the food policy should show which products must be promoted for the benefit of the consumers and the producers. Therefore, he said:

"Agricultural policy can influence the nutritional habits of the people but there is also a need for measures. This is a general issue that needs specialisation. It also needs policies for investments in the primary sector because nowadays we see an disinvestment of about 2.5% annually. We should also consider whether the policies about food sales are going to have a nutritional orientation...in this case we should, for example, promote PDO products. Therefore there is a need for policies and modern standards in the agricultural sector." **(interviewee B25)**

On the other hand, another interviewee was not optimistic concerning the development of a food policy in the future despite the fact that in his view this is what is missing to reverse the current situation. He blamed the State for this situation, blamed it for not organising future activities and failing to create long-term plans. He specifically said:

"The State should plan ahead what is going to be in high demand in the future and to promote these products. If the State promotes these products when the high demand has already appeared, then this is obvious to the producer as well, hence the role of the State is unnecessary. Greece has never had structured policy and I am sure that it will never have in the future a structured food policy, or any kind of policy, despite the fact that this is what is missing." **(interviewee C18)**

Despite the need for a far-reaching formal food policy, there were participants who focused on specific initiatives in order to remedy the weaknesses of the current system as they have been presented in the previous paragraph based on the interviewees' opinion. Two participants highlighted the need for cooperation between the responsible agents. One participant from a non-governmental organization mentioned the need for cooperation with professors and researchers from education

institutes as their knowledge is more updated and therefore they can make more accurate suggestions.

"It is very important to get information by agents from education institutes because they are well informed about the new developments and therefore they can inform us accurately. Moreover, all the agents and people occupied with nutrition must set the minimum common targets and try to achieve these goals together. From then on, each one of us independently can do anything else in order to achieve other specific goals." (interviewee C10)

The same need was reflected by another participant who also raised the issue of better coordination and division of responsibilities. She said:

"If the involved agents cooperated, things would be better in the nutrition sector. The relationships between the responsible services should be better in terms of the division of work and responsibilities. There is a need for better coordination." (interviewee S04)

Better division of responsibilities has also been recommended by another participant who said:

"They have to make clear who is doing what in order to avoid overlap." (interviewee S03)

The long-term initiatives and the need for planning have been proposed by two participants. The first one said that initiatives must be based on long-term plans otherwise there are no permanent results. She reported that:

"What we are doing must have continuity, or else it's a waste…in Greece there could have been many more things." (interviewee C08)

The second participant talked about the continuity and expansion of the programme of the non-governmental organization where she works and she highlighted the need for wide and regular implementation. She specifically reported:

"There is a great need for higher funding, better communication, and motivation so that the programme could be implemented in every school." (interviewee C12)

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The lack of personnel in specific departments or from specific scientific specialties has been raised in the paragraph about the reported weaknesses. Here, there are suggestions about the staffing of some departments of the State organisations.

A participant from a Ministry reported that there is a need for a department with specialised scientists on nutrition and public health issues in order to develop and implement action plans for the promotion of healthy eating. She reported that:

"There should be a National Public Health Council, so there should be something more permanent...I mean some people occupied only with the development and implementation of public health plans that would include nutritional issues. There should be a whole department inside the Ministry, specialised in nutritional and public health issues, and not only one person as it is now, that will exclusively work on the nutrition policy of the country." (interviewee S06)

Also, another interviewee from a State organization suggested that employees with know-how in the field of food and nutrition would increase the reliability of the State and its agents. She specifically suggested that:

"The accumulation of know-how in specific responsible agents would increase confidence towards the State and among the agents, because the employees in State organisations would know whom they should address in order to guide them correctly." (interviewee S04)

Another issue is the need for better controls and promotion of the control activities undertaken by the State in order to increase public trust towards State organisations. This was reflected by a participant from a Ministry who said:

"Concerning controls, we aim to create checklists in order to achieve harmonisation everywhere. But we must also emphasise communication in order to help Civil Society understand that the State does its job properly and is trustworthy. So it is important to cooperate with the media." (interviewee S03)

Furthermore, another suggestion that will simplify, harmonise and facilitate comparisons between countries and will also improve the initiatives and policies

developed for Greece was research. This view is also supported by Karamanos et al. (2002) and it was reflected by one participant who said:

"The problem is that there is no harmonisation in Europe concerning research methodology and this is what we are trying to achieve now." (interviewee S03)

Proposals about social marketing initiatives have been introduced in the previous paragraph on social marketing. In this section, the suggestions concerning communication and marketing will be presented. One interviewee suggested informing the producers in order to apply marketing techniques on their job by saying that:

"There is a need for marketing but not only. In order to achieve high market penetration we need to inform the producers about production and promotion methods and about the kind of products that are best to produce." (interviewee B25)

Another participant raised the issue of marketing limitations. She referred specifically to advertisements and package information in order not to mislead consumers. She said:

"Therefore, there should be someone to control advertisements so that food companies would be obliged to tell the truth about fat and calorie contents and create packages which will show these facts using bold letters and in a way familiar to the public in order to understand what is good and what is not. This is proper and ethical." (interviewee C11)

Moreover, another participant added that the State should also promote healthy eating in order to strike a balance between healthy and unhealthy foodstuffs and for the consumers to be exposed to the counter-argument and not only to the opinion of the food industry. This was reflected by a nutritionist who said:

"There must be advertisements by the State in order to balance the promotion of the food industry. Apart from which, there should also be availability of the suggested options, for example we can't promote extra virgin olive oil for heart problems while it is too expensive and unavailable to Civil Society." (interviewee C09)

Education is another issue, closer to the aims of this study, which focuses on undergraduate students. Concerning this matter there were two main views. There was one participant who supported the initiatives that are based on education and another who was against education and supported other kinds of actions.

The first based her preference of education on the fact that the environment inside education institutes is more supportive and easier to control. She said:

"If I had to choose I would set informing people in schools as a priority as there is a lot of time spent there and we can have access to both children and parents. This along with social marketing initiatives would be the best combination." (interviewee C11)

On the other hand, the interviewee who was against education about nutritional issues in schools suggested other initiatives, based on games, which are more appealing to children and said:

"I believe that there is no need to introduce a course in schools, I pity children, who have to learn so many things there. I believe that healthy eating must be promoted through games organised for example in municipalities during the weekends with the help of teachers, sports and cultural associations." (interviewee C09)

There was also one participant who was against the introduction of nutrition in the school curriculum but she found it inevitable that it would happen under the current situation. This participant said:

"I do not know if it is possible to introduce a lesson about nutrition in schools because after this everyone will demand a lesson like environmental protection, road safety etc. On the other hand, I find it very good to use the power of TV in order to promote social messages. But this is not enough. I realised it; I understood it and then what am I doing? We have to show them what they must do, not only what is healthy and what is not. So, I think, education is inevitable and must happen under these circumstances." (interviewee C14)

Finally the need to train teachers and parents in order to deliver correct messages to children and students was reflected by an interviewee who said:

"We have found out that teachers do not give the correct information to their students because they are not well informed. Therefore, we need to train teachers first. The same goes for parents. " (interviewee C10)

Also, the adoption of healthy eating habits could be achieved through the promotion of healthy alternatives, like natural sugar substitutes and through the resistance to fast-food movement and the adherence to traditional nutrition in the context of the slow-food movement (Slow Food Website). These proposals were supported by a food production trade association member who said:

"Our policy is for agriculture to turn to a nutrition model with respect to the environment by exploiting green energy in order for Greek agriculture to contribute to the reduction of the consequences of climate change and waste of resources. We need to exploit other plants, like stevia, a sweetening plant that has 100 times more sweetening substance than sugar without having negative effects on our health. We also need to resist fast-food through the slow-food movement, which is already expanding in Italy. In this movement, the way, the content and the process of nutrition is completely different to the process of fast-food and includes traditional products of good quality, promotes the Mediterranean diet and replaces imported products that offer no safety and quality guarantees. This is a very good development. In order to achieve this, we must provide motives to enterprises in order to produce pure and high-quality Greek traditional products. The less the State involvement, the better for the enterprises because State deficiency in structures works as an obstacle. " (interviewee B25)

Finally, the idea of interventions inside the workplace was another proposal embraced by the food industry representatives. This was also reflected by the interviewee from the big supermarket chain who stated:

"We want to do something for our employees to promote healthy eating with the support of a University, like for example body fat measurements and provision of healthy foodstuffs inside the workplace. " (interviewee B16)

The main worries about the improvement of the current situation were about the economic crisis of the country, its impact on nutritional habits and the adopted policies due to lack of funding. Specifically, people from non-governmental, non-

profit organisations are worried about their funding for health promotion initiatives. In this context, an interviewee suggested including these initiatives along with other actions in order to reduce their cost by promoting synergy. She suggested that:

"Probably because of the economic crisis there will be a reduction on funds for nutritional issues, therefore we should find other ways to keep promoting healthy eating, like, for example, make it part of the training of health promotion workers." (interviewee C15)

Also, another interviewee from the same sector was worried about the increase of unhealthy foodstuffs which are cheaper than the healthy options and in the context of the economic crisis along with wages reduction, people will turn to cheap alternatives promoted by the food industry. This participant reported that:

"During the economic crisis there is an increase of unhealthy foodstuffs consumption and the food industry is going to take advantage of this situation. So the State must intervene to discourage this trend." (interviewee C15)

But it is not only Civil Society that worries about the economic crisis. The food industry also takes into account the current crisis, which leads to profit reduction due to the drop of prices in order to increase the demand for their products. When an interviewee was asked to say what she would change in their current initiatives towards nutrition she replied that what comes first under these conditions is price reductions and not health promotion initiatives. She specifically said:

"If I had the power, I would not change anything from the current initiatives of our organisation because there is no funding. In this period of economic crisis, people expect to see more price reductions and offers, so the budget for these (health promotion initiatives) is very low." (interviewee B19)

Based on the problem of the economic crisis, the problem of high prices of healthy foods like fruits and vegetables has been pointed out by some participants. The need for investments in the primary sector and the stricter control of the big retailers were the main proposals to reduce the prices of the final product. This was reflected by a participant who said:

"An investment in the primary sector would result in the reduction of healthy products' prices. But high prices are related also to the current situation in the supermarkets that overprice their products. Organic products are expensive because of their high production costs but enough to justify the exorbitant selling prices."
(interviewee B25)

Also, the way of production, which is unorganised because the State has no plans and policies, is another matter that should change through the creation of a responsible agent in charge of the modernisation of the food production processes and the price reductions. This was reflected by an interviewee who said:

"The way of production has an impact on the consumers in terms of high prices. This would never happen if there was a responsible agent to put them through a process of modernisation and cost reduction. But there are only private initiatives. There must be comprehensive thinking about how the product will be produced and how it will arrive at the final consumer in high quality and at the lowest possible cost."
(interviewee C18)

As a way to support Greek economy and production, some interviewees supported the commitment to Greek products. This would create more profits for Greek organisations and producers and it would lead to development and synchronization of the current processes and lower the impact of the crisis. This was reflected by a participant who said:

"This is an opportunity for all of us to help our country and turn to the Greek products. Unfortunately, nowadays, in our country 70-80% of the foodstuffs that we consume are imported. So, everyone should adopt a Greek consumer consciousness and among the criteria that we have in order to choose a product, that is price and quality, let's include whether the product is Greek. When we visit the supermarkets, let's look carefully at the place of origin of the product. The same goes for the fruit and vegetable markets...let's demand from the sellers to tell us the place of production of these products." *(interviewee B19)*

Finally, a very important statement was the connection of younger generations to the traditions of the country through their family, school, the mass media and other agents. This was reflected by a participant who said:

"Younger generations that don't have taste experiences from specific foods and processes could never adhere to healthy eating. But if they have had these experiences they could adopt healthy nutritional habits in the future even if they were forced to adopt an unhealthy lifestyle sometime in their life." **(interviewee C09)**

The same interviewee sounded optimistic about tradition adherence in order to adopt healthy eating habits. She specifically said:

"The current situation is reversible, because everyone, more or less, has experienced the traditional nutrition of our country. And in recent years, I can see that we have started to honour our tradition because in the past it was a shame to drink ouzo or raki, it was proof that you don't belong to the desirable socio-economic rank. To honour your tradition does not mean that you are not evolved because evolution is based on tradition. I am optimistic that the situation can improve." **(interviewee C09)**

8.8 Conclusion

This chapter presented the findings from the interviews with key stakeholders from the State, Civil Society and the Food Supply Chain, in order to answer to research questions one, four and five:

- How could social marketing contribute to a food policy to improve nutritional habits in Greece?

- What is and should be the role of each sector (State, Food Chain Supply, Civil Society) for the improvement of people's nutritional habits? What are/should be the relationships between the actors of each sector?

- What kind of initiatives should a future food policy for the improvement of nutritional habits of Greeks include?

The core finding is that many participants reported that there is no integrated and organised food policy in Greece. Also, the findings showed the role of these three sectors in shaping Greek food policy. The main responsible body is the State with the respective Ministries and food policy is also affected by the trade associations of the Food Supply Chain actors and by some NGOs, consumer unions and scientific associations. An interview revealed that the main power is in the big retailers' hand,

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while the rest of the interviewees did not clearly answer this question. They mainly insisted that State organisations do not work properly.

This governmental inefficiency has led to many weaknesses in the current food system and policy. The interviews with key stakeholders from the Greek Food System identified that there are a lot of weaknesses that should be eliminated in order to promote healthy eating and offer safe and adequate food to the population and eventually to the undergraduate students of the country.

The main problem is the function and structure of State organisations, where there is lack of specialised staff, lack of communication, coordination and plenty of overlap and sometimes these factors lead to tension between the responsible bodies.

Also, non-governmental agents complained about the lack of support from the State and many interviewees from different organisations reported the lack of governmental controls and failure to develop, implement and assess long-term, well-organised initiatives. For example, the National Action Plan for Healthy Nutrition and Eating Disorders (see p. 102) has never been implemented.

For these problems, the Greek culture and inefficient politicians were blamed. The question is if this is a matter of culture what could change and in what way.

On the other hand there are also strengths that have been highlighted by the participants. These have been mainly detected in the Food Supply Chain where the food industry promotes healthy eating in the context of Corporate Social Responsibility and produces healthier foodstuffs. Moreover, Civil Society organisations have been praised for their nutrition-related initiatives to promote citizens health. Other advantages had to do with the people and the country. Capable Greek scientists and the climate of the country raise expectations for a better future.

The participants reported that for specific issues they cooperate with organisations from other sectors. Trade associations of the food business sector cooperate with the State in order to promote the interests of their members, non-profit scientific associations cooperate with education institutes, with scientists and with the responsible Ministries in order to develop, promote and fund their initiatives.

The cooperation between State organisations and the food industry is not very extensive and it takes mostly the form of advice by the State. Therefore, there is a need to strengthen this relationship in order to promote appropriate policies and initiatives to improve the nutritional habits of the population.

On the other hand, it has been revealed that there is informal competition between on the one hand the State and Civil Society organisations and on the other the Food Supply Chain, especially the food industry and big retailers concerning the protection of the consumer.

Another important issue was the cooperation of Civil Society organisations who try to promote healthy eating with actors from the Food Supply Chain who mainly produce unhealthy products. The problem is that this practice may lead the consumers to confusion about what is healthy or not and especially children, who are not mature enough to make such distinctions.

Concerning social marketing and the role that it should play in shaping Greek food policy, the participants were for its philosophy and the main worries were about the organisation that would undertake this effort and its funding. The participation of the food industry in a social marketing programme has been rejected by the other two sectors that welcome private funding but from different, not nutrition-related organisations.

Despite the condemnation of the Food Supply Chain agents, participants agreed that Civil Society and the Food Supply Chain agents work more effectively than the State. Nevertheless, there are people who believe that the State should play the major role and others who claim that because of lack of resources and managerial skills, the support of the private sector is inevitable.

Finally, taking action to eliminate the weaknesses and improve the State sector was the main proposal of the participants along with the development of a formal food policy that could protect and improve the population's health.

Chapter 9: Discussion and Conclusions

9.1 Introduction

This chapter brings together a discussion of the findings from the literature review, the focus groups with undergraduate students, the interviews with key stakeholders and the discussion of the interviews in an iterative process with the literature.

The research began by discussing the evolution of Greek nutritional habits, the Greek food system and the current problems of the nutrition transition that Greece faces, in order to understand the current nutritional problem. Moreover, the role of social marketing in dealing with nutritional issues and its value for Greek society were analysed as well as the role of food policy in modern societies and the main components of the Greek food policy in order to understand the current initiatives and policies around nutrition. The research questions emanated from this process and attempted to answer these questions with the use of qualitative methods. Nine focus groups were conducted with undergraduate students and thirty-two interviews with key stakeholders from four main domains: education institutes, the State, Civil Society and the Food Supply Chain.

Through findings from these interviewees and groups, conclusions have been drawn and presented concerning the food choices and eating behaviour that are influencing Greeks. This has focussed on three broad areas:

1. the role of a national food and nutritional policy in the promotion of healthy eating habits
2. the emerging changes for effective policy development and finally
3. the role of downstream and upstream social marketing in a food policy context.

In this context, this chapter presents the contribution of this research to the body of knowledge about the Greek and the wider food policy and the role of social marketing that derived from the findings.

The first contribution is in the area of influence on people's behaviour towards healthy eating and the contribution that social marketing can have in helping people change their eating habits and also in the actual choice that Greek people have when

they select their food and shape their nutritional habits. So, the failure of the theoretical behavioural models discussed in Section 3.4 to explain healthy eating behaviour and the research contribution to the "social nutrition" concept are discussed.

The second contribution is about the implications of social marketing theory to help Greek Undergraduate Students change their nutritional habits and the implications for downstream and upstream initiatives.

The third contribution is about the tensions in the preferences of people towards soft rather than hard policies and the influence that this could have when shaping a national food policy.

The fourth major contribution discusses the main problems that exist in the Greek food system including the lack of political concern for food policy, the absence of strong political leadership to direct the country, organise the State and establish the right policies. This tension is investigated by the analysis of the situation in the Greek food system (S.W.O.T. Analysis) by finding the strengths and the weaknesses of the current system and the opportunities and threats that it is likely to face in the future. Moreover, lack of political leadership becomes apparent through the analysis of the relationships among the food system actors and the current situation of the Greek food policy in accordance with the international and European directives.

The fifth contribution has to do with the criticism of the triangle food policy model (see Figure 4.1), the dimensions of the Greek food policy in terms of food safety and hygiene, nutrition and a sustainable food supply chain, its current and potentially desirable status towards these three dimensions, the deviation of the Greek Food Policy from the European and global patterns and the agents that could move the Greek food policy forward.

Finally, based on the findings, there is a presentation of the implications for the Greek food policy and the role that social marketing can play in developing effective food policies.

Hence, this chapter suggests that there should be a policy focus as well as health promotion actions in order to modify the current situation and prevent the occurrence

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of NCDs in order to improve the quality of people's lives by increasing healthy-life years (Oster et al., 1999). The need for policy was raised by the interviewees from all sectors (see sections 8.4 and 8.7). At the same time, the adopted strategies should be sustainable and in accordance with the culture and lifestyle of each specific country and targeted to the different population groups, always in the context of a wider health policy (WHO/Europe, 2006a).

9.2 The Determinants of Healthy Eating Behaviour and the Concept of Choice

The findings from the literature review of nutrition in Greece (Chapter 2) showed that Greek people consume a lot of unhealthy foods, opt for fast-foods and take-aways and therefore face obesity as well as NCD-related health problems. The trend towards unhealthy foods in this group of young undergraduate students was also revealed through the focus groups discussions where it was reported that they prefer foods that are easy to find and prepare (see section 6.4 & 6.8), and these are mainly fast foods, and they do not consume lots of fruits and vegetables because they are not readily available when they want them and they need time to prepare them (see section 6.4). These findings were all at odds with the perceptions of the Mediterranean Diet.

Literature review findings (Jackson, 2005, Adams and White, 2005) imply that food consumption is a complex matter which is not only based on the model: knowledge → attitudes → behaviour and this was also highlighted by the other theories like the Social-ecological Model of Change (Gregson, 2001), Social Cognitive Theory (Bandura, 2001) and the Health Belief Model (Becker, 1974) that try to explain individual behaviour by taking into consideration a variety of factors (see Section 3.4). Undergraduate students, for example, may know that it is better to take a home-made snack and they are willing to do so (attitude) but they do not always do it at the end. This is because people's behaviour is affected by many factors beyond knowledge and choice and these factors generate the social approach to nutrition as it has been discussed in Section 2.15. At this point, methods that are not peculiar to social marketing were used to help shed light on the social determinants of food intake.

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Therefore, based on the findings about the participants' reported barriers and motives in their effort to adopt a healthy diet, it was revealed that there is a distinction between the barriers that work as internal competitors to healthy nutritional habits and also as external ones. Internal are those factors that steam from the individuals because of their experiences, habits and culture, while external are these factors that cannot be affected by the individual because these are the result of the current food system (Hastings, 2007). Nevertheless, people have a choice even against these structural odds. These competitors are shown in Table 9.1.

Table 9.1: Greek Undergraduate Students Perceived Competitors of Healthy Eating

External competitors (cannot easily be affected by the target audience)
Availability of unhealthy food - existence of fast food outlets in many places
Heavy promotion (marketing) of unhealthy foodstuffs
Foods in packages and with preservatives can be stored for a long time (provide convenience)
Low prices of unhealthy foodstuffs
Lack of time to have a proper meal due to unstable module hours
Non- supportive environment inside the education institutes
Internal competitors (can be influenced by the target audience)
Taste and food preferences
Unwillingness to prepare a healthy meal
Mood, greed and stress (psychological factors)
Refusal to force myself

Source: Author

Table 9.1 shows that it is not just lack of knowledge that drives eating behaviour. For Greek undergraduate students, as revealed during the focus groups, their eating choices are based on many factors. Knowledge about healthy food consumption benefits and dangers of an unhealthy diet that could have led to a healthy eating behaviour was influenced by other factors that undergraduate students revealed. These factors are presented in the following paragraphs.

Lack of time and excessive effort needed for food preparation was the main reported reason why this group of people resorted to fast-food and ready-to-eat meals. This was also reflected through the literature review where the current trends, which can lead to unhealthy nutritional habits, included lack of time and knowledge due to weakened family bonds (Yannakoulia et al., 2003, Papadaki et al., 2007, INKA, 2008). Lack of cooking skills was also reported by the participants and this trend finding is concurrent with the study by Stead et al. (2004). So, the attenuation of the family bonds has lead younger generations away from learning cooking skills. This lack of cooking skills leads people to more processed foods and easy-to-cook solutions that may be unhealthy.

The taste experiences that people accumulate throughout their lives, and especially at younger ages, are among the main factors that shape people's preferences. Taste, is another factor that forces Greek undergraduates to avoid healthy foodstuffs. Some participants have reported that junk food tastes better and they will not force themselves to limit the pleasure they get from food. So, it can be concluded that it is very difficult to reach these people with the use of "soft" policy measures like education because they are not willing to change despite the fact that they are aware of the negative consequences of unhealthy eating, because they prefer convenience to health. The issue is also about strong tastes of fast foods which contain lots of sugar and fat and this makes them more desirable to people (Drewnowski, 1997). To alter these perceptions, there are plenty of recipes where healthy food, like vegetables and fruits are used to create healthy and tasty meals. There are also social marketing programmes, like the New Zealand Feeding our Families (http://www.feedingourfamilies.org.nz/) and the Safefood campaigns in Ireland (http://www.safefood.eu/en/Consumer/) that provide healthy recipes and tips for their target audiences in their websites. By following these tips and recipes people could have new taste experiences and they could probably alter their preferences towards healthy foods.

In Greece, food is very strongly linked to socialisation (Karakosta, 2009). In this context, food is very strongly linked to the culture of the people and to special occasions. In the second chapter, the meaning of family and its contribution to the development of the nutritional habits of its members was discussed (Yannakoulia et

al., 2003). This culture is handed down to the younger generations through the family and this was raised by the focus groups where participants reported that they eat the same food as their parents when they live with them and that some of them (two participants) fast on Wednesdays and Fridays by not consuming meat as the orthodox church suggests (see section 6.4). This finding agrees with culture and tradition as factors that can affect people's choices as presented by Lang et al. (2009) and Stead et al. (2004).

The trend of unhealthy eating is not so prevalent among those participants who still live with their families because, as they have reported, the family take care of their nutrition by cooking and shopping for them (see section 6.4). Also, people who live away from their family reported that they do not consume enough quantities of healthy foodstuffs because they do not have anyone to see to it. Representative of this situation is the quote of a woman in the second focus group who said *"In order to have a balanced diet, you must have someone to prepare the food for you."* **(participant 2.2)**. This is a general truth for the Greeks, where parents and especially mothers are over-protective and the primary carer of the family even when the child is old enough to leave the family. This trend in general has also been raised in the Greek literature through the study of Papadaki et al. (2007), the wider literature (Sharma et al., 2009) and in social marketing interventions that target families in order to improve the health of the children (Fitzgibbon et al., 2002). Moreover, Murcott (1995) has raised the issue of family members (mother or wife) who prepare the food for the whole family, creating coherence between the nutritional habits of the members whether they like some foods or not.

Culture can be transferred and behaviours influenced and changed outside family settings in areas such as schools, where children can have the experience of unhealthy foodstuffs provided by the canteens. Even if the families protect the children from unhealthy taste experiences, the current food system allows foodstuffs full of fat and sugar to enter the education institute gates and be made available at low cost in the institutes' canteens as reported by focus groups participants and interviewees. On the other hand, the family can affect eating habits and can also encourage undergraduates to take food from home to consume at the education institute and avoid fast food. This alternative of consuming home-made food instead of buying something ready-to-eat

can very often also be cheaper. The influence of the settings where a person consumes food on his/her choice of healthy or unhealthy eating has been emphasised by the WHO (Tsouros et al., 1998) and the recent Marmot review (Marmot, 2010). Nevertheless, Dobson et al, (2000) and Caraher and Lang (1995) support that these interventions can have only a short-term effect on people's behaviour, therefore, other initiatives should be adopted to support long-term adoption of healthy eating behaviours.

Peer pressure, especially from friends and fellow-students is another important factor of food choice (National Institute for Health and Clinical Excellence, 2007, Tapp and Warren, 2010, House of Lords Science and Technology Select Committee, 2011). *"When I am with my friends I will eat what they eat. I won't become a problem"* (participant 1.1), says an undergraduate student showing the need of people to belong to a group and share habits and experiences, a fact which cannot be overlooked by the analysis of the social fold of nutrition. The problem here is that in the case of undergraduate students, group dynamics of friends when they go out influence the consumption of fast-foods like souvlaki, which is a traditional fast-food of Greek society (Matalas and Yannakoulia, 2000).

Knowledge is not the only factor that affects people's behaviour, but it is one of the factors that encourage people to understand the positive consequences of healthy eating and learn how to prepare healthy meals (National Institute for Health and Clinical Excellence, 2007). Nevertheless, the right knowledge is sometimes hard to acquire in order to lead people to the correct healthy choices as also highlighted by Lambert et al. (2002). Undergraduate students reported that they often receive contradictory messages about healthy eating and they do not know who to trust and what to follow and express a desire for the State to introduce standards and protect them (see Section 6.12). The research findings showed that, just like in other countries, food marketing is predominant in Greece too and this is also supported by other studies which reveal that unhealthy food expenditure on advertising is much higher than that of healthy options (Dibb and Harris, 1996, Matthews et al., 2005, Batrinou and Kanellou, 2009). On the other hand, in 2010, the available budget of the Ministry of Health and Social Solidarity on any kind of advertising, publications and TV and radio programmes about health in general was only €50,000 (Hellenic

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Ministry of Economy and Finance, 2010). This bombardment by deceptive messages from different sources and the power of advertisement were also raised in Chapter 2 (Yannakoulia et al. 2004) and in the wider literature (Hawkes, 2007, Hastings et al., 2003).

Lack of healthy alternatives was also a very important factor for those who have the knowledge and want to consume healthy foodstuffs during the day. The findings of the research showed a contradiction concerning the provision of healthy alternatives inside the education institutes. Law 2286/95 about the operation of restaurants inside Universities and TEIs obliging them to provide healthy meals and according to the interviewees from Universities and TEIs, the restaurants inside these education institutes provide healthy meals for the students at very good prices (see section 6.10). On the other hand, participants of focus groups reported that they do not have healthy alternatives and others said that there are healthy alternatives inside Universities and TEIs restaurants but they do not prefer them because "it is not in" (meaning it is not fashionable) to have healthy foodstuffs, or because they do not have time to consume a proper healthy meal provided by the restaurants of the education institute (see section 6.10). This difference in participant views does not apply to the education institutes' canteens as both the interviewees from education institutes and undergraduate students agreed that the food in the canteens does not include many healthy alternatives because food provision is based on profit.

"We are enterprises with a view to profit, so the provided alternatives are based on profit and only if students ask for healthy foodstuffs can these be included in the product list." (interviewee E32).

The influence that food availability can have on food choice is in agreement with the international literature (Carroll et al., 2000, Stead et al., 2004, Sharma et al., 2009, House of Lords Science and Technology Select Committee, 2011).

The issue of prices, especially for organic products was also raised by many participants who want to adhere to healthy eating habits and due to the economic crisis in Greece this is difficult. Social inequalities exist in many groups within Greek society, like the immigrants, the poor and the "new poor", i.e. the portion of the population that had their income cut or lost their jobs due to the financial crisis. The

issue of food prices, as an important factor that can affect choice, has also been raised by Lang et al. (2009) and the WHO (WHO/Europe, 2004). Low income communities' access to food, lack of cooking skills and lack of proper equipment and settings to cook healthy meals that lead to unhealthy food choices were also raised by other studies (Lang and Caraher, 2001, Stead et al., 2004).

This research revealed that healthy eating behaviour can be affected by social factors like peer pressure and the culture transferred by the family and the school, availability of healthy foodstuffs at reasonable prices that the citizens could afford, and existence of unhealthy food marketing. In view of these factors, there is a need for food policy intervention to promote healthy eating supportive environments. This confirms what other studies about adults (Steptoe et al., 1995, Booth et al., 2001, Pollard et al., 2002), adolescents (Neumark-Sztainer et al., 1999) and University students (Wharf Higgins et al., 2010) have suggested, i.e. that eating behaviour is affected by multiple factors, individual (taste, psychology) as well as environmental (family, peers, culture, marketing, food system, policy).

So, from this research, the dynamic model presented in Figure 9.1 is derived, which shows that the choice of a more or less healthy eating behaviour can vary and can be influenced by a variety of factors that can work as internal or external competitors to a healthy eating behaviour (see also Table 9.1). Food and public health policy and social marketing work, or should work, in order to fill the gap between more and less healthy eating choices and in order to help people adopt healthier eating habits. On the other hand, the food industry promotes less healthy eating behaviours. This research revealed that Greece is closer to the right side of the continuum between more and less healthy eating behaviours.

Figure 9.1: Factors that Affect the Decision about Eating Behaviour among Undergraduate Students in Greece

Food & Public Health Policy
& Social Marketing   Food Industry

More Healthy Eating Behaviour ←————————————→ Less Healthy Eating Behaviour

Decision

Knowledge	Social factors	Marketing	Availability	Personal Factors	Capabilities
- Knowledge about healthy eating benefits - Knowledge about unhealthy eating consequences - Messages about food in general	- Peer pressure & social associations - Occasion (i.e. celebration, holidays, exams) - Culture (transferred by school & family)	- Food marketing in general - Social marketing and health promotion initiatives to promote healthy eating habits	- Availability of healthy foodstuffs - Prices of foodstuffs and available income	- Preferences of specific foodstuffs (subjective issue) - Taste & taste experiences - Mood of the individual	- Time & effort needed - Skills to prepare healthy meals and snacks

External Competitors of
Healthy Eating

Internal Competitors of
Healthy Eating

Source: Author

All these factors that affect the undergraduate students' eating decisions correspond to what the literature suggests about the tension that exists between knowledge, attitudes and beliefs (Caraher and Carr-Hill, 2007, Fishbein, 2008). Focus groups participants associated fast-foods with joy and healthy foods with family and association with relatives rather than friends. This situation may seem boring in the eyes of young people who prefer to have something unhealthy and be with friends away from the family that is associated with healthy foods. These reports can add to the current knowledge from studies that show similar attitudes for children and adolescents all over the world (Contento et al., 2006). It is not always a matter of health beliefs and

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knowledge, it is also about social relationships and beliefs about friendship and bonds with a group, as they link unhealthy food with pleasure, friends and enjoyment (Shepherd et al., 2006).

In Section 3.4, the main models of behaviour change have been discussed. Despite doubts about their competence to show the complex grid that surrounds and affects eating behaviours (Adams and White, 2005) there is still evidence of their competence to design and implement healthy eating interventions (Lefebvre, 2001). In Table 9.2, the findings from this research concerning what affects people's eating behaviour (Figure 9.1 and Table 9.1) are being compared with the suggestions of the main behavioural theory models.

Table 9.2: Influencers of Undergraduate Students Eating Behaviour in Greece and Theoretical Models of Behaviour

Findings from the research...	Theoretical Models of Behaviour											
	Expectancy Value (EV) Theory	Needs Opportunities Abilities (NOA) Model	Social Cognitive Theory	AIDA	Social-ecological Model of Change	Theory of Interpersonal Behaviour	Health Belief Model	Theory of Planned Behaviour	Value Action Gap	Consumer Preference Theory	Theory of 'judgement heuristics'	Risk as Feelings Model
Fast foods are everywhere		X	X		X							
Unhealthy food marketing		X	X		X		X	X				
Convenience of unhealthy foods (easy to store)		X			X				X			
Availability of foodstuffs		X			X				X		X	
Price of foodstuffs		X	X		X	X			X	X		
Lack of time		X			X				X		X	
Culture	X	X	X		X	X		X				
Taste and preferences		X	X		X	X			X	X		
Feelings, inertia and mood (psychological factors)					X				X		X inertia	X
Peer pressure (what others do and think)	X	X	X		X	X		X				
Occasion			X		X							
Knowledge	X	X		X	X		X	X	X			
Messages about food	X	X			X		X					
Skills to prepare healthy food		X			X			X				
Lack of interest									X			

Source: Author

Based on Table 9.2, different theoretical models have different things to say about different attitudes. So, we understand that no one theoretical model can comprehensively help to explain the healthy eating behaviour of Greeks. The models

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that best describe all these factors are the Social-ecological Model of Change (Dahlgren and Whitehead, 1991) and the Needs Opportunities Abilities (NOA) Model (Vlek et al., 1997 in Darnton, 2008), which are societal theoretical models and not purely psychological. Nevertheless, these models fail to include the dynamics of all these factors that can affect people's behaviour and remain static having always the individual at the centre of everything; therefore this is their main weakness and raises the need for more dynamic models.

This research suggests what also Darnton (2008) says, that these theoretical models can only constitute a guide to help understand people's behaviour but they cannot provide a specific context about the specific influencers and about the extent of the influence that each factor can have. Therefore, there is a need to understand the different factors that affect the behaviour of different people and this can only happen through specific research on different segments of the target population (Hastings, 2007). This is what social marketing theory can contribute to the attempt of understanding people's choices and behaviours (Lefebvre, 2011).

This research also suggests that change of eating behaviour and the shift from an unhealthy diet to a healthier one is affected by many factors and this leads to the conclusion that the theoretical behaviour models focused on the individual cannot be used to explain the forces that lead people, who know about healthy eating benefits and unhealthy eating bad consequences, to consume unhealthy foodstuffs. The failure of these theoretical models to explain people's choices has also been discussed by Lang et al. (2009). This is also supported by Thaler and Sunstein (2008, p. 3) who discuss the need for the State to provide a "choice architecture" in a way that it will not deprive citizens of free-will but it will help them make the right choices for their health as there are many forces (like the food industry) that try to influence consumers choice.

Another issue that crops up from the findings is that eating habits are often a matter of limited choice.

In the literature there are practices which focus on consumer choice and embrace their right to choose what to consume by promoting informed choice. On the other hand, there are techniques aiming to change people's behaviour (choice editing) without

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making them aware of it but this raises ethical issues such as the right of consumers to choose what they want to eat (Thaler and Sunstein, 2008). These techniques may include portion reduction, fast-food outlets closure and all these practices that force the consumer to choose only healthy options because there are no unhealthy alternatives, or are difficult to find (Lang et al., 2009). Moreover, the WHO/Europe (2004, p.12) model about influences on food choice suggests that consumed foodstuffs are a resultant of the food that the consumer can buy due to their knowledge, food availability, their access to specific stores and their available income, of personal preferences and family habits and of socio-economic factors and influences of the wider environment like agricultural issues, Food Supply Chain actors power and tensions and the mass media.

The literature review (Alvarez, 2003, Lang and Heasman, 2004, ICAP, 2008b) and this research showed that it is difficult to talk about unlimited choice. The "healthy" alternatives are rare when compared with unhealthy foodstuffs, prices of healthy options are high, food marketing is predominant, so the consumers are trapped between fast-food outlets when they are looking for a healthy alternative on-the-go and ready to eat meals-full of salt and fat- when trying to buy something from the supermarket to cook fast and easily at home. Therefore, this situation undermines the notion of unlimited choice (Gabriel and Lang, 1995).

So, the issue raised here is whether there is real choice or restricted choice between unhealthy and less unhealthy foodstuffs and this question has also been raised by food policy thinkers (Lang et al., 2009).

During the focus groups, agricultural accountability was also raised by some participants who said that they cannot be sure if fruits and vegetables are healthy as there are a lot of chemicals in them and also organic products, which are perceived as healthy, are very expensive and in Greece they cannot be sure if they are organic because they do not trust the State and the inspections made by its responsible bodies (see section 6.11).

People who work in education institutes also highlighted the current situation where healthy food options are limited and mainly exist in the restaurants of Universities and TEI's and not in the canteens of the education institutes (see Chapter 7). So, there are

healthy alternatives inside Universities and TEI restaurants but they are not well promoted to the students, like the competitive food outlets would have done by using marketing techniques.

Therefore, we can see that in Greece, options are limited. This was also reflected by the reported lack of healthy alternatives inside and around the education institutes (see Section 6.10) and also through the situation in school canteens where the law is hardly implemented as reported by participants in focus groups (see Section 6.11), through publications in Greek newspapers (Apogevmatini, 2010) and through the comments of the interviewees (see section 7.3).

"In Greece, children don't eat [meals] at school so there has been no emphasis on their nutrition. In school canteens, the existing regulation is not implemented and is not controlled and the foodstuffs provided there be assumed healthy. The nutritional issue is political in terms of foodstuffs availability in canteens and their promotion."
(interviewee C11).

So, here there is a lack of choice basically due to the lack of available healthy options and in some cases, where healthy options exist, due to lack of proper information and prejudices of the students. The limited choice due to lack of information has also been raised by Lang et al., (2009), the UK National Institute for Health and Clinical Excellence (2007) and Knowles et al. (2007). This is an issue that should involve policy makers and responsible agents in the education institutes and lead them to adopt promotional strategies that could encourage students to consume these products.

So, based on the conceptual model of Lang et al. (2009, p.239) about choice that could vary from unbridled to restricted, this thesis shows that Greek undergraduate students have choices, not unbridled but limited, because they do not have enough money, they are not very well informed about the alternatives and their pros and cons and also they are affected by the choice editing of the food industry and retailers through their marketing policies.

This can extend to the wider Greek population, as the wider environment in Greece is the same for every citizen. Also, it is very important that because of the economic recession in Greece, more people are going to lose their buying power hence their variety of choices. Therefore, this thesis suggests that policy should help create

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supportive environments for the vulnerable citizens in order to increase their access to information and to a variety of healthy foodstuffs that they could afford. This is also supported by Lang et al. (2009) who say that the citizens of lower incomes have fewer choices, less access to information and are more likely to be manipulated by the choice editing techniques of the food industry.

As highlighted in Chapter 2, Greece is going through a nutrition transition based on Popkin's model (Popkin, 2006) when around the 80s it developed from a peasant society to a capitalistic country (Yannakoulia et al., 2003). At that point, the nutrition transition model of Popkin could explain the change in the eating habits of the Greek population, who adopted western nutritional patterns (Kafatos et al., 2000, Aristidis Daskalopoulos Foundation, 2006, Hassapidou et al., 2006), and nowadays have high rates of diet-related diseases (OECD, 2008). So this model can help explain these transitions in the developed countries (Caraher and Coveney, 2004). On the other hand, Greece, like other OECD countries that now face economic recession, is moving from a wealthy, developed country to a society that starts facing poverty and unemployment with its population trapped in the big cities, waiting for an office job and yet unwilling to return to the land. Therefore, the nutrition transition model of Popkin fails to explain the current situation in Greece and needs to be re-designed to embrace the nutritional and nutrition-related health problems that the countries affected by a financial crisis would face in the future.

Social marketing, depending on how it is constructed, can have an impact on knowledge increase, skills improvement and marketing initiatives to promote healthy eating. These factors are also competent to create the conditions of a healthy eating supportive environment and help the State to become a "choice architecture" and facilitate the citizens to make the right choices for their own benefit based on the nudge theory of Thaler and Sunstein (2008). Finally, eating behaviour can be influenced by a synergy of policy and social marketing, as it has also proposed recently by the UK House of Lords Science and Technology Select Committee (2011) that suggested "nudge" techniques as well as fiscal measures for complicated behaviours like eating.

Food policy could also include all these aspects that can affect people's behaviour and ensure that the environment would support healthy choices. But, in order to achieve

this, there is a need for further research through the tools provided by social marketing like formative research to reveal populations' preferences, segmentation and targeting of the population based on their preferences and pre-testing of the proposed actions with people representative of the target population (NSMC, 2006, Hertzog and Williams, 2007). Social, cultural and behavioural characteristics are important for food policy (Lang et al., 2009). Therefore, this research suggests that Greek food policy should focus on culture changes and should take into consideration the factors which have been revealed that affect consumers' eating behaviour through the techniques that social marketing provides.

Therefore, this research suggests that food policy is very important in order to create supportive environments by enforcing the context and the conditions that would lead to behavioural change. In this food policy context, social marketing can have an impact on behavioural change but not in isolation. All the above factors should be taken into consideration and for this purpose; social marketing can have an important role, as will be discussed in the following section.

This research questions those models of behaviour change that only focus on the psychology of the individual, updates the WHO-Europe model of food choice by adding the social associations with peers and friends and presents the factors that affect the eating choices and behaviour in Greece.

9.3 Social Nutrition in the light of the research findings

The thesis findings are a reminder that any attempt to change the way Greeks eat must take account of how nutrition is embedded in social meanings. In this sense, the findings confirm what Lang, Barling and Caraher wrote about the concept of "social nutrition" (Lang et al., 2009). They proposed that nutrition was no longer, if it ever was, a coherent and unified science, rather, nutrition exists in three broad intellectual traditions; life sciences, environmental and social sciences. The present inquiry firmly sits within the social nutrition perspective, arguing that Greek eating is meshed in complex social understandings and cultural assumptions. Greek food and eating can only be addressed if that perspective is central. It remains to be seen – by other future studies – how this social nutrition perspective can be linked to the environmental tradition of nutrition and the current dominant life sciences perspective. Pending such

future research, for now, the social nutrition perspective is confirmed as key to any version of social marketing. Social nutrition was introduced in this thesis earlier in the literature review. A major conclusion therefore is that Lang et al.'s (2009) concept is useful theoretically. The findings confirm that social factors affect eating habits. Indeed the social marketing approach makes little sense without highlighting cultural understandings. This point is elaborated in a more recent publication (Rayner & Lang, 2012) where the writers argue that the long historical process of cultural change is fundamental to any 21st century understanding of public health. The social context of eating is not just immediate – the room, the atmosphere, the lighting – but also the historical and 'psychological' legacy of the past, via parents, social class, country and economic development. There is no distinction, argue Rayner and Lang (2012), between the 'immediate' and the 'distant' factors of food culture. We are both our history and our present. These cultural dynamics have a considerable impact on shaping the conditions for individual and collective health as well as on the public health in terms of nutrition-related diseases.

Lang et al. (2009), in their detailed account of what they mean by social nutrition, propose that nutrition and its problems are essentially framed by socio-cultural factors. In their Table 4.1 (Lang et al., 2009, p. 117-118), they point out the distinctions between social nutrition and other traditions and major perspectives in public health nutrition. The key phrases they use – such ' social goals', 'embedding nutrition within society, living and culture', and 'reshape culture and economy' – all suggest possible resonance with what has been researched in this present study. Indeed, they make one overt reference within their typology of social nutrition to marketing, but this is categorised under "Industrial Appeal". The present study has explored whether social marketing broadens the appeal beyond industry to State interests and the public interest of Civil Society.

So, based on Lang et al. (2009), the notion of social nutrition is multifaceted and includes attempts of socialisation by the citizens as well as attempts to influence nutritional habits by all the food system's key stakeholders. In this context, the results of this research add the following to the current knowledge about social nutrition:

The Greek State makes no effort to understand the social determinants of people's eating habits and it is noteworthy that there is little concern by the Greek government

to establish food security and the economic recession could consequently worsen the current situation. This finding also affirms the currently poor state appeal revealed by Lang et al. (2009). Also, as revealed through the literature review (chapters 2-4), there are not many studies in Greece shedding light on the social determinants of Greek nutritional habits, and, as stated by Civil Society interviewees (see section 8.2.2), lack of funding is one of the main constraints to the undertaking of such researches. This is consistent with the findings of Lang et al. (2009, p. 118) about the state and research/scientist appeal of the social nutrition concept. Moreover, based on the research findings, Boyle (2004) is right and the case of Greece also shows that the main focus on social nutrition comes from the food and advertising industry, which tries to produce and promote those foods that increase their profits.

On the other hand, consumers, and in this case this can be reflected by focus groups participants and Civil Society interviewees, show interest in the social aspects of their nutrition in terms of improving their diets in order to promote their societal profile (see Table 6.2), but at the same time they recognise the societal influences that force them to eat unhealthily (see Table 6.4). Civil society movements, on the other hand, make efforts to highlight these social dynamics (see Section 8.2) but again the State's lack of support creates big obstacles to the effort of eliminating the societal factors that negatively affect Greek nutritional habits.

The research findings confirm that Lang et al. (2009, p. 244) were correct to stress that an effective and integrated modern food policy must take account of the social dimension of food. Specifically, social dynamics were revealed in different ways by both focus groups participants and key interviewees. In this respect, the findings suggest that at different levels -political, structural, and citizenship -socially wise effort is needed to help people adopt healthy nutritional habits. Social factors are essential to any public health strategies, if these are to be effective. The social dimension cannot be omitted and should always be a major consideration in every initiative and intervention.

The social factors affecting consumer choice are also supported by the theories of behaviour change that focus on society and not only the individual (Becker, 1974, Bandura, 2001, Gregson, 2001, Thaler and Sunstein, 2008). The study also showed the same factors at play. Focus groups participants reported that there are social

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factors that affect their eating behaviour and in Greece these factors have "pushed" them towards unhealthy eating habits. Representative of this multifaceted influence was the quote of a participant in the sixth focus group who said that *"to some degree I can be influenced by everything around me"* (**participant 6.2**).

Social aspects of nutritional habits raised through focus groups participants and adding to current knowledge about the notion of social nutrition were discussed in section 9.2 and include, among others, peer pressure and family influences, impacts from the structure of specific settings like the education institutes and the wider Greek environment, lack of time due to the structure of modern society, taste experiences, cultural issues and food availability (in terms of place and price). This is in line with the conclusions of Fieldhouse (1995) who sees food as an important means that people use in order to contact and interact with other people and with the opinion of Lang and Heasman (2004), who stress the influences of social context on nutritional habits and food choices.

Citizens' food choice and the efforts of the food industry and other food system powers to edit people's choices is a very important social factor that should not be neglected by the notion of social nutrition. Choice editing is extensive in the case of Greece, therefore, through appropriate food policies, the State should intervene to make unlimited choice a reality for Greek consumers, by revealing and trying to fight against those aspects that work as negative choice editors for the consumers. This was also proposed by Landman and Cruickshank (2001) in their study about nutrition and migration in the UK.

Finally, this thesis embraces the multifaceted notion of social nutrition and agrees with its core concept as presented by Lang et al. (2009) because people see eating as a means of increasing their socialisation, as revealed through the focus groups and at the same time society and the relationships among the key agents of the food system define food availability by making decisions about food marketing, which include price, place, promotion and product attributes, about agricultural, food and nutritional policies and other initiatives and about food controls.

The challenges of social nutrition are not only about the imported influences that steam from globalisation trends (see section 2.11) but nowadays, in the light of the

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economic recession, the challenge is to understand the new dynamics that will emerge and try to defeat them through strong food policies that will not blame the victim (Lefebvre and Flora, 1988, Kotler and Lee, 2007, Hastings, 2007).

The following table (Table 9.3) summarises the research findings' contribution to what Lang et al., (2009) had proposed in their Table 4.1 (p. 117-118).

Table 9.3: Research Findings' Contribution to the "Social Nutrition" Concept.

Features of social nutrition	Research findings contribution
Core concept	• Choice editing (by all the forces of the food system).
Current emphasis/challenges	• Understand new dynamics due to the economic recession.
Industrial appeal	• Choice editing through marketing strategies and tools. • Corporate social responsibility.
State appeal	• Social marketing is the new trend. • State should become a choice architect to support citizens in adopting healthy eating habits.
Scientist appeal	• Social marketing training & research.
Consumer appeal	• Health promotion & social marketing campaigns by Civil Society organisations to promote healthy eating. • Consumers are aware of the societal influences on their eating habits but they still eat unhealthily. • Consumers see their nutritional habits (healthy or unhealthy) as a means to increase their socialisation. • Need for State initiatives that will not blame the victim.

Source: Author; drawing upon Lang et al.'s (2009) table 4.1 p. 117-118.

Therefore, what is proposed is the urgent development of food policies that would include the social dimension of nutrition and would target society as a whole as well as those settings that affect citizens' socialisation and as a consequence their food choices, such as education institutes and workplaces, as also proposed by Lang (2005b). This thesis also adds to Lang's (2005b) proposals when trying to solve the second problem about *"Nutrition's societal role – provide evidence for policy?"* the

insight that, as proved by this research, social marketing can inform policy makers and provide evidence for the development of effective policies (see also Table 9.8 and Fig 9.4) and should be included in food policy interventions at upstream and downstream levels in order to reveal and help improve the societal dimension of nutrition. So, social marketing fits into an approach which goes back to the 19th century (Lennon & Fieldhouse, 1982) as a proposal of thinking within the social nutrition framework.

9.4 Social Marketing theory to help Greek Undergraduate Students change their Nutritional Habits

The review of the Greek initiatives aiming to improve nutritional habits (see Section 4.6.3) has shown that social marketing theory is not used in the case of Greece. There is one initiative called 'Social Marketing Programme', but there is no evidence that all the benchmark criteria of social marketing (Andreasen, 2002, NSMC, 2006) were met in this case. Therefore, in this section, based on the findings from the focus groups, an outline of the main downstream and upstream initiatives in the case of Greece are presented as a new contribution to the current knowledge in this country.

The findings from the focus groups revealed that there was a tension between participants who wanted to adopt a healthy diet but they could not and those who were not interested in adopting a healthy diet because they could not see immediate benefits. The later, reported that they prefer the pleasure that they get form unhealthy foodstuffs in the short term rather than pleasure deprivation in order to be healthy in the long-run (see section 6.5). This adds to the current knowledge of the classic health promotion and public health tension between the short-term and long-term consequences of healthy and unhealthy behaviours (Stafieu et al., 1995). The problem that always exists is the long-term benefits of the healthy behaviours in comparison to the short-term benefits (like pleasure) of the unhealthy ones. This is a challenge for social marketers and policy makers as well.

Moreover, through the formative research with undergraduate students, the barriers and benefits towards healthy eating have been revealed. Table 9.4 summarises the

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perceived costs and motivators for the adoption of a healthy as well as an unhealthy diet.

Table 9.4: Greek undergraduate students' perceived costs and benefits from the adoption of a healthy and an unhealthy diet

Target audience perceptions	Desired behaviour: Eat healthy	Competing behaviour: Eat unhealthy
Perceived benefits	Health and well-being improvement	Nice taste
	Appearance improvement	Easy to prepare
	Better performance on everyday activities	Availability
	Better socialisation	Durability and ease of storage
	Better mood/psychology	Be "cool" and in fashion
	Respect for ourselves	
	Live longer	
Perceived costs	Time (to prepare and to find)	Cardiovascular diseases
	Pleasure reduction	Obesity & appearance problems
	Failure to keep up with peers	High cholesterol
	Money	Lack of vitamins
	Stress of adhering to a healthy diet	Headaches

Source: Author

As there are personal as well as societal (low treatment costs) benefits from the adoption of healthy eating habits (Rangan et al., 1996), potential initiatives must reduce the perceived costs in order to increase personal benefits, while at the same time, "hard" policy initiatives, like unhealthy products distribution and promotion regulations, could increase the cost of the current unhealthy behaviour. Moreover, based on the exchange theory (Houston and Gassenheimer, 1987), in marketing there is always an exchange of values in order to increase the chance of success. In the case of social marketing, this mostly includes a symbolic exchange (Bagozzi, 1975) where the perceived benefits are more important than the perceived costs (Hastings, 2007). In the case of Greece, this can be translated into the provision of healthy alternatives in many places, so that the cost of finding or preparing them will be reduced or even eliminated. This was proposed by the participants of the focus groups as the most appealing approach to help them improve their nutritional habits (see Section 6.13).

Moreover, some focus groups participants stated that it is stressful to adhere to a healthy diet and this is what they want to avoid (see section 6.5). This fact shows that healthy alternatives are hard to find, are expensive or that the participants have not been educated by their family and teachers to prepare healthy foods. This remark also supports the literature observations about the evolution of the family in Greece (see Chapter 2) and the lack of supportive policies in the Greek society as revealed through the interviews with the key stakeholders from education institutes (see sections 7.3 & 7.5) and the Civil Society (see section 8.4). The stressful situation that people who want to adopt healthy eating habits face is also raised in the literature that suggests the elimination of stress through "products" that promote ease, happiness and popularity (Smith, 2007b, French, 2008).

Therefore, based on social marketing theory, any initiatives should increase the benefits and decrease the costs of a healthy diet and at the same time decrease the benefits and increase the costs of unhealthy eating. According to the participants there are two kinds of cost for the adoption of healthy eating habits shown in Table 9.5.

Table 9.5: Greek undergraduate students' monetary and non-monetary perceived costs for the adoption of a healthy diet

Monetary costs
▪ Pay for expensive fruits, vegetables and whole grain products which can also easily decompose.
▪ Expensive organic products.
▪ Buy a cook book or attend cooking lessons.
Nonmonetary costs
● Stress from watching my diet all the time.
● Pleasure reduction by eating healthy foods and avoiding sugar, salt and fats.
● Not being part of the peer-group when eating out of home.
▪ Time and effort to prepare a healthy meal and learn how to cook.

Source: Author

All the above connotations from the findings with the focus groups also support the multi-factor influences of the adoption of healthy eating behaviours (Figure 9.1). Social, cultural and personal factors have also been revealed and by understanding

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these benefits and costs (Tables 9.3 and 9.4), policies and specific initiatives could be developed having a citizen-centric character that would be more appropriate to help this target audience to adopt healthy nutritional habits.

In the case of Greek Undergraduate students' perceptions towards healthy eating, a lot of information about the social aspect of healthy eating nutrition of this specific group of people has been revealed. Based on these data, both "soft" and "hard" policy initiatives can be developed and implemented in order to impact in a targeted manner on the needs of this specific audience. This is also proposed by Papadopoulos and Lees (2002). By using these data, a proposed social marketing programme could have been developed but this is not the aim of this thesis. Nevertheless, an outline of their opinions that could be incorporated into a social marketing programme is presented.

Specifically, undergraduate students revealed that they spend most of their time inside their education institutes. So, for them, any initiatives to promote healthy eating habits, should take place inside the education institute where they spend most of their time. This is also related to the public health approach of Dahlgren and Whitehead (1991). Interventions inside specific settings reduce cost and time of reachability and increases coverage and accessibility (Tsouros et al., 1998), as revealed by the evaluations of other interventions which were implemented in specific settings like schools (Schuit et al., 2000) and Universities (Dooris and Doherty, 2009). This approach would satisfy policy makers who have to design policies in the context of the financial crisis with very limited budget. Also, the revealed need to introduce healthy foodstuffs (like fruits) and healthy substitute products (like low fat milk), in education institutes canteens at convenient prices reveals the role of upstream social marketing. These efforts should be supported by food policies to ensure that this happens.

Based on these findings, the opportunities to target undergraduate students through downstream social marketing initiatives, as well as the implications of upstream social marketing to influence policy makers will be presented.

9.4.1 Suggestions for Downstream Social Marketing Initiatives

Formative research with undergraduate students provided sufficient data for the development of a social marketing programme inside the education institutes. The

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main components of the programme based on the target audience's needs should include the following.

Undergraduate students that live away from their family revealed that they do not know how to cook, or that they have little knowledge and they cook meals that are fast and easy to prepare like pasta and eggs and they appeared to be indifferent to the health consequences of their choices. Also, focus groups analysis showed that most undergraduate students are not familiar with the real extent of unhealthy eating consequences on health and society (see Section 6.5). Therefore, this research suggests that cooking lessons and counselling services by nutritionists, dieticians and health professionals could be provided inside the education institutes (or over a free phone line). Similar initiatives for University students have been proposed by Rodrigues et al. (2001) and by the University of Ulster in the form of "A student survival guide to food" (Food Standards Agency Northern Ireland and University of Ulster, 2006). In these initiatives there must be a link between taste and healthy food in order to change their behaviour so, they should be taught how to prepare tasty, fast and healthy meals, as in the case of the national healthy eating social marketing programme in New Zealand (http://www.feedingourfamilies.org.nz/).

Furthermore, the participants reported that they are heavy users of the internet and this is a medium that they trust, hence, there should be a website with tips to prepare easy, tasty and healthy meals and snacks. The information in this website should be given by scientists, because the target audience mentioned that they trust scientists like doctors, dieticians and nutritionists. The website could also replace cooking lessons by providing internet based cooking programmes which will reduce the cost of time and effort of attending a live lesson at the education institute as undergraduates could watch the video at their own convenience. This will also reduce the cost of the whole programme. There are also other initiatives that have used the internet to approach the target audience like the Fun, Food and Fitness Project (Thornley et al., 2007), which had some positive effects on healthy eating behaviour.

Any communication messages should highlight the positive consequences that healthy eating can bring to them as reported by Undergraduate students during the focus groups interviews. Health improvement is important but many undergraduates stated that they are still too young to care about their health, so more short-termed motives,

like appearance and everyday performance, should be highlighted at the beginning of the programme to increase knowledge and encourage the target audience. Nevertheless, health benefits should be mentioned at every opportunity. This has also been adopted by other social marketing programmes like the "Go for 2&5" in Australia that focuses on increasing vegetables and fruits consumption. The messages adopted for this campaign were based on the opinions of the target audience and there was proof of its positive impact on the consumption of fruits and vegetables (Kirchhoff et al., 2011).

Moreover, friends emerged as a very important influence (see Section 6.9), therefore, healthy eating as a means to perform better in everyday activities with friends and appearance improvement which will improve their socialisation should be emphasised in the programme. The concept of peer modelling interventions has also been embraced by the Food Dudes social marketing programme which has shown positive results on increasing fruits and vegetables consumption (Lowe et al., 2004). The effectiveness of peer modelling programmes was also raised by the Review of Thornley et al. (2007).

Additionally, for the sustainability of this effort, psychological rewards can be provided (Kottler and Lee, 2008). Free BMI, body fat measurements and blood tests (these can be covered by the participants' health insurance) should be provided so that the participants can be informed about their health and appearance improvement. Furthermore, in order to reduce their feeling of peer isolation when they adopt healthy eating practices, they must be encouraged to participate in these activities with their friends.

Another issue that should be raised during a downstream social marketing programme is education about interpreting food labels. Unambiguous food labelling has been proposed by the EU in order to help EU citizens to adopt healthy eating habits (Europa website). It is pointless though if people cannot understand what these labels reflect. Participants reported that they do not read the labels because they do not understand them (see section 6.7). This was also revealed by other studies that have taken place in Greece which showed that 44% of the participants do not read the food labels (Aristidis Daskalopoulos Foundation, 2009). So, it is vital to highlight the importance of reading the labels on food packages. Moreover, there is a need to

explain to undergraduate students how to read them, what all these things mean and the consequences that their ignorance may have on their health.

For the implementation of the above, there is a need for new structures and involvement of many key stakeholders, hence policy should be developed to support these initiatives and recruit all different agents involved towards the success of the programme. The upstream social marketing initiatives based on the findings follow.

9.4.2 Suggestions for Upstream Social Marketing Initiatives

This thesis supports that it is not very rational to expect that people can change their eating habits only because they know that it is good for their health, as was shown before. Some of them may do it but the majority will be influenced by other motives and barriers as outlined in Table 9.4.

The formative research with focus groups revealed that there is a need to reduce or eliminate the barriers of availability of unhealthy foodstuffs and low distribution of healthy, heavy promotion (marketing) and low prices of unhealthy foodstuffs and inconvenient module hours inside the education institutes that reduce the time for a proper meal driving the students to fast alternatives (see Section 6.13). The problems of the wider environment that include heavy unhealthy food marketing and availability of unhealthy foods in many places have also been pointed out in the literature (Hawkes, 2002, Hastings, 2006, Lang et al., 2009)

For this reason, upstream social marketing initiatives are necessary to encourage policy-makers to intervene and create more supportive environments in general and more specifically inside the education institutes. Here there is a need to remind that the participants in the focus groups reported that the environment inside their education institutes and in Greece in general is not very supportive for the adoption of healthy nutritional habits (see Section 6.10). This was also partially supported by interviewees from the education institutes as well as the Civil Society.

"[Canteens provide] bakery products such as pies, croissants and doughnuts, snacks high in sugar, fats and salt, coffees and there are also some "light" products, concentrated juices and turkey sandwiches." (interviewee E32).

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"Concerning school canteens, the regulation is one of the best in Europe...it was a result of a two-year work but exists only on paper. The State does not supervise its implementation and the canteen owners prefer to provide unhealthy foodstuffs to increase their profits" (interviewee C09)

Based on the focus groups findings, upstream social marketing initiatives could focus on:

1. The responsible authorities of the State i.e. Ministry of Health and Social Solidarity and Ministry of Rural Development and Food, which are responsible for policy development concerning food and nutrition.

2. Education institutes authorities and canteen owners in order to increase healthy alternatives in the canteens of the education institutes and promote healthy alternatives that already exist.

3. The food industry to provide healthy alternatives, i.e. products with less salt, sugar and fats.

Specifically, policy makers should develop food policy plans that would embrace all these actions and translate the findings into feasible initiatives to help undergraduate students adopt healthy nutritional habits.

Moreover, as canteen owners do not introduce healthy products in their canteens because of low demand, difficulties of storage and high costs that reduce their profit margin (see Chapter 7) there must be an increase of monetary benefits for the canteen owners, like lower taxes for fruits, "light" and non-refined products, through legislation. This will facilitate the balance between healthy and unhealthy alternatives, as undergraduate students demand for free will is not likely to be infringed. Another option is to manage this through contracting, so the responsible authority for each education institute should lay down a contract and ensure standards are met. In addition, forcing policy makers to design stricter legislation and imposing fines when a canteen owner does not include a specific number of healthy alternatives can increase the monetary cost of unhealthy alternatives (see Table 9.5). Another issue for policy makers is the existence of food outlets close to the education institute that provide unhealthy foodstuffs. Policy-makers should take this fact into consideration too. Increase of the available healthy foods in specific settings like churches and

schools has also had positive effects on increasing their consumption (Campbell et al., 1999, Birnbaum et al., 2002).

Furthermore, there is a need to get education institute authorities to plan class timetables in a way that a lunch and dinner break can be provided. This will reduce the reported "lack of time" barrier. Finally, the food industry should be included in the policy interventions in order to reduce malpractice and market its products in more ethical and health-oriented ways. This could include less marketing to young people, avoidance of misleading advertisements and messages, analytical and clear labelling and healthy alternatives. In this context, the role of food policy is very important as it can create balance among the actors of the food system who play a major role in the development of the nutrition transition that affects the population's health.

The challenges to influence policy-makers to create supportive environments and integrated food policy are discussed in the following paragraph through the findings from the interviews with key stakeholders. The need to reduce the pressure that the environment of unhealthy food marketing puts on the citizens was also highlighted by Hastings (2006).

9.5 Tension between "Soft" and "Hard" Policy Initiatives

Findings from the focus groups showed a tension between the participants who were in favour of the hard policies of food taxation and food marketing regulations or elimination (paternalism) and those who were for the free will of the citizens and swear by the concept of free choice (liberalism). The literature reveals that citizens' choices can be edited by the food industry that produces and promotes specific foodstuffs and then the consumers have to choose among the available provided alternatives (Sustainable Development Commission & National Consumer Council, 2006). This situation limits their choice which is actually driven by the food manufacturers. Moreover, despite the fact that the food industry limits choices, when public health does this through policy it is seen as negative and as an effort to limit consumer free will. Nevertheless, this threat, posed by the food industry, makes more imperative the need of "hard" policies, which were also supported by some interviewees like, for example, one who said:

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"Therefore, there should be someone to control advertisements so that food companies would be obliged to tell the truth about fat and calorie contents and create packages displaying these facts using bold letters and in a way that is familiar to the public in order to understand what is good and what is not. This is proper and ethical" **(interviewee C11)**

However, a policy that will try to eliminate marketing initiatives by the food industry would definitely have to deal with the great power of the global food and beverage companies. Therefore, despite the evidence that has been outlined in Chapter 2 about the power of advertisements and marketing on people's and especially children's choices (Hawkes, 2004) there has been a limited range of measures by the Greek government. This was also revealed by some of the focus groups participants who reported that they are influenced by the advertisements and food marketing and at the same time that there is an imbalance between healthy and unhealthy food marketing, which was also supported by the interviewees (Chapter 6 and Chapter 8). In the wider literature there is also a tension between those who support the elimination of food marketing especially on children (Lang, 2004, Halford et al., 2004, Hastings et al., 2006) and those who support that this is not going to have any effect on people's food choices (Lvovich, 2003, Young, 2003, Ambler, 2004).

Concerning taxes on food, based on the research, this was not very appealing to the respondents, but once again there was a tension between those for and those against this measure. Such tensions are common concerning taxes (Caraher and Cowburn, 2005). There is also an ongoing debate between the interested parts about the classification of the products and the correlation of the taxes (Mytton et al., 2007). Moreover, Caraher and Cowburn (2005) concluded that health taxes are more effective and appealing to the public when they are implemented in closed settings.

Another "soft" policy is the guiding stars or traffic lights on food labels, based on the neo-liberal position about respecting the consumer's "right to know" (Consumers International, 2006), and a means to increase informed choice (Baltas, 2001). These were negatively criticised by the focus groups participants mainly because there were worries about the classification of the products and the same worries were raised by some interviewees. In the literature, the study of Sutherland et al. (2010) showed a positive effect of the use of guiding stars on changing purchase behaviour and they

were proposed as an easy and coherent way to understand the nutritional value of specific products. Also, more recently, in a study in Australia, parents asked for more enlightening labels (Collier, 2011). In the Greek literature, the importance of labelling techniques to inform the consumers was also raised by Baltas (2001).

The most appealing initiative for undergraduate students, based on their reports, was the introduction of healthy alternatives inside the education institutes canteens because this measure does not limit choice, it rather broadens food choices and at the same time makes healthy alternatives more accessible. The challenge is whether this initiative could work independently of other measures, harder ones like the elimination of unhealthy food marketing or the prohibition of unhealthy foodstuffs inside the education institutes. Nevertheless, studies about the introduction of healthy alternatives in school settings have also concluded on the positive impact that this initiatives can have on students' eating behaviour (Douglas Evans et al., 2010).

Probably, the failure of tobacco restriction measures (Moutousi, 2009) led the majority of the focus groups participants to suggest structural and policy changes of State organisations and did not propose "hard" initiatives, but "soft policies" like education and balance between the big powers of the food system and citizen welfare. For example, an interviewee that reflected this opinion said:

"There must be advertisements by the State in order to counterbalance the promotion of the food industry. But apart from this, there should also be availability of the suggested alternatives, for example we can't promote extra virgin olive oil for heart problems and allow it to be too expensive and unavailable to the Civil Society" (interviewee C09).

Based on the findings from the focus groups and the interviews, an indicative list can be drawn, ranging from 'hard' at the left of the table to 'soft' measures towards the right (Table 9.6).

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Table 9.6: The Range of Policy Interventions to Improve Nutritional Habits (based on the research participants views)

Interventions raised through the research	Regulate fast-food outlets	Taxes & fiscal measures	Restrict food marketing	Increase Healthy Alternatives	Education (by school)	Labelling
Opinion of the participants	Not very democratic-supported only by few participants. It will lead to unemployment. **More appealing alternative:** close fast-food outlets close to education institutes	Not very appealing among the participants. They mostly preferred the reduction of healthy food prices	Focus groups participants believe that it is against free will. **More appealing alternative:** increase the quantity and quality of healthy foods marketing	The most appealing initiative among focus groups participants but only if there are strict controls about food quality	Very appealing among key interviewees. There were participants who were against it because: 1. Lots of modules in school curriculum 2. Lack of structures to support this	Diverging views. Main worries about the classification of the products

⟵————————————————————————————————————⟶

Hard policies   Soft policies
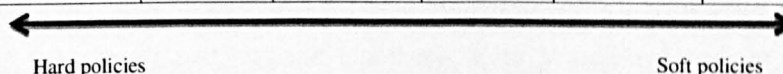
Source: Author

This tension is also reported in the literature. The trend towards "soft" policies has also been outlined by the discussion paper of James et al. (2006) about the global strategies to prevent childhood obesity, which also emphasised the need for more dynamic measures. In addition, hard policies like food marketing elimination and regulations of fast-food outlets were proposed as the only way to tackle obesogenic environments (Algazy et al., 2010). On the other hand, nudge theory and soft paternalism call for "soft" policies in order to motivate people to adopt healthy eating habits and make the right, healthy choices based on the concept of environmental changes like the wider promotion of healthy foodstuffs (Thaler and Sunstein, 2008) focusing greater attention on the "place" of the social marketing mix (Hastings, 2007). These initiatives would not have a straightforward effect on people, as food taxes could have, hence do not stringently restrict citizens' free choice (The Economist, 2006).

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Therefore, despite the fact that in both focus groups and interviews there were advocates of both approaches the tendency towards "soft" initiatives was marked. Nevertheless, this thesis suggests that there should be a combination of policies in order to create a supportive environment for all Greek citizens. Especially, in this period of economic recession, only those policies that could be more efficient should be chosen. The combination of soft and hard policies as well as policy reformulation was proposed by WHO /Europe (2006a) to tackle nutrition-related diseases.

Finally, the peculiarities of healthy eating behaviours, which diversify it from other behaviours like safe sex and smoking (Asp, 1999, Lambert et al., 2002, Lefebvre, 2003, Chopra and Darnton-Hill, 2004, Hastings, 2007, Lang et al., 2009) highlight a higher need for a multi-faceted approach and a combination of "hard" and "soft" policies to reverse the current situation and fight against the plethora of barriers against healthy eating.

9.6 Important issues concerning Greek Food Policy

The analysis of the findings concerning the Greek food system and food policy has led to the development of a situational analysis that reveals the strengths and weaknesses of the current system and the opportunities and threats concerning its future ability to shape the relationships between the food system actors. It was also revealed in paragraph 9.2 that Greek people, like other Europeans, are affected by similar factors in order to adopt healthy eating habits but the Greek Food policy fails to meet the recommended requirements of the EU. This gap between the global and European proposals and legislation relative to the current Greek food policy will be presented.

9.6.1 Development of a S.W.O.T. Analysis of the Greek Food System

All the data gathered in this study led to the formation of a situation analysis (Hastings, 2007). This situation analysis facilitates the development of a SWOT Analysis for the current food system (Table 9.7). Specifically, SWOT Analysis includes the strengths (s) and weaknesses (w) of the Greek food system to support and promote healthy eating and the opportunities (o) that the Greek responsible key

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stakeholders should take advantage of and threats (t) that they should try to avoid in an effort to develop and support an integrated food policy.

Table 9.7: S.W.O.T. Analysis of the Greek Food System

Strengths	Weaknesses
Greek Code of Advertising & Communication (incl. chapters for children and nutrition).	Lack of governmental support. Many times its obsolete procedures and bureaucracy can be an obstacle for specific initiatives.
Ministry of Health and Social Solidarity is renamed to Ministry of Health, Nutrition and Sports.	Greek government does not complete any initiative. State campaigns are short- termed and expensive. They are more like fanfares.
Introduction of the Greek Codex for Foodstuff and Drinks.	Limited budget allocation because of the economic recession.
There are many brilliant scientists in Greece like doctors, nutritionists and dieticians.	No food policy and social marketing experts in Greece (key stakeholders are not fully aware of these concepts)
Greece is the country of the Mediterranean Diet. Geographical position of Greece and climate facilitate the production of basic products of the Mediterranean Diet.	Lack of policy: There is no instituted action plan for nutrition. Also, Greek food policy is fragmentary and virtually absent.
There are private, non-governmental initiatives for the promotion of healthy eating which are efficient and the Government can learn from them.	There is lack of synergy between various organisations that undertake nutritional programmes which lead to splintering off of efforts and to higher expenditures due to overlapping activities.
Existence of decretive bodies that force the Government into policies and actions.	There is no responsible body for nutrition.
Existence of a Ministerial Decision for foodstuff in schools and fruits in schools (which is one of the best in Europe) which can be introduced in all education institutes.	There is lack of education to understand what it is right and wrong to do, eat etc. For example Greek society supports individual interests, not community concerns, e.g. canteen owners do not obey the law and sell only what is profitable and no one protests.
	Market monitoring mechanisms are not considered very reliable. The whole system is precarious. (tension concerning State inspections reliability).
	Lack of cooperation between key agents and poor allocation of activities and responsibilities. There are a lot of issues, insufficient personnel and many responsible ministries and other sectors and there is no proper organisation for good cooperation.
	Low confidence of the citizens in the government.

Opportunities	Threats
Family bonds and tradition are still strong in Greece.	High prices of healthy and organic foodstuffs due to the power of supermarkets and retailers.
Specialists' opinions like nutritionists, doctors, dieticians can impact on consumers.	External environment stresses people and this can lead to uncontrollable eating (emotional eating).
Internet diffusion provides the opportunity to learn tips on healthy eating.	Fast foods are in fashion.
E.U. Policies on nutrition which support (financially) and promote nutritional interventions like social marketing initiatives	Unhealthy food marketing is paramount.
	Loss of family roles.
Self-regulations and voluntary actions (Code Of Principles For Nutrition Physical Activity And Health by SEVT) to promote healthy diets by the food industry incl. conscientious advertisements and marketing.	Food scandals and E.U. tolerance towards GMOs make people unsure of what is healthy or not.
Development of international monitoring systems to support policy making evidence based.	Healthy food is not easy available while unhealthy food is everywhere.
Economic crisis (lower salaries & pensions) can lead people to move to the land and hence to turn to their traditional healthy diet.	Economic crisis (lower salaries & pensions) can demote healthy eating if this remains expensive.
Technological advances are in favour of the production of various products like «light», low-calorie, low salt, low fat and functional products.	Abrogation of collective working contracts (increase of working hours, so less time to prepare food)
A new EU law on food information to consumers (No 1169/2011) applicable by December 2014, which would protect citizens from misleading food labels and support Greek food policy efforts to promote healthy eating choices	Many products are labelled as Greek, so we cannot be sure of their quality.
There are studies which show that social marketing interventions can have a positive impact on the adoption of healthy diets. These interventions can work as patterns for a Greek initiative.	Agricultural sector investment reduced by 2.5% yearly.
	Nutritional intervention having food companies as sponsors may lead the consumers to believe that these companies produce only healthy products (need to be careful about the partnerships).

Based on this situational analysis it is obvious that many things should change in Greece in order to enforce an integrated food policy and an organised food system that will include nutritional issues to improve public health indexes. S.W.O.T. Analysis reveals that there are many weaknesses concerning the Greek food system

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which stem from Government failure to develop and maintain a rational, well-operated and flexible system that could support public health improvement initiatives. But this is not only a problem of the Greek system. As outlined in the literature review, the UK also confronted problems of cooperation and lack of right decisions, policy focus and job allocation (Lang et al., 2009).

In Greece, based on the findings from focus groups and interviews, there is lack of knowledge about social marketing. This is not only a problem in Greece, despite the fact that in the UK the situation is better there are still confusions about what social marketing really is and this has raised an interest in building sustainable capacity between health professionals and practitioners (Whitelaw et al., 2011).

The major issue, though, is the fact that interviews with key stakeholders showed that they had no clear notion of what food policy is, judging by the definitions of food policy experts (Timmer et al., 1983, WHO/Europe, 2001, Lang et al., 2009). Only one participant (interviewee B25) included all the components of the food policy in his recommendations and critique, while the others gave their perspective in relation to the field that they came from; Civil Society interviewees talked about nutritional issues and policies, interviewees form the food industry and caterers talked about issues of the food supply chain and healthy nutrition avoiding the environmental consequences and governmental employees focused mostly on the agricultural policy and the inspection mechanisms. Nevertheless, this is not only happening in Greece. According to Lang et al. (2009), food policy is not a well understood issue in the broad sense of the world, so there is a need to clarify food policy in Greece too. In this context, there is a need first to train key stakeholders of the Greek food policy to understand all the related issues and then try to develop and implement effective food policies. This is also supported by the WHO, which organises food policy training programmes for everyone concerned like policy-makers and NGOs (WHO/Europe, 2000) and by Greek experts (Trichopoulou et al., 2002).

The problem of understanding food policy may have led to the lack of an integrated nutritional and food policy, as there is no instituted action plan for nutrition. Any existing initiatives are fragmented and short- termed. Manios et al. (2005) also emphasised the failure of the Greek government to adopt an integrated nutritional

policy. This may also reflect sectional interests with agriculture not wanting health to dominate and vice versa.

The present study also revealed untrustworthy market monitoring mechanisms that create a tension concerning State inspections reliability. The interviewees revealed that in Greece there is a problem of presenting imported products as Greek, and governmental mechanisms fail to detect these frauds. The importance of knowing the place of origin, as a food safety, nutritional, economic and social factor, that gives people the right to choose what to consume has been raised by Knowles et al. (2007). Nevertheless, this practice is not only adopted in Greece but also in other European countries (Knowles et al., 2007). Also, characteristic was the quote of an interviewee who said:

"The main weakness of the State is the inspecting mechanisms. The market is not controlled at all. There are illegal practices that affect the revenues of the producers and small suppliers who supply the big retail chains with foodstuffs. These practices are financial blackmail by delaying payments...they pay their suppliers in 200 days while the European Union says in 60 days, or ...they increase the price in order to show that they offer discounts. So, the producer loses much of his income when the price on the shelf is extortive and suspect and the producer's earnings are devalued. Based on a recent study undertaken by our organisation, one out of two foodstuffs in packages offered in supermarkets deceives the consumer." (interviewee B25)

There is also a need for better control of the food industry and big food retailers, which at this time are very strong in Greece and lobby to promote their profits. The power of the food industry and retailers also cropped up in the interviews with key stakeholders from State and Civil Society (Chapter 8) and the undergraduate students during the focus groups (Chapter 6). This was also outlined through the overview of the Greek food system in Chapter 2.

Moreover, the government's failure to organise and implement sound controls and develop integrated policies has created unsupportive environments for public health. The State has shown inability to control food prices which are very high for the healthy products like fruits, vegetables and organic foodstuffs. At the same time, supermarkets and retailers inordinately increase their profits by buying cheap products

from food producers and selling them to the final consumer at unaffordable prices (see Section 8.4). This power of the big retailers on the food supply chain and their ability to determine food prices has also been discussed in the wider literature (Caraher and Coveney, 2004).

Furthermore, high food prices have led to another problem. The income of the food producers is very low and leads to the disinvestment of the agricultural sector by 2.5% annually. The improper management of the Greek agricultural sector and the deficiencies of the Greek agricultural policies which fail to follow the orientation of the Common Agricultural Policy (CAP) have also been highlighted in the Greek literature (Alexiadis, 2011).

Such practices have led to low confidence of the citizens towards the government. Also, interviews with key stakeholders showed that there is no trust towards the State:

"...there is no reliable mechanism which can guarantee what we buy, how it is produced and where" (interviewee C18)

"Based on our data there is low respect towards the State and high towards the family" (interviewee C10)

This notion was also reported by many focus groups participants (see Section 6.12) as they stated that they cannot depend on the State for their health protection. This lack of trust in the inspection mechanisms is also raised in the Greek literature by the critical article of Alexiadis (2011) and another study which showed that Greek consumers do not believe that the State can protect them and they rather depend on their families, consumer unions and scientists (Aristidis Daskalopoulos Foundation, 2008). Nevertheless, the problem of trust towards food production and the governmental policies has been raised in the literature as discussed by Eden et al. (2008), who said that "the problem of trust in food production and regulation has increasingly been raised as a practical and policy issue in recent years".

The analysis of the findings revealed that in Greece there are no systematic interventions at a nutritional level and current programmes focus only on informing people rather than on helping them change their habits and behaviours and are not based on any formative research. As Hastings (2006) stressed, isolated advertising

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campaigns would not have any effect on bringing about structural and behavioural changes. Moreover, the development of initiatives to promote political benefits and not societal ones in Greece, which lead to the ineffectiveness of these initiatives due to their short-term character, has also been raised by Raftopoulou and Hogg (2010). Nevertheless, this is not a problem that only Greece faces. Among health promotion and public health experts there is the dilemma between the short-term and long-term initiatives effectiveness and the necessity of combining these two approaches (Cocwra, 2006).

Moreover, as revealed through the overview of the current initiatives (Chapter 4) and the interviews with key stakeholders (Chapter 8), there is no intervention in Greece that could be characterised as a social marketing intervention, as they do not meet the benchmark criteria mentioned in Chapter 3 (Andreasen, 2002, NSMC, 2006). This disadvantage springs from the lack of social marketing experts in Greece and also from the doubtful staffing processes, as Ministers employ their relatives and friends and not the appropriately qualified people. This is also supported by the literature where according to Liaropoulos (2005), the reasons why interventions in Greece failed are due to cultural factors. The main problems are:

- Shortage of funding.
- Lack of capacity and capability of social marketing and health promotion skills across the wider public health system.
- Lack of cooperation and communication among the responsible agents.

Furthermore, the current food policy is divided among many responsible agents, ministries and control bodies, while at the same time committees are set up for specific issues for a specific period of time and then gone forever. So, this thesis suggests that a new responsible agent should bring stakeholders from all the related sectors together in order to shape an effective food policy and create synergy to avoid splintering off efforts and higher expenditure due to overlapping activities. The problem of the Greek policy that leads to such overlap has also been raised in the article of Soultatou et al. (2011).

Thus, the current problem is that there is no responsible or coordinative authority to undertake all these issues as a whole; therefore a National Nutritional Council should be developed in order to deal with nutritional issues including all three, i.e. scientific,

social and ecological (Lang et al., 2009) (see also Section 2.15). This was also raised by an interviewee from a State organisation who said:

"There should be a National Public Health Council, so there should be something more permanent...I mean some people who will handle only the development and implementation of public health plans that would include nutritional issues. There should be a whole department in the Ministry, specialised in nutritional and public health issues, and not only one person as now, which will exclusively work on the nutrition policy of the country" **(interviewee S06)**

The need to develop a national nutritional council was also pointed out by WHO (WHO/Europe, 2008) and by the Greek MoH in the National Action Plan on Healthy Nutrition (Hellenic MoH, 2008).

Concerning inter- and intra-sector cooperation, interviews with the key stakeholders (Chapter 7 and 8) revealed that there is lack of cooperation between key agents and poor division of activities and responsibilities. NGOs complained of the lack of governmental support and its antiquated bureaucratic structures. Moreover, all State employees interviewed confirmed the inefficient cooperation between them.

The need to develop sound cooperation among the responsible agents and the support from the government is also highlighted by the WHO (WHO/Europe, 1999, WHO/Europe, 2008) and by Dowler (2001).

Concerning the relationships between the organisations of the Food Supply Chain, this research revealed that there are not many integrated efforts to promote the Greek production and the promotion and exports of the Greek products. This situation has also been described in the Greek literature by Vakoufaris et al. (2007), who has detected some efforts for collective actions especially in the case of olive-oil and wine, but they concluded that these initiatives were not enough to reshape Greek agriculture.

Within the context of cooperation comes the notion of partnerships. The current research showed that Greek nutritional interventions have many food companies as sponsors and this can lead consumers to believe that these companies produce only

healthy products that are good for them. This problem was stressed during the interviews:

"We don't work with companies as funders because our board of directors want to prevent being accused of getting influenced by them and of promoting their brand" *(interviewee C10).*

On the other hand, the social marketing specialists suggest that the development of partnerships between the private and the public sector can lead to more effective initiatives (Ahn et al., 2000, Hastings, 2003a, Lee et al., 2005, Thornley et al., 2007). But they also suggest that partnerships should be carefully chosen and regulated because private sector organisations, and in this case food companies, care only about their own profits and this may have an effect on the trust of the public towards these initiatives as well as disorienting the citizens (Bentz et al., 2005, Lagarde et al., 2005, Hastings et al., 2011). This issue has also been raised by Donovan (2011), who reported that any partner is not always a good partner especially when we are talking about the food industry. In this context, an interviewee from Civil Society reported that initiatives towards nutrition should exclude food companies as sponsors of their programmes:

"It is not good when such initiatives are funded by food companies who produce and promote unhealthy products. Children see them and then consider them healthy. I don't care if they find money from other companies, like banks, but not food companies. This conflicts with the attempt to ban advertisements for children. In these cases the EU and the WHO should intervene in order to discourage this attempt." *(interviewee S06)*

Greek culture is probably the main issue that has led to the current situation. Recent political scandals and the economic crisis have disappointed citizens, who daily face a counteractive environment which cannot support their efforts towards a better life (Lewis, 2010). Moreover, Greek culture, which promotes personal interests instead of massive interests, hinders the development of downstream initiatives and education.

Hence, the research findings reflected a need for immediate action because of the lack of supportive environments. This observation agrees with the current situation in Greece where despite the initiatives presented in Chapter 4, the nutritional problem is

getting worse year by year. This is also supported by the literature (Douglas Evans et al., 2006, Stead et al., 2007b) where it is mentioned that in non-supportive environments there is evidence of less effective programmes to tackle obesity and improve nutritional habits and this also emphasises the vital need for environmental changes.

Therefore, this thesis suggests that in order to avoid these threats it is vital that the use of upstream social marketing techniques should change the unsympathetic environment and consequently support any downstream initiatives. In this context, there are studies which show that social marketing interventions can have a positive impact on the adoption of healthy diets (Alcalay and Bell, 2000, Carroll et al., 2000, McDermott et al., 2006, Gracia-Marco et al., 2011). These interventions can work as blueprints for a Greek initiative.

This was also raised by Walsh et al. (1993), Kotler and Lee (2007) and Hoek and Jones (2011). For this reason, key stakeholders should take advantage of the current scientific human resources available in Greece and employ the right person in the right place beyond under-the-table deals. Greece should also make the most of the opportunities given by the EU for programmes to promote public health through nutritional interventions and implement them in the right way without wasteful use of the available resources. So, this thesis vividly showed and suggests that there is urgent need to reshape policies, relationships, structures, staffing and the way that things happen in general inside the Greek system.

Lack of policy and control has led to fast-food predominance, unhealthy food marketing, renaming foreign products as Greek and unavailability of healthy food in specific places like hospitals, schools and other education institutes as reported by participants from all the key sectors of the food system, education institutes and undergraduate students. In this context, there should be something stronger than self-regulation, which is a good first step by the food industry, but as also outlined in the literature (James et al., 1997, Caraher et al., 2006, Hawkes, 2007) it cannot have the desired results concerning the adoption of healthy eating habits, as it mostly works as a means to avoid stricter measures and restrictions.

Therefore, this thesis supports the view that it is vital that all these attempts be part of a National Food and Nutritional Policy, which will include all population groups, as also indicated by the IOTF, which proposes that *"there is a need to develop a balanced portfolio of policies, programmes, and other actions that are both achievable and sufficient to reduce rates of obesity"* (Swinburn et al., 2005). The same emerging need for an integrated, well-organised national nutritional and food policy in Greece was also pointed out by Hassapidou and Fotiadou (2001), Manios et al., (2005) and Trichopoulou et al. (2002). In order to achieve this, strong political leadership is needed to develop the guidelines for a sound cooperation and ensure their implementation.

9.6.2 Global and European Influences on the Greek Food Policy

The WHO asks its member countries to design and implement food policies based on the two proposed Action Plans for Food and Nutrition Policy (WHO/Europe, 2001, WHO/Europe, 2008). In the same context, the EU Commission has created directives and proposals to support its member states in their effort to adopt food and nutritional policies.

The first area of proposals covers the issue of food safety where the EU, as well as the WHO, have adopted the "farm to fork" approach (WHO/Europe, 2001, http://ec.europa.eu/food/intro_en.htm). This approach suggests that food safety should exist in every stage of the food route from animals and seeds to food manufacture and food consumption. Moreover, this strategy enforces strict controls to ensure food safety and hygiene in the places that food is produced and consumed.

In this area of food policy Greece has developed the National Strategic Plan of Agricultural Development 2007-2013, which is based on the "farm to fork" approach (Hellenic Ministry of Rural Development and Food, 2008). Moreover, for the production and distribution of specific products and for the development of appropriate controls, the Greek Codex for Foodstuff and Drinks has been developed (General Chemical State Laboratory, 2009).

On the one hand, the interviews with key stakeholders and with undergraduate students revealed that there is tension concerning the controls and the origin of the provided foodstuffs. Specifically, there is tension between the participants of the

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focus groups who believe that there are no controls by the State or that the controls are not very reliable and the interviewees from the education institutes who claim that the State conducts inspections in order to guarantee food quality and safety. The first view, accusing the State of lack of control, was also supported by the key stakeholders from the Civil Society and the trade associations of the Food Supply Chain (see Chapter 8) while the latter opinion was supported by the data that gathered for the presentation of the fourth Chapter in the overview of the Greek food policy (Section 4.6) and the opinion of the State interviewees (see Chapter 8). This tension also shows the urgent need for better organisation of the State and adoption of strategies to increase the trust of the citizens. In the same context, the Codex Alimentarius Commission (FAO/WHO, 2006) provides food standards and recommendations about hygiene in the food industry. The Greek food policy is aligned with these recommendations as shown by the Greek Codex of Foods & Drinks (General Chemical State Laboratory, 2009) and the National Strategic Plan of Agricultural Development 2007-2013 (Hellenic Ministry of Rural Development and Food, 2008). Moreover, the majority of the Greek food industry companies have adopted HACCP standards to ensure food safety as shown by this research and pertinent literature (Fotopoulos et al., 2010).

However, the interviewees reported that all these efforts are obstructed by the existence of many agents, jobs overlap, poor communication and lack of cooperation between the Ministry of Food and the MoH in order to integrate food with health.

The second area includes nutritional strategies in order to formulate national action plans promoting healthy eating habits at all stages of people's lives (WHO/Europe 2001, WHO/Europe, 2008). Actions that support this effort include food marketing, labelling, health promotion campaigns and product reformulation.

In this context, in Greece, the Ministry of Health and Social Solidarity developed Nutritional Guidelines in 1999 based on the Mediterranean Diet Pattern (Ministry of Health and Welfare of Greece- Supreme Scientific Health Council, 1999). In this thesis, we propose that there is a need to update these guidelines as there have been changes in the health of Greeks since 1999 and therefore, there should be new guidelines that would reflect the current situation and the needs of the population, as also proposed by Soultatou et al. (2011).

Moreover, in 2008 the same Ministry developed the National Action Plan for Healthy Nutrition and Eating Disorders (Hellenic MoH, 2008). This plan presents a very good approach towards tackling the current nutrition-related health issues and includes apart from campaigns and education, structural changes in Greek society. However, this plan has never been enacted and implemented (see Chapter 8, p 220-221).

In both action plans of the WHO (WHO/Europe, 2001, WHO/Europe, 2008), food marketing especially to children has been criticised and a proposal for good marketing practices has been prepared. In Greece, there are marketing regulations concerning children only about toys, but there is also the Communication Control Council, which, based on the Hellenic Advertisement and Communication Codex, tries to eliminate the deceptive techniques of advertisements, including food advertisements (Law 2251 FEK 191-16.11.1994). Nevertheless, the Greek State has not intervened in this issue and there is no specific legislation about food marketing.

Moreover, in the context of the E.U. Platform for Action on Diet, Physical Activity and Health a National Platform for Action on Diet, Physical Activity and Health was created in November 2007 in order to develop a forum for national key stakeholders for the creation of a strategy about nutrition and physical activity to promote health. (Hellenic Ministry of Development, 2007)

Concerning labelling on foodstuffs, the WHO and the European Commission have worked on creating legislation that could protect consumers from manipulative techniques. Recently, the EU published a new regulation on food information to consumers, which also propounds the need for public protection in relation to wider food marketing techniques such as advertising. This regulation is going to be applied at the end of 2014 and includes food components, allergenic substances, place of origin, nutrition information, nutrition claims and health claims and easily understood, consistent information on the food packages (Regulation (EU) No. 1169/2011).

In this context, Greek legislation enforces the compulsory appearance of the name, description, components, weight, expiry-date, name and place of manufacture and instructions for use. On the other hand, GDAs, trans-fatty acids and other nutritional information are not compulsory and should only be included when there is a health claim about the product (i.e. low fat, no added sugar etc). Nevertheless, there are

many food companies in Greece that use GDAs and other nutritional information on the packages of their products (SEVT, 2007).

Product reformulation (WHO/Europe, 2008) has also been proposed by the WHO in order to develop foodstuffs that would not harm people's health. In Greece, this is only supported by self-regulations of the food industry as discussed in Chapter 4 (SEVT, 2007).

Furthermore, campaigns to inform citizens have been proposed by the WHO (WHO/Europe, 2008). In Greece, health promotion in schools is voluntary and may or may not include the promotion of healthy eating habits. Also, there are many health promotion campaigns towards nutrition-related issues mainly by NGOs, scientific associations, state organisations and the food industry. Nevertheless, during the interviews there were complaints about overlap, lack of cooperation and problems with budget allocation.

Moreover, the proposal of the WHO (WHO/Europe, 2008) to improve the quality and safety of the foodstuffs provided in specific public places like hospitals, prisons and education institutes has been adopted by the Greek food policy only in the case of schools where there is specific legislation about the foodstuffs available by school-canteens. Nevertheless, there was tension between the interviewees and the evidence of the grey literature about the credibility and frequency of these controls as discussed at the beginning of this section.

The third area of food policy is concerned with a sustainable food supply chain strategy in order to ensure food safety, limit social inequalities concerning food and protect the environment (WHO/Europe, 2001, WHO/Europe, 2008). In Greece, there is no specific agricultural policy that could guide the production of agricultural products so as to support these aims (see Chapter 4 and Chapter 8 p 214,235). Current agricultural policy promotes specific traditional products PDO, PGI, TSG and Organic Products, but not so as to support and promote healthy eating habits. Moreover, food prices are not controlled by the government because, as revealed through the interviews, the retailers are the ones who decide about food prices and the State does not intervene to protect the citizens and the small producers. Furthermore,

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this research has not found any environmental orientation of the Greek food policy and this was also pointed out by the interviewees.

The two Action Plans of the WHO have raised some other important issues that national food policies should embrace.

The first WHO action plan (WHO/Europe, 2001) asks for an integrated food policy but in Greece, based on the interviews with key stakeholders, there is no comprehensive food policy and it was also reported that "...*there is still a lot of effort needed in order to talk about a formal Greek food policy ...*" (interviewee S01).

Evidence-based policy (WHO/Europe, 2001, WHO/Europe, 2008) has also failed in Greece where there is lack of consistent evidence and longitudinal studies that could have created a better picture of the trends and the impact of different actions on the population's health.

Partnerships between local and international actors (WHO/Europe, 2001, WHO/Europe, 2008) have also been created by the Greek state, scientists, NGOs and the food industry that participate in the EU and the Greek Platform for Action on Diet, Physical Activity and Health (Hellenic Ministry of Development, 2007). However, this study revealed that food policy key stakeholders face a lot of problems concerning communication and cooperation among them (see Chapter 8 p 217-218). These problems were also revealed through the Greek literature (Kalloniatis, 2011).

Another issue that arose through the first action plan of the WHO (WHO/Europe, 2001) is advisory councils for the creation of appropriate policies. In Greece, these councils are being developed from time to time to deal with specific issues, but the interviews revealed the need for something more consistent to support policy makers (see Chapter 8).

Resources and budget allocation was dealt with in the second action plan (WHO/Europe, 2008), but the interviewees reported that this is not very effective in Greece and, especially nowadays under the financial recession, things are expected to grow worse.

Finally, the need for coordination between local, national and international actors that could affect food and nutritional policies is another issue raised by the two WHO action plans while in Greece such coordination is quite inadequate as has been seen in the previous section.

The analysis of the interviews with focus group participants and key stakeholders and the comparison between the EU directives and Greek policies reveals that, in Greece, policy makers adopt only what is mandatory and what the EU forces them to do. For this reason, it has been seen that when there is no specific legislation by the EU, Greek food policy fails to adopt and implement the directives and proposals.

The S.W.O.T. Analysis of the Greek food system, the relationships between the food policy actors and the current alignment of the Greek food policy to the global and European directives raise the problem of political leadership in Greek society. The research concludes that if there was strong political leadership in Greece, many of these proposals would have been implemented in an organised and permanent way and there would not have been tensions about controls, cooperation and lack of trust towards the State. The failure of the Greek political leadership was also highlighted in the critical article of Kalloniatis (2011) about the economic recession.

An evolved Greek Food Policy, in the context of the EU, should include coordinated efforts from all responsible agents in order to embrace everything around food including its safety and hygiene, its nutritional dimension and its ecological impact. There is a need for new structures, better cooperation and new responsibilities and as suggested by the participant key stakeholders, there is call for a unified authority to tune all these efforts (for a more comprehensive analysis see section 9.7).

So, the suggestion of the thesis is that there is a need for political leadership to drive the development of a proper food policy that would meet the high standards that the WHO and the EU have established to improve the population's health, reduce societal inequalities and protect the environment.

9.7 Models and State bodies to Improve Greek Food Policy

In the first Action Plan for Food and Nutrition Policy (WHO/Europe, 2001, p.10), WHO introduced three dimensions for a food and nutrition policy in order to improve

the health of the population through food availability and the nutritional choices of the individuals. This is an ideal model for policy makers, which shows that food policy should be based on three dimensions (Figure 9.2) including:

- Food safety to ensure that the available foodstuffs are not dangerous for public health.

- Nutrition strategy to ensure sufficient nutritional intake at every stage of people's lives in order to support good health.

- Sustainable food supply chain strategy that deals with the societal and environmental implications of producing sufficient food of good quality.

Figure 9.2: Comprehensive Policy contains Nutrition, Food Safety and Sustainable Food Supply Strategies
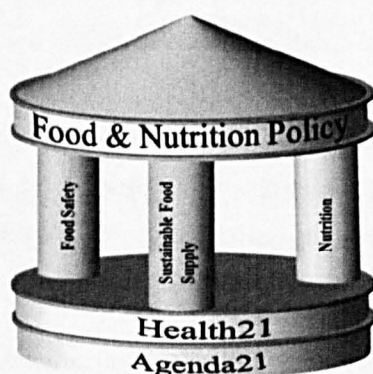
Source: WHO/Europe, 2001 p.10

Current Greek food policy, as presented in Chapter 4, is based on two main dimensions, the initiatives to ensure food safety and hygiene and the initiatives to promote healthy nutritional habits. Based on the analysis of the interviews with key stakeholders and archive data, there is a conclusion that the Greek food policy is very "safety and hygiene" oriented because it follows the EU and WHO guidelines (circle 1 in Figure 9.4). On the other hand, very few State actions can be seen to address nutritional issues.

Nevertheless, the National Action Plan on Nutrition (see p. 104), which had the potential to give an emphasis on nutrition in the current food policy, has never been

legislated and implemented, but if it was, the Greek food policy would have moved in the right direction creating a more integrated food policy that would include nutritional actions as well as food safety valves (circle 2 in Figure 9.4).

The need of the current food system, as raised by many interviewees from all sectors, is for an integrated food policy which will embrace apart from food safety and hygiene issues, nutrition and public health issues to tackle obesity and NCDs, as well as an ecological orientation (this orientation was reported by one participant from the Food Supply Chain). This is also embraced by the WHO in its proposed Action Plan for Food and Nutrition Policy (WHO/Europe, 2001, WHO/Europe, 2008) and by academics (Lang et al., 2009). The limited role of this environmental dimension in the Greek Food policy was also highlighted by the study of Damianos and Giannakopoulos (2002). Also, the failure of national food policies to embrace all these issues and their focus only on the nutritional aspect has also been highlighted by Caraher and Coveney (2004).

Moreover, with pressures on food systems from climate change, water stress and population demographics, it is highly likely that Greece will have to broaden its approach to food beyond just safety and nutrition. The emerging debate about food and sustainability is likely to reshape what the nutrition task is and will broaden Greek food policy beyond just nutrition-led requirements for behaviour change to become centred on new focuses such as what a 'sustainable diet' is. There are signs of that policy shift already emerging both at the global level (Nellemann et al., 2009) and, within the EU, at the member state level. Main examples are the case of the UK (Sustainable Development Commission, 2009), the Netherlands (Health Council of the Netherlands, 2011) and Sweden (Livsmedels Verket National Food Administration, 2009) where there are efforts to reduce greenhouse gas emissions, increase biodiversity, improve the use of the land and at the same time promote healthy eating by aiming for the development of food production and consumption sustainability criteria.

In actual fact, the triangle model of food policy is not an ideal model, rather a model exploring the relationships between the food system actors in order to depict the reality of food systems, their actors and the powers that influence policies. The findings from the interviews with key stakeholders of the Greek food system helped

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to picture the Greek triangle model of food policy (Figure 9.3), which was a very good basis for developing the research framework and expanding the research to the entire food system of Greece, as it helped to recognise all the key informants of the Greek food policy.

Figure 9.3: Model of Food System Relations, Showing Co-operation and Tensions in the Greek Food System.
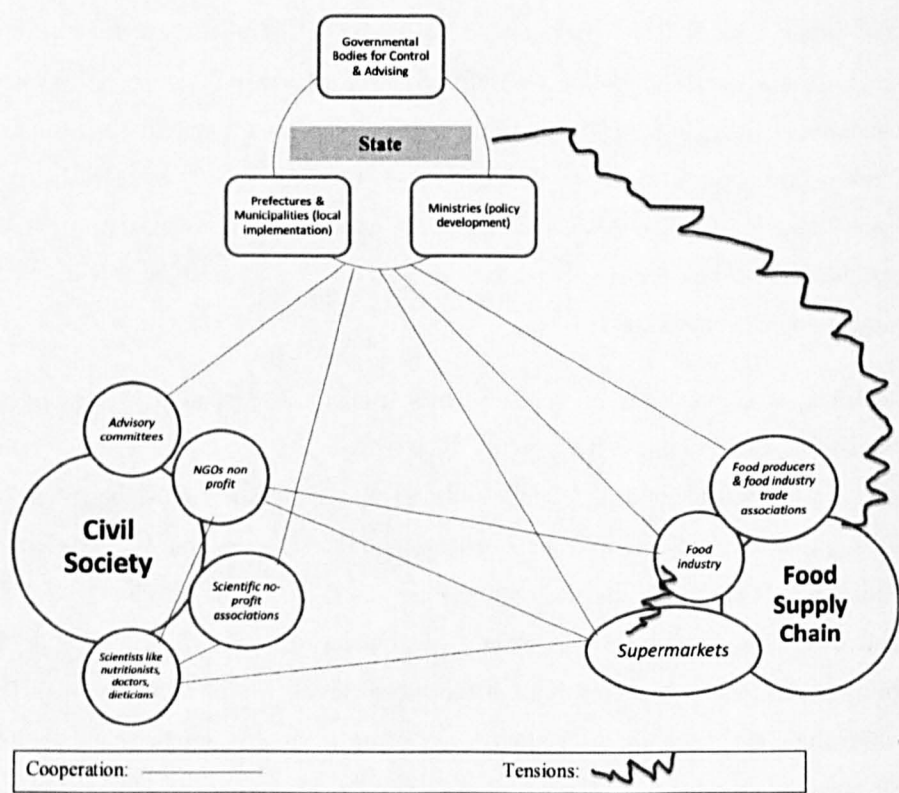
The relationships and tensions included in Figure 9.3 were drawn based on the findings described in Section 8.3. From this drawing, it is obvious that the relationships among the key agents of the Greek food system are very complex and most of the times are characterised by cooperation, while the tensions among these sectors are probably stronger, hence more predominant in the initial Triangle Model of Lang (2005a). It is also important that many times there are conflicts among the

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agents of the same sector, as in the case of Greece where it was revealed that there are often conflicts between the food industry, the food producers and the big retailers, as also reflected by Lang (2005b).

It is important to point out that Figure 9.3 may fail to picture all the relationships among the key agents of the three sectors as it is exclusively based on the research findings from the interviews with key stakeholders as presented in Chapter 8. In real life, these relationships may be more complex and messy. Nevertheless, it is successful in showing the dynamics among all these agents and it also adds to the current triangle model (Lang, 2005a) the need to see all these agents not in three fragmented sections but in a more holistic approach that promotes cooperation among them and puts the citizen in the centre of every action (as shaped in Figure 9.5).

Based on the two previous models and the research findings, this thesis suggests that in the context of the current food-related problems of the Greek population, the alerts from the WHO and the EU and the current financial recession of the country, political leadership should guide all these efforts to move Greek food policy from an exclusive food safety focus to an integrated model of food safety, nutritional orientation and food supply chain sustainability to support the protection of public health, social security and balance and the environment. The current and potential desirable status of the Greek food policy is presented in Figure 9.4.

Figure 9.4: Greek Food Policy: its current and potentially desirable status
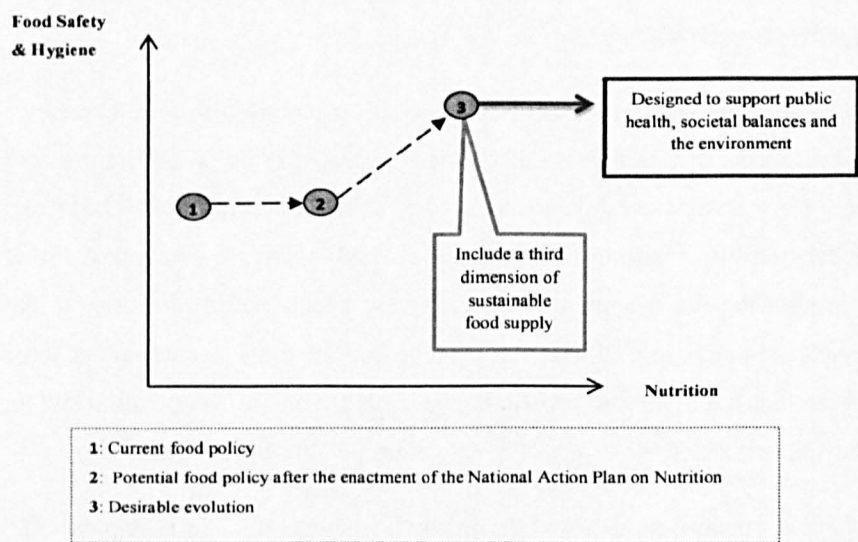
Source: Author

This thesis suggests that these three dimensions should be designed so as to promote and support

1. public health by eliminating the food-related health problems of the Greek population as outlined in Chapter 2,

2. societal impact by eliminating inequalities and poverty, especially under the pressure of the economic crisis

3. ecological/environmental sustainability of food production, distribution and consumption.

Therefore, this thesis adds to the current efforts of the Greek food policy the importance of adopting an integrated model of food policy. This should include the following:

- Increase food safety and hygiene of the available foodstuffs by improving the controls and inspections and by developing communication channels and better cooperation between the responsible Ministries.

- Improve the value of nutrition by enacting the National Action Plan on Nutrition and by creating more and better actions to influence the nutritional habits of the citizens.

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- Creating a sustainable food supply orientation by following the proposals of the WHO and the EU Commission in order to promote social security.

Moreover, another important finding was the need for the State to take initiatives in order to move the Greek food policy forward and develop effective initiatives to promote healthy eating habits in the country (see Section 8.7).

So, based on the research, the key State agents that should lead this effort are the Ministry of Food and the MoH. Specifically, the Ministry of Rural Development and Food should create a separate **Department of Food Policy** which would be responsible for the development of an integrated, evidence-based food policy for the whole country, based on the specific needs of the different target groups of the population along with global and European guidance. The same Ministry is already responsible for the agricultural policies of the country, as discussed in Section 4.6, but now should make sure that the agricultural policies would be adherent to the national food policy and to the included nutritional policies and initiatives. This was also proposed by Barling (2007), who supports that agricultural policies should be a part of the wider policies in order to deal with the complex food systems and tackle public health negative outcomes.

Another very important role of the Ministry of Rural Development and Food, in the context of food policy development, should be to control the power of the food industry and the other choice-editors that jeopardise citizens' health. On this basis, market monitoring mechanisms should change and become transparent and reliable, as they have been accused of the opposite (see Section 8.4), probably via better coordination of the controls from the current responsible agents under the umbrella of the Ministry of Rural Development and Food. The development of a Monitoring Department within the Food Policy Department would be helpful in fine-tuning the efforts of all the monitoring mechanisms and agents at a national and local level.

In addition, the Ministry of Health, Nutrition and Sports should be responsible for the nutritional policies that would also embrace the dimension of social nutrition. The nutritional policies would stem from the wider food policy developed by the Ministry of Rural Development and Food and the **Department of Nutrition** within the MoH should be responsible for their development, implementation and monitoring.

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Based on the suggestions of the EU and the WHO, current efforts to reinforce nutrition in a policy context are the renaming of the Ministry of Health and Social Solidarity to Ministry of Health, Nutrition and Sports since October 2010 and the development of the National Action Plan on healthy Nutrition and Eating Disorders (see Chapter 4 p. 104), which is a very good plan for a national nutritional policy but it has not been legislated and implemented yet, as was revealed by the interviews (see Chapter 8). This thesis suggests that the new Ministry should pay a lot of attention to the effective development of the "Nutrition" department in order to overcome the structural, organisational and communication weaknesses that have been identified in the S.W.O.T. Analysis (see Section 9.6.1). Based on the findings of this study, this research suggests that the following should be considered:

- For the effective development and implementation of a national nutritional policy, cooperation is vital among all responsible agents, appropriate job and responsibilities allocation in order to avoid conflicts, modernisation of the structures and bureaucracy reduction.

- Any initiatives should have long-term orientation, not be fragmented and be regularly monitored by the use of predetermined indexes in order to be adapted to environmental changes.

- All initiatives should be implemented after careful design, monitoring and research in order to avoid resource waste.

- For the staffing of the departments, scientists of different fields should be employed. Nutritionists, physicians, epidemiologists, researchers, managers, public health specialists and social marketers need to cooperate.

- Stricter controls of the private agents that affect the food system should be developed.

- Nutritional policy is directly connected to the food policy of the country, therefore, the improvement of the national food policy so as to embrace nutrition and direct cooperation with the responsible agents of the national food policy, i.e. the Ministry of Rural Development and Food is vital.

- Finally, informing the public about all policies and actions is a must in order to increase transparency and trust towards the State. The need for trust and transparency in the political scene was also highlighted by Michael Thomas in

the concept of "social capitalism" (Thomas, 1999 cited by Hastings et al., 2011)

In this context and based on the exigencies of the current situation as they have been revealed through this study, the following sub-departments should be included:

- Department for the research of nutritional issues (recording of eating habits of the population and providing nutritional guidance)

- Department of nutritional control (coordinates the efforts for healthy nutrition with the food industry, the food outlets and controls food marketing)

- Department of nutrition information and education (responsible for downstream initiatives, website for healthy eating and healthy eating information)

- Department for special issues (nutrition in specific places like education institutes, hospitals and jails and nutrition for specific groups of the population like diabetics)

- Department of emerging conditions about nutrition (e.g. food scandals)

The main challenge is the cooperation between the Ministry of Rural Development and Food with the Ministry of Health, Nutrition and Sports in order to integrate food with health and also in order to develop those food, agricultural and nutritional policies that could work together to protect and improve citizens' health. The need for cooperation and better communication was also stressed through the interviews with key stakeholders from the three sectors of the food system (see Chapter 8).

Finally, the criticism derived from the interviews with key stakeholders was that there is no responsible agent to coordinate actions towards nutrition and that any councils that had been developed in the past were short-lived, hence they failed to deliver the appropriate results. Therefore, this thesis suggests what is also included in the article of Lang et al. (2005) about policy councils in the UK, i.e. that in order to develop a strong cooperation between the responsible agents, which in the case of Greece should be the two Ministries mentioned before, there should be a **National Nutritional Council**. This Council should be the link between the Ministry of Rural Development and Food that would provide the food policy framework and the Ministry of Health, Nutrition and Sports, which would provide the nutritional policy framework, in order to make sure that the nutritional policy is aligned to and coherent

with the wider food policy of the country. The need for a National Council was also highlighted by the interviewees from the State sector (see Chapter 8).

In the context of the economic recession, these proposals are not based on high expenditure, rather on a reconstruction of the current agents.

9.8 Integrating Social Marketing Theory in Food Policy

The aim of this thesis is to understand the role that social marketing can play in a food policy context and examine whether social marketing initiatives could be part of a food policy along with other activities. In addition, it has investigated whether social marketing can and should affect food policy decision through upstream social marketing activities.

All the key interviewees have included social marketing initiatives in their proposals, some as a main component of a national strategy for eating habits improvements and others as a complementary approach (see Section 8.6). Moreover, according to the literature review about the relationship between social marketing and policy, it was revealed that these two can and should cooperate in order to maximise the impact of the proposed initiatives (Bentz et al., 2005, NSMC, 2006, Novelli, 2007, Stead et al., 2007b, Wymer, 2011) Therefore, through this research, the relationship between social marketing and food policy has been surveyed within the Greek reality. Also, Lefebvre (2011) supports the integration of social marketing into public policy in order to develop better and more effective initiatives. These links between social marketing, Greek food policy issues and food policy in general are presented in Table 9.8.

Table 9.8: Relationship between research findings, social marketing theory and implications for food policy

Research findings about weaknesses in the Greek Food System	Social Marketing elements	Contribution to food policy
The State must pay more attention to the people (lack of governmental support)	• Citizen in the centre of every attempt • Formative research • Segmentation and targeting based on formative research • Public policy marketing	Understand the influencers of eating behaviour and create initiatives and policies based on the needs of the specific population.
There is lack of resources due to the economic recession and the current policies have wasted lots of money	• Formative research • Pre-testings • Monitoring • Evaluation	Create efficient policies and anticipate waste of resources because of ineffective policies. Better budget allocation to effective initiatives.
Current policies and initiatives are mostly based on EU and global directives and fail to outline and adapt to the Greek reality		Evidence-Based Policy
Unhealthy food marketing is paramount and healthy foodstuffs are not easily available	• 4P's (place, price, promotion, product) • Exchange theory • Competition concept	Make healthy food more predominant, more easily available and reduce perceived costs.
The relationships between the food system actors especially between the State and Civil Society/Food Supply Chain are not very good and there is lack of cooperation	Relational thinking	See other organisations as customers and try to create sustainable relationships with them.
Low confidence of the citizens and the Civil Society, Food Supply Chain organisations towards the government.	Relational thinking	Build strong and long-term relationship by providing transparency, information, by listening to citizens and by taking action to protect them.
There is lack of planning and Greek initiatives are discursive	Total process planning model	Adoption of a simple method of planning, developing, implementing and evaluating policies in a permanent, long-term way.

Source: Author

In Section 9.4, dealing with downstream and upstream social marketing, it has been shown that social marketing theory provides the tool to overcome some barriers in order to survey the influencers of people's eating behaviour (through formative research) and help understand the forms of healthy eating competition, its strengths and weaknesses concerning healthy behaviour and the costs that the adoption of

healthy eating habits involves. The exchange theory (Hastings, 2007) also facilitates the understanding of the things that people are willing to sacrifice in order to adopt healthy eating habits.

Moreover, in the context of the economic recession in Greece, but also in other countries of the world, it is very important to reveal the monetary and non-monetary costs of the adoption of healthy behaviours. This is also another issue that social marketing could bring to the surface with the use of formative research.

The failure of current theoretical models to explain people's behaviour strengthens social marketing contribution, which, based on formative research, helps understand it under specific circumstances in specific places and then develop tailor-made initiatives to help these people modify their behaviour. For example, the same happened in the case of New Zealand's national social marketing healthy eating programme, where a formative research took place in order to develop specific initiatives based on the specific needs of the target audience (TNS, 2007a, TNS, 2007b). So, this thesis suggests that it is more rational to try to understand the behaviour influencers of specific people in specific settings rather than adopt already developed theory models to explain all sorts of behaviours. This does not mean to repel theoretical models of behaviour change but rather use them as a basis to broaden our knowledge and understand some general principles that could facilitate the interpretation of our own findings. The same concept has been adopted by Darnton (2008) in his report about behaviour change.

Furthermore, the tension between long-term and sort-term costs and benefits of healthy and unhealthy eating habits is another problem that social marketing tries to eliminate through the tools it provides. Specifically, through formative research, it can pinpoint the competitors of the desirable behaviour (healthy eating). Then, it can reveal the disadvantages of the competition and by developing the 4P's in an appropriate way it can promote the short-term benefits that the desired healthy behaviour could bring to the people, such as good performance on everyday activities and appearance improvement (Hastings, 2007, Kottler and Lee, 2008). At the same time, the negative short term (like appearance problems and lack of vitamins) and long term consequences (like cardiovascular diseases and diabetes) of the competitive behaviour (unhealthy eating) could be promoted to prevent people from adopting

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these behaviours or to alter their eating habits. These data should be taken into consideration by policy-makers in order to develop effective and citizen-centric initiatives. The citizen driven policy initiatives have also been emphasised under the term "public policy marketing" (Buurma, 2001), where policy makers try to understand citizens' needs and develop policies based on them in order to build strong relationships and trust. This notion was also adopted by other researches in order to develop more effective initiatives as in the case of the Cookwell Programme in Scotland, where interventions were based on the results of a formative research with a sample of the target audience (Stead et al., 2004). Also, in the case of Greece this was supported by Soultatou et al. (2011).

On the other hand, it has been revealed that eating behaviour is affected by a variety of factors, not all of which are related to individuals. Hence, social marketing theory that is based only on the notion that knowledge increase can lead to altered attitudes and finally behaviour change should not be adopted in isolation but only as a first step leading to specific structural and environmental changes (Tilbury et al., 2005). It is therefore recommended that upstream social marketing is inevitable for successful behavioural change. This was also supported in the literature review (Stead et al., 2004, Hastings et al., 2011) where it is highlighted that social marketers should do what corporate marketing does; lobby and move upstream in order to achieve structural and environmental changes.

The Total Process Planning Model (see Figure 3.2), is nothing more than an organised planning methodology of interventions (Tilbury et al., 2005, Caraher et al., 2007) and it can be used in every case where lack of planning is observed leading to failure of the initiatives. This model can facilitate the systemic thinking that is vital for sustainable initiatives that could lead to sustainable change. This has also been supported by the UK National Institute for Health and Clinical Excellence (2007), which reinforces the notion that many initiatives fail to meet their objectives due to lack of good planning and monitoring.

This research revealed that both the primary target audiences selected, i.e. undergraduate students and the key interviewees, agreed that social marketing can have an impact on their eating behaviour, but this is not the only influence or a factor that would totally change their eating behaviours. On the contrary, more emphasis

was placed on the impact of the wider environment and the lack of supportive policies that have led them to adopt unhealthy eating behaviours. This is also raised by Hastings (2003b), Darnton (2008) and Lang et al. (2009) who say that, probably, social marketing can have an impact on behaviour change but environmental and structural changes are also vital to reverse the ill health of the population.

Therefore, this thesis suggests that social marketing is not a panacea. It is a tool that could have a positive impact on changing eating behaviours but any efforts to promote healthy eating habits should include other initiatives like education, legislation, food marketing reduction, advocacy and change in culture. So, this thesis underlines the importance of the supportive role of social marketing in bringing about essential behavioural changes. This opinion was also presented by the social marketing expert Gerard Hastings (2003b and 2006), who supports that social marketing can have the effect of altering people's behaviour but there are also other things that policy-makers should take into consideration in connection with the wider obesogenic environment.

In addition, trying to answer the question raised on p. 85 (Chapter 3), regarding what should come first, this thesis, based on the Greek situation, recommends that there be simultaneous initiatives targeting individuals and improving the wider environment, reinforcing Hastings' (2007) opinion about the need for both downstream and upstream initiatives and the need to curb the notion of blaming the victim (WHO/Europe, 2006a).

So, what this research adds to the current wider theory of social marketing is the importance of developing social marketing programmes always including a fifth P for Policy, which would include all these initiatives that would ensure that all other efforts, i.e. branding, positioning, price, place and promotion of healthy eating behaviour would be in place and would be supported by a citizen-friendly, citizen-centric environment.

In the case of Greece, this thesis suggests that social marketing theory, and especially the introduction of the Total Process Planning Model (NSMC, 2006), is an important step that policy makers and health promoters should adopt. This would help to develop and implement specific policies and initiatives that would be well organised

and designed based on the needs of the citizens and of specific vulnerable groups of the population (target groups); in the case of Greece, literature (Soultatou et al., 2011) showed that policy makers decide what people need (top-down approach) without taking into consideration their specific needs. Moreover, constant monitoring, evaluation and follow up to improve the current initiatives and policies should be embraced by the Greek policy makers and the organisations responsible for their implementation.

So, this thesis suggests a food policy model that adopts social marketing components in order to be appropriate for delivering health and social outcomes (Figure 9.5)

Figure 9.5: Food Policy Model that Adopts Social Marketing Tools
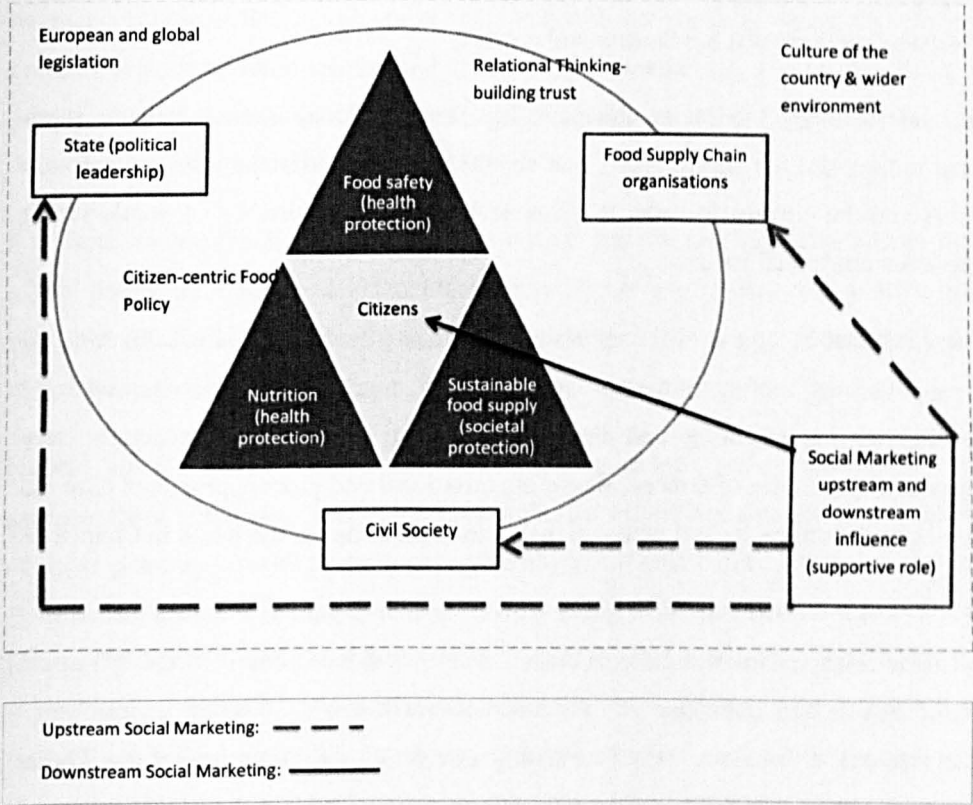
Source: Author

Based on this proposed model, food policy should adopt three main aspects of social marketing. The first is the citizen-centric approach that social marketing promotes. In this context, all the components of the food policy, i.e. the three dimensions of

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nutrition, food safety and sustainable food supply should be developed based on the needs of the citizens and endeavour to affect the factors that influence healthy eating behaviours (see Figure 9.1). By developing all three dimensions around the citizen, it is more likely to protect health, reduce social inequalities and protect the environment where the citizen lives.

The second concept that food policy should incorporate from social marketing is relational thinking (Hastings, 2003b). Relational thinking includes the development of strong relationships instead of transactions between the main actors around a healthy behaviour. So, good relationships should be developed between food policy actors (State, Civil Society and Food Supply Chain) and the citizens. In the case of Greece, this relational thinking could also provide a channel for the government to increase people's trust and cooperation. This situation could lead citizens to accept more easily any "hard" policies that the State would enforce.

So, the Triangle Model of Food Policy (Lang, 2005a) should include these relationships and the strong bonds that should be developed among the food system actors and the citizens in order to promote healthy food policies that would tackle important nutritional issues.

The third issue is the use of the total process planning model (NSMC, 2006) as a tool to organise any policy initiatives and hence to adopt a systematic approach of developing, implementing and monitoring food polices. This approach is very important in the case of Greece, where organisational and process problems have led to ineffective efforts to deal with national nutritional issues as discussed in Chapters 8 and 9.

All these relationships and policies should also be developed based on the influences of the culture and traditions of a country because it is vital that the social change interventions be unified with the existing culture of the target audiences (Dutta-Bergman, 2003). Also, the wider environment of a country like the weather, the soil and the production capabilities can affect policy choices. For example, in Greece there is the advantage of the Mediterranean Diet's products, like fruits, vegetables and herbs, while in other countries these products should be imported. Moreover, global and European legislation and directives affect all these decisions and the flexibility of

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the local policy makers. Nevertheless, this thesis suggests the development of strong political leadership in the case of Greece.

Also, this model shows the contribution of social marketing in affecting the individual (downstream initiatives) and the policy makers and people and organisations that can affect food policies (upstream initiatives)

Focus Groups and Interview analysis showed that there is an urgent need for cooperation between "soft" and "hard" policies. Participants asked for better labelling but also for education on how to read labels, they asked for healthy alternatives inside and around education institutes, they complained about the situation in school canteens, where the law is not implemented and some required food marketing elimination and fast-food closure. There were also participants who preferred balanced solutions like better marketing for health and healthy eating in order to create a balance between healthy and unhealthy food marketing. The need to educate people to read the labels on food packages was also raised by Baltas (2001) and Aristidis Daskalopoulos Foundation (2009).

All these views should be relayed to the policy makers and key stakeholders that affect policy in order to develop effective policy measures that would have the potential to tackle the current nutritional problems in Greece as they have been discussed in the second Chapter.

Hence, upstream social marketing initiatives can induce policy stakeholders to promote these initiatives, "soft", "hard" or both, that would facilitate the improvement of the population's health by introducing healthy nutritional habits. At the same time, downstream social marketing initiatives, always along with other actions, can co-exist in an effective mix of food policy actions to participate in consumer choice editing concerning nutritional issues. The combination of upstream and downstream initiatives was also highlighted by Noble (2006) and other academics (Hastings and Donovan, 2002, Wallack, 2002, Hastings, 2007, Lagarde et al., 2007).

Therefore, this thesis suggests that the Greek food policy should adopt a more citizen-centric and integrated food policy model in order to embrace the three food policy dimensions. It also needs to strengthen the relationships between the key stakeholders and the citizens in order to increase trust and desire for cooperation. This was also

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proposed by the National Action Plan for Healthy Nutrition and Eating Disorders 2008-2012 (Hellenic MoH, 2008). Moreover, it should adopt a better planning process to organise any initiatives and through monitoring to evolve and improve them and all the above in the context of the European and global environment, given the peculiarities of the Greek culture.

The supportive role of social marketing should not be omitted. Downstream social marketing initiatives could help people to adopt healthy eating behaviours while upstream social marketing initiatives could help create healthy eating supportive structures and environments.

These suggestions could be implemented in other countries as well but every time the unique characteristics of the local culture should be taken into consideration (Lefebvre, 2011).

Finally, this thesis does not recommend the use of social marketing in order to create fancy, expensive social advertisements and the expenditure of large amounts of money, as in the case of the UK (DoH, 2009). This action, in the case of Greece and under the economic recession, could be catastrophic for the future of the economy. It perceives social marketing as a good public health approach (Walsh et al., 1993) which can also deter the waste of resources by the provision of constant research, evaluation and monitoring. What is suggested is the adoption of specific social marketing elements (see Figure 9.5 and Table 9.8) in order to promote a healthy and integrated food policy for a country with many nutrition-related problems. Prior to this, a good, in-depth understanding of the notion of food policy by the key stakeholders and policy-makers is vital.

The economic recession is a challenge to the Greek policy in general. There are contradictory studies in the literature about the effect of economic recession on nutrition. Morris et al. (1994) describes a connection between low income populations and the adoption of unhealthy eating habits, while Economou et al. (2008) found no significant connection between these two variables.

The optimistic scenario says that the recession could lead Greeks to their traditional lifestyles and the Mediterranean Diet and hence to the improvement of their health. This shift it is also supported by the wider literature (Wahlqvist et al., 2005, Popkin,

2006, Willett, 2006) and the Greek literature (Trichopoulou and Lagiou, 1997, Panagiotakos et al., 2007c). This would lead to the so called "re-localisation" of food which has been seen as the future of the global food systems (Lang, 1999).

On the other hand, the pessimistic view is based on the power of the big, global, food companies which would not allow a turn like this as seen in the developed countries hitherto (Caraher and Coveney, 2004, Hawkes, 2005, Hawkes, 2006). Therefore, this recession could lead to a more catastrophic deterioration of the Greek people's health, where poor people would consume more unhealthy foodstuffs (Lang & Caraher, 2001, Stead et al., 2004).

Chapter 10: Reflections

"The issue of nutrition is political" (interviewee C11)

This final chapter includes the reflections of this thesis. It includes an effort to generalise the findings from the research with a sample of people to the wider population of Greece and of other countries and settings in general.

In this context, this chapter first presents the contribution of this thesis to the current knowledge in terms of people's choice, social marketing, food policy and the role of the Greek food system actors. It then describes the limitations that this research includes and as a result, opportunities for future researches are proposed and a personal note is included at the end.

10.1 Contribution of the Research to the Current Knowledge

First of all, it has been seen that healthy eating is a complex situation. People are aware of the major effects that food can have on their health but this is not enough. People are asked to make the right choices, but letting people make decisions is unsatisfactory. Healthy eating is not only about knowledge and attitudes towards healthy eating. There are structural factors that influence consumer choice like food policies, power allocation among the food system players and supportive micro and macro environments.

The structures of the society influence people's choices but in Greece, based on the findings, the main problem is structural. Lack of communication, wrong job allocation and overlap within the food policy system, policy corruption and bureaucracy in governmental organisations hand over the power to the food industry and diminish the role of the State. These imparities are creating an obesogenic environment that does not support any effort towards healthy eating. So, this thesis emphasises the need for structural changes in the food system in a way that would promote the population's health.

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In this context of a healthy food system that would support healthy eating choices, food policy plays a very important role in terms of nutrition, food safety and hygiene of foodstuffs and environmental impact of food production and consumption. So, this thesis suggests that food policies should balance these three dimensions and try to promote them together in order to achieve maximum effectiveness and protect the citizens. Especially, Greek food policy should pay more attention to the nutritional and environmental dimensions in order to achieve this objective.

Food policy should also adopt a citizen-friendly, citizen-centric approach, where priority of every action, reform or structural change should be consumer health, as outlined in the findings and in the literature (Buurma, 2001, WHO/Europe, 2008). What this thesis suggests is a citizen orientation of the food policy. This is also what social marketing theory suggests, i.e. the consumer should be at the centre of every initiative (Hastings, 2007). In order to achieve this, policy makers should rely on evidence (evidence-based policy) from international and mainly national data in order to create the policies that better fit into the situation of the specific country.

Furthermore, a better communication and collaboration could exist between the key players of the food system. The tensions that the Triangle Model of Lang (2005a) mentions should be replaced by better cooperation among the three main sectors of the food system. Academics should provide their knowledge about healthy eating and about ways to support healthy eating choices. Social marketers should provide data about people's needs (formative research). Policy makers should be based on this evidence in order to develop and promote effective food policies. The food industry should keep pace with the regulations and food policies and provide healthy and safe foodstuffs. NGOs should supplement the State in developing and implementing healthy eating initiatives.

Concerning social marketing, this research suggests that it is an approach that could facilitate the adoption of healthy eating habits by providing specific actions concerning the 4P's, i.e. Product, Place, Promotion and Price. On the other hand, it has been seen through the research that there is great need for policies to develop appropriate conditions supporting healthy food choices, because food choice is a complicated matter affected by many factors. Therefore, social marketing initiatives should always include a fifth P for Policy. Policy would make sure that all the 4P's are

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developed and promoted in supportive environments and not under the pressure of the food industry and the lack of healthy alternatives. This is an issue not only for Greece but for other countries that face imbalances among their food system players.

The research also found that in Greece, Food Policy, as an area of activity, has not the credibility and status that it should. As with many other things in Greece, it is an issue that has to be dealt with because the E.U. says so. Therefore, one role of social marketing, with its 5P's, should be to inform policy makers about the peculiarities of food and about the better ways of developing food policies to promote healthy, safe and ecological eating. Social marketing should be introduced in Greek Food Policy in order to promote its multifaceted role which should include three dimensions: healthy nutrition, safety and hygiene of foodstuffs and environment-friendly food production and consumption.

Moreover, in Greece there is a need to educate those occupied with food and public health policies at all levels about social marketing and food policy in order to achieve all the initiatives proposed by this thesis. It is remarkable that there is no education institute in Greece that provides such specific curriculum, so the implementation of their principles is very difficult.

Social marketers should base the development of their upstream and downstream initiatives towards nutrition on formative research about their target population(s). A linear approach of people's food choices cannot cover the complicated issues that affect nutritional habits, which are mainly influenced by other people (like family, peers and friends) and by the actions of the food system actors. Moreover, the theoretical models of behaviour that go beyond the individual, like the Social-ecological Model of Change (Dahlgren and Whitehead, 1991) are better than the linear ones but are still static and fail to include the dynamics and the complexity that surrounds food choices and eating habits. So, the theoretical models can be used as a basis of thinking but the development of any initiatives should be strictly based on the unique needs of the target populations.

This research also reveals the weakness of Popkin's model (Popkin, 2006) of nutrition transition, which is not apt to explain the transition of the Greek society and other OECD countries that become poorer due to the economic recession. This happens

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because Popkin's model had been designed to explain the nutritional problems that poor countries face when they become richer, therefore, it should be used with caution in the case of countries like Greece and should be adapted or replaced with a more appropriate model.

Food policy and social marketing in Greece are two concepts that seem neglected. This study revealed that there is no integrated food policy and the nutritional aspect is missing from the current legislation and policy plans. Any initiatives towards nutrition improvements only inform people about healthy and unhealthy eating consequences in order to increase knowledge without considering the social factors that affect food choice.

In fact, social marketing techniques could help policy makers to understand the social aspects of nutrition and include them in food policy formulation in their effort to create a public health orientation (upstream social marketing). Also, social marketing programmes can be included in policy plans for the improvement of nutritional habits of the population (downstream social marketing) along with other initiatives in an integrated food policy context.

Another important issue is the trust of the citizens in government and the other players of the food system, like the food industry. If people do not trust the government they will not be willing to adopt any of their recommendations and policies. So it is vital for governments to create strong relations of trust with the citizens by promoting the transparency of any process that they undertake such as the development of a food policy. Therefore, food policies should be developed, implemented and monitored in a way that would not create any suspicions about the motives of their developers.

Systematic monitoring of food policy implementation is also advocated by this thesis, in order to measure the effectiveness and lead to any appropriate improvements. This process will increase the impact of food policies on people's health.

Finally, the findings of this research add two main concepts to the current notion of social nutrition; the idea of choice editing adopted by all the three sectors of the food system in an attempt to promote healthy eating habits (State and Civil Society) or to increase their profits (Food Industry) and social marketing as an approach to deal with nutritional problems through the social dimension of nutrition.

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10.2 Limitations of the Research

The main constraints of the present research concern the research methodology used. The problems and disadvantages of the use of semi-structured interviews and focus groups are the main limitations of this research.

Concerning focus groups, the disadvantages linked to group interviews can apply in this case too. The main problem is the predominance of a specific speaker or a small number of speakers in a group (Merton et al., 1990). Despite the efforts of the researcher to maintain a balance between the participants, there were people in some focus groups who did not speak a lot, not because other people covered them but because they were shyer than others or because they did not have a lot of things to adduce. Moreover, group dynamics (Denzin and Lincoln, 2008) can have an influence on the responses of some participants who may have reported different things to what they truly believe in order to avoid confrontation with other members of the group.

Concerning the unstructured interviews, there is a similar limitation that may occur in focus groups as well. Despite the efforts that have been made to minimise the errors that may occur because of the interaction between the interviewee and the researcher, it cannot be ruled out that the interviewee may feel uncomfortable and more embarrassed to reveal a whole range of issues that s/he could probably discuss more easily and frankly with a friend or a colleague or a member of his/her family. The researcher tried to establish rapport with the interviewees but the fact that the researcher is a stranger can impact on the interviewees' responses (Denzin and Lincoln, 2008). This was also revealed in this study as it was sometimes requested by the interviewees not to include some of the things that they said in the findings of the study.

Another issue that may arise concerning this study is the fact that the findings had to be translated into English and there, despite the fact that the translations were double-checked by the researcher and the external supervisor, some meanings may have been lost in translation.

A further disadvantage is the fact that the samples used for the research were not representative of the population. The selection of the subjects was based mainly on

convenience and hence the data should be projected with great caution to the wider population where the samples came from.

Furthermore, because there were time and resource restrictions and the key stakeholders of the food system are many and come from many sectors, it was impossible to contact some interesting agents like the consumer unions that did not respond to our call for an interview. Their view probably could have provided another aspect of the current problems that the Greek consumers face. So, a future research should include them as well. The same problem existed with undergraduate students. For convenience reasons, only students in Athenian education institutes participated and probably, the views of undergraduate students of the rural areas would have created different assumptions about the eating habits, motives and barriers of this target audience.

10.3 Recommendations for Future Research

The first and most important recommendation for future research is the development of a health map for the Greek population, that will give a picture of the health problems, like obesity, NCDs, vitamin deficiencies etc., that the Greek population faces in different places of the country. In order to shape effective food policies, there is a need to understand the needs of the population of a country and of different, special sub-groups within it, as is also proposed by the WHO (WHO/Europe, 2008). For example, based on this research, the dietary recommendations for Greece are outdated and need updating and there are not many studies about the factors that can affect their habits. This can happen only if we acquire a full, clear picture of the current nutritional habits' influences and epidemiological implications concerning the population through long-term, constant research.

A new model should be developed to replace the nutrition transition model of Popkin in order to explain in a more appropriate way the nutritional problems that countries, like Greece, which were rich and due to the economic recession are becoming poorer, are facing and how these could be averted. Moreover, concerning the theoretical models of behaviour change, more dynamic models should emerge through research in order to interpret the complexities of human behaviour concerning the decisions between healthier and unhealthier food choices.

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Due to time and resource restrictions, only a group of the population was investigated (i.e. undergraduate students) as a case in order to support the role of social marketing in the context of a food policy to improve nutritional habits. Future research needs to shed light on the social determinants of food choice for the total population in order to shape a compound national food policy that would concern all groups of the Greek population.

Future research should also include all the emerging issues that link food to public health, as the current research showed that Greek food policy is partially linked to public health through the dimension of food safety and hygiene. The social aspect of nutrition was investigated in this research, but this is only one step towards an integrated food policy. Therefore, future studies should focus on the al and scientific dimensions of food and its link to public health.

Moreover, it is suggested that the role of social marketing in food policy should further be explored in order to develop upstream social marketing initiatives that would target policy-makers and the food industry. The main components that an upstream social marketing initiative should include in order to target these audiences should be identified. Also these components should be first pre-tested and then implemented.

When this research started there was no sign of the forthcoming economic crisis. Therefore, there is a need to pinpoint, through new research, the initiatives that will have the best result with the best resource allocation, i.e. to evaluate the cost-effectiveness of the proposed initiatives and choose among them the most efficient.

In this context there should be an economic study in order to reveal the current costs related to unhealthy nutritional habits in order to estimate the savings that a prevention strategy would accrue. This study would also form a good incentive for food policy makers to adopt and promote the most efficient strategies and policies in order to promote citizens' good health through healthy eating.

Finally, the impact that the economic crisis could have on people's eating habits and food choices should also be measured and this is a great challenge for the food policy maker of the future: to balance poverty, greater social inequalities and healthy nutritional habits.

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10.4 A Personal Note

It is difficult for me as a novice researcher to phrase my own critique about the current situation in Greece. What went wrong and why did the policies fail? The fact is that the current policies in Greece have failed to meet the high standards of globalisation. In the case of food, Greek food policy has also failed to support the citizens who are nowadays among the fattest people on earth with any implications that this situation could have.

Despite my age, during recent years I have witnessed the rapid rise and the fall of a country that feels proud of its history and ancestors.

When I was born in the 80s the country was undergoing a spectacular development. There were also developments in the food sector. New foodstuffs, fancy advertisements, candies, ice-creams, doughnuts, pies with cream and coca-cola. These are the foods that I mostly remember from my childhood. My grandmother told me a story about my grandfather yelling at her if there was no coca-cola on the table.

I remember the little grove across my house where I could play with my friends which is now turned into apartments. I also remember the voice of the woman who sold eggs on the street and the person who brought my grandmother yogurt on our doorstep. To have eggs and yogurt today I should go to the supermarket.

I also remember that people around me were talking about the abundance of jobs, food, choices and now I see the same people protesting outside the Greek parliament.

It was at that time that financial development should have been accompanied by an equivalent development of societal structures and policies and it is a fact that this never happened. On the contrary, corruption and bureaucracy grew and now we are fighting as a nation to have the self-evident dignity that we should. We are fighting for health, education and security.

In this context, I can see why people do not trust the government and the politicians. I can also understand why Greek people are fat and why the State is absent.

When this research started, in 2008, Greece was not yet facing the current major economic crisis. Nevertheless, some interviewees from the food system organisations

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had expressed a concern based on the current global recession. The main concern was about lack of money, so any social concerns would be put aside by the government.

On the other hand, it is a fact that despite any crisis people will keep eating and include food in their social and cultural lifestyles. This is the peculiarity of food that separates healthy eating from other behaviours like smoking. People cannot just quit. Hence, food policies should not be neglected in the name of financial recession but they should be stronger and more targeted to help the citizens make the right choices in an environment that would be likely to facilitate the promotion of cheap, unhealthy foodstuffs.

This is also a challenge for social marketing which, as we have seen in the literature review, is often seen as a waste of money. Therefore, it is vital for policy makers to understand the advantages that social marketing could provide towards the development of effective food policies in order to protect citizens and help them deal with unequal competition in their attempt to make healthy choices.

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Appendices

Appendix 1: Explanatory- Invitation Letter for Focus Groups' Participants

CITY UNIVERSITY LONDON

Date

Re: Research on food policy and social marketing in Greece.

Dear student,

You are invited to participate in a focus group that will contribute to my doctoral thesis work concerning undergraduate students. Would you consider sharing your perceptions and experiences about nutrition and about food initiatives that target Greek undergraduate students?

The Research Project

This research focuses on nutritional initiatives that could influence the nutritional habits of undergraduate students. Special focus is given on the use of social marketing[3] methods, in cooperation with other initiatives like food policy, legislation, regulations, education, advocacy, health promotion and public health actions.

For the development of a strategic plan to promote healthy eating habits it is important the creation of a map of the motives and barriers that undergraduates have towards healthy eating along with their nutritional attitudes and behaviours. Furthermore, the analysis will focus on your perception about current nutritional interventions and about the role of the main key actors of the Greek food system. The aim is to come up with a plan based on the needs, wants, opinions and culture of Greek undergraduate students.

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[3] With the term social marketing we mean the application of marketing concepts and techniques to achieve specific behavioural goals relevant to a social good which in this case is the adoption of healthy eating patterns.

So, the purpose of this research is the development of a strategic plan for the improvement of the nutritional habits of Greek undergraduate students by analysing:

1. their eating habits and their perceptions about healthy eating
2. their motives and barriers towards healthy eating
3. the environmental factors that can influence their eating choices
4. the sources of getting nutritional information
5. their suggestions about future initiatives and about the role of key actors

The Procedure

Participation is voluntary and you may choose not to participate in part or the entire focus group, or withdraw at any stage of it without being penalized or disadvantaged in any way. If you decide to participate, there will be a focus group of 5-6 undergraduate students from your University/department during a convenient time of the week in the building of your University. I will be the facilitator and no one else will attend the session. The interview will take 90-120 minutes of your time based on a semi-structured questionnaire. Results of the study will be kept confidential and will be recorded anonymously. Data will be used in my doctoral thesis and confidentiality will be maintained in any resulting publications.

Confidentiality and Data Protection

All information collected will be confidential and will not be used to identify individuals. Your identity will be kept strictly confidential and no individuals will be named in the thesis, any published reports, or to any other party or organisation.

Electronic versions of notes will be saved on a computer with password protection and hand-written notes and audio tapes will be stored in a locked filing cabinet. Only the researcher and her supervisors will have access to the data in its raw form. Digital and written data collected will be kept for 4 years, at which point the digital recordings will be wiped clean, and the interviews will be shredded.

Consent

If you wish to take part in the research, please fill in the consent form enclosed.

University complaints procedure

In case of a complaint, City University has established a complaints procedure to deal with any problems experienced by people taking part in research via the Secretary to the Research Ethics Committee. So, to complain about the study, please refer to the project as: "Public Health Promotion: The Use of Social Marketing for the Improvement of Nutritional Habits in Greece". Phone + 44 (0)20 7040 3040 and ask to speak to the Secretary of the Ethics Committee or write to her at the following address:

Anna Ramberg
Secretary Senate Ethics Committee
CRIDO
City University London, Northampton Square, EC1V 0HB
Email: anna.ramberg.1@city.ac.uk

Alternatively, you can contact the Secretary of the Greek Ethics Committee (National & Kapodistrian University of Athens) Ms. Nafsika Violaki by calling 210- 746 1485 and give again the relevant information about this project.

In follow up, I will contact you to confirm whether, based on the information enclosed in this letter, you are interested in participating in this research.

In the meantime, if you have any questions, please do not hesitate to contact me on 6932225622 or 2106540642 or via email on ariadne.kapetanaki.1@city.ac.uk.

Yours sincerely,

Ariadne-Beatrice Kapetanaki, BSc, MSc
PhD candidate in City University London, U.K.
Supervisors: Pr. Tim Lang and Dr. Martin Caraher (City University London) and Dr. Panagiota Sourtzi (National & Kapodistrian University of Athens).

Appendix 2: Explanatory-Invitation Letter for Interviews' Participants

CITY UNIVERSITY LONDON

Date

Re: Research on food policy and social marketing in Greece.

Dear..........................,

You are invited to participate in an interview that will contribute to my doctoral thesis work due to your affiliation with food policy, public health and nutritional interventions in Greece. Would you consider sharing your perceptions and experiences about initiatives that could improve the nutritional habits of the Greek citizens?

The Research Project

This research focuses on nutritional initiatives that could influence the nutritional habits of undergraduate students. Special focus is given on the current food policy in Greece and the use of social marketing[4] methods in cooperation with other initiatives like legislation, regulations, education, advocacy, health promotion and public health actions in order to improve nutritional habits in the country.

A draft plan based on the views of undergraduate students has been developed and we would like to have your opinion about this and on how your organisation can contribute to its implementation. The analysis also focuses on current and potential nutritional initiatives and the role of three key sectors which include the State, the Food Supply Chain and the Civil Society.

So in order to meet the purpose of this research it is importnant to discuss and analyse with you the following:

1. the current nutritional initiatives and food policy

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[4] With the term social marketing we mean the application of marketing concepts and techniques to achieve specific behavioural goals relevant to a social good which in this case is the adoption of healthy eating patterns.

2. the facilitators and barriers for the implementation of the proposed actions

3. the role of key stakeholders and their partnerships

4. the role of social marketing and its coexistence with other initiatives

5. the lessons to be learned that could support future nutritional interventions

The Procedure

Participation is voluntary and you may choose not to participate in part or the entire interview, or withdraw at any stage of the project without being penalized or disadvantaged in any way. If you decide to participate, there will be a face to face interview with me in a place of your choice and the interview will take 30-60 minutes of your time based on a semi-structured questionnaire that will be sent to you, along with the draft action plan, prior the meeting to facilitate your preparation and receive any approvals needed from your organisation. Results of the study will be kept confidential and will be recorded anonymously. Data will be used in my doctoral thesis and confidentiality will be maintained in any resulting publications.

Confidentiality and Data Protection

All information collected will be confidential and will not be used to identify individuals or organisations. Your identity will be kept strictly confidential and no individuals will be named in the thesis, any published reports, or to any other party or organisation.

Electronic versions of notes will be saved on a computer with password protection and the hand-written notes and audio tapes will be stored in a locked filing cabinet. Only the researcher and her supervisors will have access to the data in its raw form. Digital and written data collected will be kept for 4 years, at which point the digital recordings will be wiped clean, and the interviews will be shredded.

Consent

If you wish to take part in the research, please fill in the consent form enclosed.

University complaints procedure

In case of a complaint, City University has established a complaints procedure to deal with any problems experienced by people taking part in research via the Secretary to

the Research Ethics Committee. So, to complain about the study, please refer to the project as: "Public Health Promotion: The Use of Social Marketing for the Improvement of Nutritional Habits in Greece". Phone 0044 (0) 20 7040 3040 and ask to speak to the Secretary of the Ethics Committee or write to her at the following address:

Anna Ramberg
Secretary Senate Ethics Committee
CRIDO
City University London
Northampton Square
EC1V 0HB
Email: anna.ramberg.1@city.ac.uk

Alternatively, you can contact the Secretary of the Greek Ethics Committee (National & Kapodistrian University of Athens) Ms. Nafsika Violaki by calling 210- 746 1485 and give again the relevant information about this project.

In follow up, I will contact you by phone to confirm whether, based on the information enclosed in this letter, you are interested in participating in this research.

In the meantime, if you have any questions, please do not hesitate to contact me on 6932225622 or 2106540642 or via email on ariadne.kapetanaki.1@city.ac.uk.

Yours sincerely,

Ariadne-Beatrice Kapetanaki, BSc, MSc
PhD candidate in City University London, U.K.
Supervisors: Pr. Tim Lang and Dr. Martin Caraher (City University London) and Dr. Panagiota Sourtzi (National & Kapodistrian University of Athens).

Appendix 3: Informed Consent Form for Focus Groups Participants

CITY UNIVERSITY LONDON

Research Project Title: Research on food policy and social marketing in Greece.

This is a research project by the Centre for Food Policy at City University
Researcher: Ms. Ariadne-Beatrice Kapetanaki
Supervisors: Pr. Tim Lang & Dr. Martin Caraher (City University) and Dr. Panagiota Sourtzi (National & Kapodistrian University of Athens)
Contact: ariadne.kapetanaki.1@city.ac.uk

By signing this form I agree to take part in the above City University research project. The project has been explained to me, and I have read the Explanatory Statement, which I can keep for my records.

I understand that agreeing to take part means that I am willing to participate in a focus group with other University students and be interviewed by the researcher.

Data Protection

This information will be held and processed for:

        ❧ Ariadne-Beatrice Kapetanaki's doctoral thesis

        ❧ Resultant papers and publications

I understand that any information that I provide is confidential, and that no information that could lead to my identification would be disclosed in any reports on the project, or to any other party. No personal information about me will be published or shared with any other organisation. Only the student researcher and her advisors will have access to the identifiable information.

Withdrawal from study

I understand that my agreeing to take part in this study is voluntary and I can decide not to participate in part or all of the project, and that I can withdraw my participation at any stage of the project without being penalised or disadvantaged in any way.

Name: ....

Signature: ....……Date: ....

Appendix 4: Informed Consent Form for Interviews Participants

CITY UNIVERSITY
LONDON

Research Project Title: Research on food policy and social marketing in Greece.

This is a research project by the Centre for Food Policy at City University

Researcher: Ms. Ariadne-Beatrice Kapetanaki

Supervisors: Pr. Tim Lang & Dr. Martin Caraher (City University) and Dr. Panagiota Sourtzi (National & Kapodistrian University of Athens)

Contact: ariadne.kapetanaki.1@city.ac.uk

By signing this form I agree to take part in the above City University research project. The project has been explained to me, and I have read the Explanatory Statement, which I can keep for my records.

I understand that agreeing to take part means that I am willing to be interviewed by the researcher.

Data Protection

This information will be held and processed for:

       ❧ Ariadne-Beatrice Kapetanaki's doctoral thesis

       ❧ Resultant papers and publications

I understand that any information that I provide is confidential, and that no information that could lead to my identification would be disclosed in any reports on the project, or to any other party. No personal information about me will be published or shared with any other organisation. Only the student researcher and her advisors will have access to the identifiable information.

Withdrawal from study

I understand that my agreeing to take part in this study is voluntary and I can decide not to participate in part or all of the project, and that I can withdraw my participation at any stage of the project without being penalised or disadvantaged in any way.

Name: ....

Signature: ....Date: ....

Appendix 5: Focus Group Coding Guide

No.	Code of Participant	Gender	Year of Studies	Living with family	Education institute	Annual Income of family	Place of Residence before studies
1	1.1	Female	1	no	University B	€10,001-€25,000	Small city
2	1.2	Male	1	no	University B	€10,001-€25,000	Large city
3	1.3	Female	1	no	University B	Up to €10,000	Town
4	1.4	Female	1	no	University B	Up to €10,000	Town
5	1.5	Male	1	no	University B	€10,001-€25,000	Small city
6	1.6	Female	1	yes	University B	€10,001-€25,000	Small city
7	1.7	Female	1	yes	University B	€10,001-€25,000	Large city
8	2.1	Male	4	yes	University A	Up to €10,000	Large city
9	2.2	Female	2	no	University A	€10,001-€25,000	Town
10	2.3	Female	1	yes	University A	€10,001-€25,000	Town
11	2.4	Female	1	yes	University A	€10,001-€25,000	Large city
12	2.5	Female	2	yes	University A	€10,001-€25,000	Large city
13	2.6	Male	1	no	University A	€10,001-€25,000	Village
14	3.1	Male	2	no	TEI A	Up to €10,000	Small city
15	3.2	Female	4	no	TEI A	Up to €10,000	Town
16	3.3	Male	1	no	IEK B	Up to €10,000	Town
17	3.4	Male	1	no	IEK B	Up to €10,000	Town
18	3.5	Female	1	no	University A	Up to €10,000	Small city
19	3.6	Male	3	no	Private College	Up to €10,000	Town
20	4.1	Female	4	no	University B	Up to €10,000	Large city
21	4.2	Female	4	yes	University B	€10,001-€25,000	Large city
22	4.3	Female	4	yes	University B	more than €25,000	Large city
23	4.4	Male	4	yes	University B	€10,001-€25,000	Large city
24	4.5	Female	4	yes	University B	Up to €10,000	Small city
25	4.6	Female	4	no	University B	Up to €10,000	Town
26	4.7	Male	4	yes	University B	Up to €10,000	Large city
27	5.1	Female	2	yes	Private College	€10,001-€25,000	Small city
28	5.2	Male	3	yes	Private College	more than €25,000	Large city
29	5.3	Male	3	yes	Private College	more than €25,000	Large city
30	5.4	Male	3	no	Private College	€10,001-€25,000	Town

No.	Code of Participant	Gender	Year of Studies	Living with family	Education institute	Annual Income of family	Place of Residence before studies
31	5.5	Female	3	yes	Private College	€10,001-€25,000	Small city
32	5.6	Male	2	yes	Private College	Up to €10,000	Large city
33	5.7	Female	2	yes	Private College	Up to €10,000	Large city
34	6.1	Male	1	yes	University B	€10,001-€25,000	Small city
35	6.2	Female	1	yes	TEI A	Up to €10,000	Town
36	6.3	Female	3	yes	TEI B	€10,001-€25,000	Town
37	6.4	Male	2	no	TEI B	Up to €10,000	Small city
38	6.5	Male	2	no	TEI B	€10,001-€25,000	Large city
39	6.6	Male	5	yes	University C	€10,001-€25,000	Small city
40	6.7	Female	1	yes	TEI A	€10,001-€25,000	Town
41	6.8	Female	2	yes	TEI B	Up to €10,000	Town
42	7.1	Female	2	yes	IEK A	€10,001-€25,000	Large city
43	7.2	Female	2	yes	IEK A	€10,001-€25,000	Small city
44	7.3	Female	2	yes	IEK A	€10,001-€25,000	Large city
45	7.4	Female	2	yes	IEK A	more than €25,000	Large city
46	7.5	Female	2	yes	IEK A	€10,001-€25,000	Large city
47	8.1	Female	4	yes	University A	€10,001-€25,000	Large city
48	8.2	Male	3	yes	University A	€10,001-€25,000	Large city
49	8.3	Female	4	yes	University A	€10,001-€25,000	Large city
50	8.4	Female	4	no	University A	€10,001-€25,000	Town
51	8.5	Female	4	no	University A	Up to €10,000	Town
52	8.6	Female	4	yes	University A	€10,001-€25,000	Large city
53	8.7	Female	4	no	University A	Up to €10,000	Small city
54	9.1	Male	5	yes	University A	Up to €10,000	Small city
55	9.2	Male	2	yes	University C	€10,001-€25,000	Large city
56	9.3	Male	5	yes	University A	more than €25,000	Large city
57	9.4	Male	5	yes	TEI B	more than €25,000	Large city
58	9.5	Male	5	yes	TEI A	Up to €10,000	Small city
59	9.6	Male	5	yes	TEI B	Up to €10,000	Small city