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**Agrofood chain analysis: production, commercialisation and  
consumption of healthy food for population at risk of poverty in Italy**

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*“The big wheel keeps on turning  
On a simple line day by day  
The earth spins on its axis  
One man struggle while another relaxes...”*  
*(Massive Attack , 1991.Hymn Of the Big Wheel, Blue Lines)*

To the person that is experiencing the big wheel of life with me,  
making my relaxing time as wonderful  
and supporting me within the struggling moments.

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## Abbreviations and Acronyms

EFSA	European Food Safety Authority
EC	European Commission
EU	European Union
EUROSTAT	Statistical Office of the European Union (European Statistics)
FAFH	Food Away From Home
FG	Focus Group
ISMEA	Istituto di Servizi per il Mercato Agricolo Alimentare /Institution for Agro–Food Market Services
ISTAT	Istituto Nazionale di Statistica/Italian National Institute of Statistics
OECD	Organization for Economic Co-operation and Development
ROP	Risk of Poverty
RTE	Ready To Eat
RTH	Ready To Heat
RTC	Ready To Cook
R&D	Research and Development
SMEs	Small and Medium Enterprises
WHO	World Health Organizations

## Abstract

Italy registers a fast increase of low income population. Academics and policy makers consider income inequalities as a key determinant for low or inadequate healthy food consumption.

Thus the objective is to understand how to overcome the agrofood chain barriers towards healthy food production, commercialisation and consumption for population at risk of poverty (ROP) in Italy.

The study adopts a market oriented food chain approach, focusing the research ambit on ROP consumers, processing industries and retailers.

The empirical investigation adopts a qualitative methodology with an explorative approach. The actors are investigated through 4 focus groups for consumers and carrying out 27 face to face semi-structured interviews for industries and retailers' representatives. The results achieved provide the perceptions of each actor integrated into an overall chain approach.

The analysis shows that all agrofood actors lack of an adequate level of knowledge towards healthy food definition. Food industries and retailers also show poor awareness about ROP consumers' segment. In addition they perceive that the high costs for producing healthy food conflict with the low economic performances expected from ROP consumers' segment. These aspects induce a scarce interest in investing on commercialisation strategies for healthy food for ROP consumers. Further ROP consumers show other notable barriers to adopt healthy diets caused, among others, by a personal strong negative attitude and lack of motivation. The personal barriers are also negatively influenced by several external socio-economic factors. The solutions to overcome the barriers shall rely on the improvement of the agrofood chain internal relations to identify successful strategies for increasing interest on low cost healthy food. In particular the focus should be on improved collaboration on innovation adoption and marketing strategies, considering ROP consumers' preferences and needs. An external political intervention is instead necessary to fill the knowledge and regulations' gaps on healthy food issues.

## Introduction

Among the enormous range of products nowadays offered by the agrofood sector, it is possible to notice how processors and distributors are constantly trying to match they offer with consumers' choice criteria, based on people changes in lifestyles, attitudes, motivations, preferences and consumption's behaviours. To this extent it is possible to identify consumers as one of the most driving actor of the agrofood chain (Costa and Jongen 2006).

Trying to match the enormous heterogeneity of consumers, processed food commercialisation nowadays include a wide range of convenience food, and quality food that have become more and more an important in the global market. (Marsden et al. 2000, Burch and Lawrence 2005).

To this extent quality food is nowadays associated to the concept of healthy food and healthy dietary habits (Gracia and Albisu 2001). Despite the term healthy food is often abused, it must be underlined that there is not an official definition for healthy food and that healthy eating mainly refers to food based dietary guidelines provided by governmental institutions (Drewnowski and Fulgoni 2008, Lobstein and Davies 2009). Due to the high presence of processed products that include a combination of several ingredients it would be almost impossible to list all healthy food. Within this study it will thus be adopted a definition that bases on the European Commission regulations and on the list of nutrition claims as provided by the European Food Safety Authority (EFSA) (European Food Safety Authority 2009).

Thus hereafter a healthy food is assumed as a food with a *good nutrient profile*, by meaning that it does not contain high amount of nutrients (sodium, total fat, saturated fat and sucrose) whose high intake could be responsible of an increase in disease risk. In addition, a healthy food is also a food with *good nutritional density*, which means that it is able to guarantee a high content of fibres, micronutrients (vitamin and minerals) and bioactive compounds.

Despite food industries and retailers are investing in commercialising products with nutritional added quality and on specific attributes/product promises (Lähteenmäki et al. 2010, Burch and Lawrence 2005), the availability of quality and healthy food is still accessible and consumed only by niches of consumers (Goodman 2009, Olsen et al. 2010).

Meanwhile European consumers pose increasing attention towards food safety and quality issues, ranking them at the top priorities for the EU's agricultural policies. As well they consider among the top five ranked problems and risks related to food consumption the ones concerning diet related diseases, including also obesity and overweight (Eurostat 2011).

Academics and policy makers are already approaching the increasing rise of not communicable diseases (hypertension, obesity, etc.) among western countries in relation to wrong and/or inadequate food consumption (Drewnowski and Popkin 1997, Caraher and Coveney 2003, Chopra et al. 2002, European Commission 2010). To this extent the low socio economic status can determine inequalities in terms of healthy food accessibility thus it can induce an increased health related risk among low income population.

The analysis of weak segments of population is often very sensitive because of their socio-political implications. In addition at present there are applied different official definitions at national and international level for categorising people with low economic possibilities.

Thus at first it is relevant to clarify that this study focuses on the segment of people with present but limited available income, thus with present but limited access to personal or household resources for their own self-sufficiency. According to the literature and the documents analysed this segment of population is often defined as low income, relatively poor or at risk of poverty.

Focusing at the European level, this low income population is defined by the European Commission as the population at “risk of poverty” (henceforth ROP). This definition includes “the share of persons with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income (after social transfers)” (Atkinson and Marlier 2010) (see Appendix 1).

The statistics reports that, in 2011, ROP population in Europe amounted at almost 84 million citizens, about 17% of total European population (EU 27). In Italy ROP population is showing a new increasing trend that could probably worsen due to the persistent economic recession that we are experiencing. In fact in 2011 ROP people has reached 19,6% of total population corresponding to almost 11.900 thousands of persons. Considering the data provided, in an agrifood market demand’s perspective, ROP consumers accounts for a relevant market share within the Italian market.

It is anyway relevant to consider, that as other typologies of consumers, low income people show notable heterogeneous characteristics varying from physiological factors, socio-demographic characteristics such as education, ethnicity and availability of food, to lifestyle factors and knowledge related to diet and health (Holgado et al. 2000, Olsen et al. 2010). Nonetheless, in Italy the segment of low income/at risk of poverty consumers still need to be explored in relation to those characteristics that influence habits and perceptions towards daily healthy food choices.

ROP consumers’ heterogeneity can also be explored as a potential market for the agrofood chain to identify and develop differentiated healthy and quality products (Hawkes 2006). Of course it is clear that the limited socio-economic conditions of these consumers do not allow high economic performances; still it is relevant to explore which are the perceptions concerning the specific barriers and possible solutions of Italian food industries and retailers in relation to the production and commercialisation of affordable healthy food.

Based on the state of art presented, the *general objective of the thesis is to understand how to overcome the agrofood chain barriers towards healthy food production, commercialisation and consumption for population at risk of poverty (ROP) in Italy.*

In order to reach this objective, the thesis exploits a market oriented agrofood chain approach as defined by Grunert et al. (2005). This approach facilitates the inclusion of consumers as part of the agrofood chain analysis in order to reach two specific objectives that follow. The first is to characterise the specific opinions perceptions and beliefs of ROP consumers, food industries and retailers towards healthy food related issues. The second is to provide an integrated analysis of the agrofood chain actors to facilitate the identification of the barriers and possible solutions for an increased accessibility and consumption of healthy food for ROP consumers.

In order to reach the proposed objectives the framework of the thesis is organized as follows:

Chapter one provides an analysis of the theoretical background in order to identify and describe the main relevant internal and external actors of the agrofood chain that could be involved in the production, commercialisation and consumption of affordable healthy food.

Chapter two presents the available baseline data for the selected agrofood chain actors, that are consumers at risk of poverty, food processing industries and retailers. The focus is on the Italian background is grounded also in consideration of the present European context.

Chapter three focuses on the methodology, data and material used. The chapter provides the methodological framework related to the explorative approach applied to consumers, food industries and retailers located in Italy. According to the selected methodologies for data collection and elaboration, the chapter provides the necessary information concerning the interviewees' selection.

Chapter four provides the results of data elaboration concerning consumers, food industries and retailers representatives' perceptions on the barriers towards healthy food accessibility and consumption for ROP consumers and on the perceived possible intervention to improve them.

The final remarks attempt at implementing a critical discussion of the results by adopting an agrofood chain approach and thus matching the outcomes for consumers, food industries and retailers' investigations. Finally it provides a critical analysis of the study carried out and the recommendations for further researches.

# 1. Theoretical background

The chapter bases on the literature review to provide the theoretical framework of the thesis. It aims at defining and describing the agrofood chain actors involved in the investigation. Furthermore it will explore the available literature concerning the policy's context that impacts the agrofood chain relations.

The chapter is divided in four paragraphs: definition and mapping of the marketed oriented agrofood chain and selection of the actors to investigate; literature review on consumers approach towards healthy food, chain's mechanisms among food processing industries and retailers towards healthy food production, commercialisation and distribution; analysis of the literature and policy's reports focusing on the political impact of healthy nutrition.

## 1.1. Agrofood chain approach and mapping

The agrofood chain approach is nowadays widely recognized and exploited in several different conceptual framework with different degree of implementation. (Matopuolus et al. 2007, Ghelfi et al.2007, Grunert et al. 2005, Van der Vorst et al. 1998, European Commission High level Forum 2012). It is thus necessary to clearly define the meaning and the boundaries applied to the present final paper for agrofood chain approach and its further development.

Focusing on the agrofood sector, Davis and Goldberg (1957:2) are considered among the first defining the concept of agribusiness, as "the sum total of all operations involved in the manufacture and distribution of farm supplies; production operations on the farm; and the storage, processing, and distribution of farm commodities and items made from them...".The agrofood chain conceptualization has its roots on the definition of value chain provided by Porter (1985) and previously by Malassis in 1979 (Bertazzoli et al. 2009). The food chain is made of a group of economic entities involved in fulfilling the functions of production, transformation and distribution of the agrofood products, which are linked by functional and structural relationships aimed at meeting the food requirements of the demand (Malassis 1979). In line with Malassis's concept of the chain, the value chain conceptualised by Porter (1985) is expressed by the combination of set of values created by companies, reciprocally interconnected by functional links, from the supply of raw materials until the transformed product for the end-users. Furthermore Kaplinsky and Morris (2001) explain that the food chain analysis include all those factors that determine the participation of different groups up to the commercialisation of the final products gaining particular importance in the complexity of a globalized market.

Van der Vorst (2000) et al. (1998) stress the importance of designing and constantly adapting the food supply chain in order to identify all the possible concerned aspects that may impact on an effective response to end users demand. The identification and coordination of the dynamics occurring along the food the food chain among the internal and external agents is also determinant in guaranteeing economic performances and competitive advantage of whole chain (Bertazzoli et al. 2009).

Since 2000, the Europe Union has devoted political attention towards the development of an agrofood chain oriented towards the consumer with the presentation of the White Paper on Food Safety (European Commission 200) that has been translated in following regulation and applications.

Looking at the world wide increased of food supply, consumers' choice criteria are constantly growing of relevance. By applying the agrofood chain approach, it is possible to identify consumers as one of the most driving actor of the food chain and thus it is necessary to understand how the value chain is able to catch consumers' heterogeneity otherwise to define the market orientation of a food chain (Costa and Jongen 2006)..

A market oriented approach is considered by several authors (Costa and Jongen 2006, Hult et al. 2005, Lafferty and Hult 2001, Lukas and Ferrel 2000, Narver and Salter 1990, Kholi and Jaworsky 1990) as a strength to emphasize product innovation and competitiveness by meeting consumers demand, despite its applicability towards different typologies of product innovation is still argued.

Kholi and Jaworsky (1990: 6) have introduced the term of market orientation as an implementation of the marketing concept by defining it as: "the organizationwide generation of market intelligence pertaining to current and future customer needs, dissemination across departments and organizationwide responsiveness to it". The previous definition of market orientation has been applied to food chain dynamics by extending the definition of term "organizationwide" to "food chain" and "defining market orientation of a value chain as chain members' generation of intelligence pertaining to current and future end-user needs, dissemination of this intelligence across chain members, and chain wide responsiveness to it" (Grunert et al 2005:430).

As previously underlined by Kohli and Jaworsky in 1990, also Grunert et al. in 2005, place relevant importance also on external regulations as part of the market intelligence creation. Market intelligence thus shall include all the exogenous factors that influence needs and preferences of consumers (Grunert 2005).

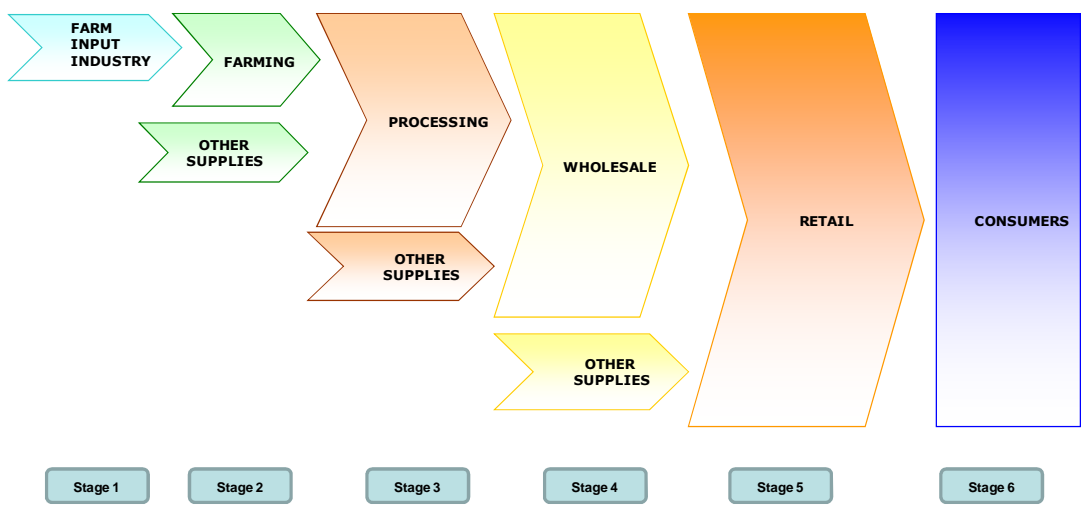
According to Grunert et al. (2005:430), in order to measure and monitor the attitude of a food chain towards a market orientation, it is thus relevant to focus on the following key factors: "characteristics of the end-users served; barriers to the exploitation of opportunities created by heterogeneous and dynamic end-users, characteristics of the market supply; characteristics of relations among value chain members; and regulations".

Looking at the affordable healthy food products to investigate, a market oriented approach is considered as necessary and effective in order to analyze the barriers that food industry and retailers face for their production, commercialisation and distribution.

Having identified the market oriented agrofood chain, it is of utmost importance to design the architecture of the system to study and to define the boundaries of the chain in order to clearly circumscribe the ambit of the study.

Considering the different characteristics of the chains and the several criteria to map a certain chain, Bertazzoli et al. (2009) have identified a mono directional representation of the chain that allows to assess the agrofood chain actors according their functional nature. Here below (Figure 1-1) it is represented the agrofood chain map that the research applies to identify the actors involved in the production, commercialisation, distribution and consumption of affordable healthy food.

**Figure 1-1: Agrofood chain mapping**



Source: own elaboration based on Bertazzoli et al. (2009)

The map provided in Figure 1-1 includes the key stages and actors involved from the primary production, processing and retailing until the consumption of the food products. This mono directional map aims at visualising also consumers as part of the agrofood chain.

Focusing on the characteristics of the consumers as the end-users served, the literature needs to be investigated among the wide range of consumers’ responses (product choice , consumption’s frequency and amount) studies, based on the different consumers’ characteristics as knowledge, attitude, motivation, lifestyle, socio-economic status, perception and personality and according to the process of consumer’s decision towards purchase of food with a special focus on healthy food products (Bogue et al. 2005).

The present and future commercialisation of healthy food products is strongly interconnected with the strategic choices of retailers and food industries due to the necessity of investing on process and product innovation. Considering the increasing amount of processed and convenience food consumption, and the pivotal role of retailers (through large, traditional and discounts distribution channels) as distributors in urban areas, food industries and retailers are considered key actors of the agrofood chain (Burch and Lawrence 2005).

Academics focuses in particular on the relations among the value chain members, trust and power asymmetry that determine a strong impact over agri-food industry relations due to strong size imbalances along the chain (Grunert et al. 2005, Sobrero and Robert 2000). As mentioned by Matopoulus et al. (2007) the power asymmetry enables large companies to exercise their power, by imposing their rules to collaboration, continuously increasing requirements and risk-reward sharing imbalance. By focusing on the distribution chain members, retailers nowadays play a key role in determining food offer and prices, up to being able to compete with their own brand product. Thanks to the capability to access on time to consumers’ preferred choice (as purchases database), retailers are now able to overcome brand manufacturers for mass production, by providing innovative convenience consumers oriented products (Burch and Lawrence 2005). It is thus necessary to explore the several dynamics occurring among these two specific actors, in order to explore the possible barriers to healthy food products production, commercialisation and distribution.



Hence, the literature review shall focus on the elements that are currently receiving attention at academic and policy level in order to characterise the single chain actors and also the interactions and dynamics occurring between food industries and retailers. Furthermore it is increasingly acknowledged that these dynamics impact on the overall food chain functioning, sustainability and capacity to ensure consumers quality food, more efficient processes, and therefore they can contribute to set favourable conditions for affordable healthy food production, commercialisation and distribution at industry and retail level.

According to the research objectives, and the market oriented chain approach, the research will thus circumscribe the ambit of study to the last part of the agrofood chain with particular regard at processing industry, retailers and consumers.

Given that agrofood chain dynamics are also influenced by external actors, as the policy and regulative environment in which chain stakeholders operate, it is also necessary to deepen the literature concerning the political issues devote to healthy food's increase of consumption among low income consumers.

## **1.2. Consumers' approaches towards healthy food**

The psychological factors that contribute to determine consumers' choices have been investigated through different and numerous approaches and methodologies. One of the most applied theories refers to the theory of planned behaviour (Shepherd 1999) that identifies attitudes, subjective norms and perceived control as the determinant of intentions to implement food decision making (Ajzen 1991). Starting from the elements identified by Ajzen, motivation, knowledge and lifestyle are also important predictors that contribute to determine consumers' actions.

Furthermore consumers are also influenced by so-called "environmental aspects" that include those external factors that, combined with the psychological predictors, determine consumers' decision (Lawrence and Barker 2009). Concerning the specific target of the study the literature review thus considers the mix of several external factors and variables that details and segment consumers according the socio-demographic characteristic (e.g.: socio –economic status, gender, age level), together with a various range of food definition degree of inclusion, varying according to different approaches (e.g.: quality food, health food, nutritional food, functional food, organic food, traditional food). Furthermore the analysis takes inconsideration also the different stage of food preparation and locations of consumption (fresh, processed, consumed away from home) and the level of accessibility and availability of food (as related to places for food purchases) (Hughes 2009).

Some studies have been conducted in United Kingdom focusing social and environmental factors (Thomas 2002, Nelson et al. 2007), despite in general there is still little literature exploring the environmental factors that interact with the individual ones to influence consumers' behaviours and the concerned intervention policies to be adopted (Story et al. 2008).

### **1.2.1. Attitude**

The definition of attitude is applied as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly and Chaiken, 2007:585).

Focusing on the attitude towards healthy dietary habits, Lappalainen et al. (1998) stress that despite European people consider healthy food as a good way to prevent diseases, they do not translate healthy eating into practice, as the majority felt already to be able to adopt an healthy diet.

By the way, according to several authors (Bogue et al. 2005, Lappalainen et al. 1998, Inglis et al. 2005), the gender aspect plays an important role towards the attitude to healthy food, so that worldwide females show more positive attitude towards healthy products intake than males. This outcome emerges also by one Italian study that has achieved this result within the analysis on functional food commercialisation (Annunziata and Del Vecchio 2011). Nonetheless it must be considered the females' attitude towards healthy food can change in relation to external factors, as in particular in consideration of the household size. In fact, on one side, it emerges that women with children express a clear parental attitude that places the responsibility of assuring adequate food's intake to their children and family as a priority. This attitude might thus improve the positivity towards the healthy attribute of food. On the other side the importance placed by females on the household's components might also often induce to limit the attitude towards healthy food in favour of the priority of satisfying the household's components preferences, even if unhealthy (Dammann and Smith 2009). The need to match different preferences also raise also among couples, so that it seems that single persons might be facilitated to follow their healthy attitude (Inglis et al. 2005).

Another relevant element that might influence on healthy attitude refers to the relevance that any person gives to the taste and flavour of food, also named a hedonic approach/attitude towards food (Nestle et al. 1998). In particular Lähteenmäki et al. (2010) stress the diffused tendency to negatively perceive healthy food due to the fact that the health attribute might induce the loss of the hedonic pleasure. Furthermore, in many cases, the importance given to pleasure and or conviviality of food consumption's experience might overcome the attitude, and following the motivation, to move forward towards healthy food.

The complexity of elements relating to the definition of consumers' attitude towards healthy food is further emphasised when analysing the attitude in relation to the available variety of typologies of food preparation.

Among others, it is useful to focus on positive or negative attitudes towards the convenience of food. Costa et al. (2006) and Olsen et al. (2010) analyse the impact of moral attitude towards processed meal consumption's behaviour. To this extent Olsen et al. (2010:535) define the moral attitude as "a situation in which the individual is aware that the well being of others depends on his/her action, and feel responsible for the actions and its consequences". These academics focus in particular on the strong negative attitude emerging towards ready to cook (RTC) ready to heat (RTH) and ready to eat (RTE) food.

Hence the different typologies of processed food purchases (e.g.: canned, chilled, frozen, take away) and the locations for food consumption (as restaurant versus homemade preparation) are associated, independently for the specific socio-economic status of the person, to the perceived lack of interest devoted to meal preparation. The negative attitude relates to the feeling of not doing the right thing, so that the use of RTC/H/E food might conflict with the respect of traditional values that instead foresee the adoption of adequate cooking competences and time devoted towards meal preparation. This interesting outcome has emerged within the study implemented by Olsen et al. (2010) that focused on northern European countries, but a negative attitude towards processed food has also resulted within the study of Annunziata and Del Vecchio (2011), who state that in general all Europeans perceive processed food as increasingly anonymous and distant from the traditional everyday life food habits.

### **1.2.2. Motivation and lifestyle**

As emphasized by Geeroms et al. (2008:705), the analysis of consumers' motivation towards healthy food needs to take into consideration multidimensional aspects related to healthy food "comprising a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". Thus motivation comprises "several psychosocial health motive dimensions, such as emotional well-being, feeling happy, being with friends, social responsibility, having energy, looking good and achievement, beyond the level and feelings of physical health only" (Geeroms et al. 2008:705).

Motivation of low income consumers to buy healthy food is identified by Dibsall et al. (2003) as one important determinant that can also overcome the environmental factors as the socio-economic status or the accessibility to affordable healthy food. In particular according to the authors, despite ability to define healthy food, low income consumers tend to avoid changes to their daily food habits and show resistance to associate healthy eating to diseases prevention. In line with this findings Geeroms et al. (2008) notice that only to those consumers that in general like to experiment or interpret healthy attribute as emotional well-being show motivation to healthy eating.

Motivation is necessarily driven by lifestyle and perceptions that strongly impact consumers' choices for food purchase (Brunsø et al. 2004). As often mentioned, Perez-Cueto et al. (2010) have derived that food related lifestyle support the characterization of people that tend to obesity or unhealthy nutrition (Mai et al. 2011).

Food related lifestyle, as defined by Brunsø and Grunert (2002), also interrelate the set of values and behaviours that drive to food consumption. To this extent it is needed to consider that for example devoted time cook or planning of food shopping might be influenced by several values like need of control or relation to traditional habits (Brunsø and Grunert 2004). Focusing on the convenience attribute, it can mainly refer to three determining, components that are time, physical energy and mental effort (Buckely et a. 2007). These attributes are combined with lifestyle aspects that might include ageing and household structures as well as technology adoption or attention towards healthy aspects. Thus it is possible to derive that healthy food related lifestyle needs to be investigated taking into consideration a wide variety of personal and external set of values.

As well, lifestyle is influenced by several external factors, such as working time, accessibility to food stores, and to the socio-demographic characteristics of consumers, as the household size. To this extent on one side it is known about increasing number of one-person households, a reduced time devoted to cook (Burch and Lawrence 2005, Shiu et al. 2004, Holgado et al. 2000). On the other side big size household determine complex food related lifestyles that often are influenced by interpersonal relationships (Lawrence and Barker 2009).

### **1.2.3. Knowledge and nutrition labelling**

According to the investigation made by Lappalainen et al. already in 1998 on 14.331 consumers belonging to all European member states (15 countries), people were in general able to cite aspects related to healthy food habits, but that respondents with lower education or elderly less likely mention them.

Furthermore a very interesting cue is given by the result of the investigation referring to the Italian sample, in particular it is merged that Italians consumers often associated the definition of healthy food with fresh or natural food. This issue also relates to the associated meaning of food quality, this term is nowadays attributed to several typologies of food, as for example origin of product, production and processing methods, by contributing to assume and interpret this term in a wide variety of ways (Goodman 2003, Pieniak et al. 2009).

Knowledge factor is determinant to assess consumers' consciousness towards healthy food consumption. As explained by Dickson-Spillman and Siegrist (2011), the term knowledge applied to healthy food includes both declarative and procedural aspects. The first refer to the acquisition of the information that enable the consumer to identify and define the nutritional characteristics of food, and the procedural one refers to the capability of choosing and consuming a healthy food in relation the knowledge acquired.

Knowledge is one of the components that impact on the use and the effectiveness of nutrition labelling (Grunert and Wills 2007, Lobstein and Davies 2009). According to the literature review on the academic and

grey literature on nutritional labelling issues implemented by the mentioned authors, it raises that in particular the perceived lack of knowledge and confusion among the sources of information can determine wrong food assumption from a nutritional point of view. As opposite, the increased knowledge over nutritional aspects might support to prioritize food purchase and the increased skills of the family responsible for food purchases can positively influence the family's dietary behaviours also among the low income ones (Dammann and Smith 2009, Inglis et al. 2005).

Bogue et al. (2005) and Campos et al. (2011) findings show that knowledge on dietary issues varies significantly according to socio demographic characteristics. In particular it is notably lower among low income consumers, and furthermore they identify, among low income consumers, mature female as those that are more aware and interested on nutritional issues.

Other components that need to be considered to assess the relevance of nutrition labelling towards increased healthy food consumption refer to search that is interest towards dietary aspects; perception and motivation towards healthy diets; understanding of the label meaning; liking and use of nutrition labelling (Grunert and Wills 2007, Hess et al. 2011).

Among the majority of high income countries the nutritional information on pre-packaged food is nowadays mandatory (Campos et al. 2011). Considering the European regulation it is possible to refer to the regulation n° 1169/2011 promulgated by the European Parliament in 2011 that includes all the provisions on food labelling including the nutritional information (Dongo 2011). There are several types of claims that are used by food industries and retailers (Williams 2005). It is of noteworthy importance to differ according to the claims used to identify the nutrition content and health claims used to emphasize nutrition functions or the impact on reduced health related disease of the product. According to definition given for healthy food the following literature review focuses only on the first ones.

Despite the presence of nutritional labelling, the understanding of the content of a nutritional label on the packaging, is considered as a sensitive issue for determining healthy food choices among low income consumers (Grunert and Wills 2007). Still the main problem is to assess is the discrepancy between declarative and procedural aspects, in this case due to the fact that consumers might easily mislead the meaning of nutritional label and adopt unconscious wrong purchasing behaviours. The understanding issues need to take in consideration also the ageing factor. In particular ageing consumers are becoming users of processed food, but show notable difficulties in comprehending the nutritional claims' meaning (Costa and Jongen 2010).

The attention towards nutrition labelling is also determined by other socio-demographic aspects, as gender, age, education and income level. As already mentioned women show in general more attention towards nutritional labelling as well. This interest is mainly present among educated, young and affluent people, despite it has not been proved that an appropriate awareness corresponds to coherent frequency of healthy food purchases (Hess et al. 2011, Annunziata and Del Vecchio 2011).

#### **1.2.4. Consumption behaviour**

Food trends are changing due to worldwide increase of food availability and price falling. The amount of calories intake is growing due to dietary changes and food substitution and with the increased availability of cheaper food (Kearney 2010, Lawrence and Barker 2009).

A growing interest and demand for healthy, health-enhancing and functional food is also occurring; despite there has not been a notable change concerning dietary habits, with particular regard to low-income groups (Bogue et al. 2005, Mai et al. 2011, Turrel 2002).

Aiming at deepening low income population behaviours, it is relevant to take in consideration that, as other typologies of consumers' segments, they also show notable heterogeneous characteristics. So that the varying psychological factors related to attitudes, lifestyle factors, motivation and level of knowledge towards diet and health are strongly related by the socio-demographic characteristics such as education, gender, ethnicity, and also from other environmental factors, as time, the availability and accessibility of food (Holgado et al. 2000, Costa and Jongen 2010). The final decision of purchase thus derives from the complex combination of all the factors.

Focusing on the typology of food purchased Lawrence and Barker (2009) stresses the fact that low income consumers often adopt processed food due to its convenience aspect. Despite RTC/H/E foods are more expensive than other less processed food, they allow saving time and reducing waste of food. Geeroms et al. 2008 also emphasize that processed meal adoption is only partially dependent from the economic condition, but it mainly relates to factors as the household's composition and age. These findings are confirmed also by Ragaert et al. (2004) that through their focus have found positive correlation between fresh processed vegetable as minimally processed one ( e.g.: cut and mixed salads) or frozen vegetables ready to cook and consumers' choices. These products, even if more expensive than fresh products, seem to fit the healthy and convenience attributes and they are also chosen by low income consumers. The general tendency of low income people is thus confirmed with the choice of processed food, and it also seems to overcome the moral attitude that could instead induce to avoid processed food. Still the majority of available and affordable convenience food often does not guarantee adequate healthy standard (Lawrence and Barker 2009).

Another consumption trend to be considered is the one related to food consumption away from home that increases due to socio-demographic changes, as for example working conditions or ethnicity (Liu et al. 2012). Finally the consumption of healthy convenience food is expected to impact also among ageing population, a segment that is notably growing in every western country (Costa and Jongen 2010).

In relation to the price issue, the lack affordable food is also often analysed as a possible barrier in relation the availability (adequate offer of affordable healthy food) and accessibility (presence of healthy food at the referring shop attended) of food (Ingliš et al. 2005, Jetter et al. 2006). As already shown by the consumption behaviours described, it emerges that price is an external factor identified by several authors as possible barrier to healthy food consumption. Notwithstanding the fact that the findings provided the authors do not show price as the only significant determinant that limits healthy food consumption, but it for sure places a notable disadvantage to healthier consumption behaviours, and in particular among those low income consumers that consider the convenience of food as an important factor (Lawrence and Barker 2009).

Looking at the preliminary information provided<sup>1</sup> in the introduction that show already a relevant percentage of population at ROP and an increasing trend of growth, in a marketing perspective this population shall account as a relevant market segment for manufacturers and retailers. This segment acquires even more relevance in consideration of that fact that, even though in terms of value their food expenditure is lower than richer families, following Engel's law, low income families have the highest percentage of the income expenditure for food in comparison to the higher income families (Holgado et al. 2000).

All these factors need to be deepened and translated in terms of marketing strategies considering the specificity of the food market targeted (regional, national, international). By the way, it is important to underline that at present the literature reviewed does not provide studies assessing at quantitative or qualitative level the present patterns concerning healthy (fresh and/or processed) food consumption among low income or at risk of poverty consumers in Italy.

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<sup>1</sup> Detailed data and information on consumers at European and Italian level are provided in chapter 2.

### **1.3. Food industry and retailers approach towards healthy food production, commercialisation and distribution**

In developed countries the availability of food is granted almost 24hour a day at any price level, through the huge variety of distribution channels. As well agrofood chain dynamics now refer to a global spatial scale so that Gereffi et al. (2009:371) adopt a wider concept of value chain by using Ponte and Gibbon (2005) definition of global value chain. In this sense food industrialised manufacture is seen as globalized sector “strictly tied to international trade, foreign investment and Western firms’ marketing campaigns”.

It is thus relevant to analyse the available academic literature for both sectors by focusing on the agrofood dynamics occurring in relation to: innovation adoption, the level of market orientation, power relation, commercial and private label/brand adoption that might relate to healthy food and low cost healthy food production and commercialisation.

#### **1.3.1. Food industries and retailers’ relations**

An increased interest on internal, external, vertical and horizontal relations among agrofood chain actors is worldwide recognized (Fischer et al. 2007). The intensity of collaboration among actors is influenced by the share of risk, trust, power and dependence together with the external factors such as regulations (Matopoulos et al. 2007).

Share of risk and trust, as analysed by Fisher et al. (2007), are important leverages that according to the transaction cost theory can notably influence relations among food chain actors. Trust strongly bases on interpersonal reliance built among subjects within the exchange of economic activities and it is weighted by the competitive, cultural, social and political environment. It thus also determines the positive exploitation of communication flows. Still, according to the article, regulations and with respect to food safety and traceability can increase the level of trust and transparency, but trust can be affected by the increased the tendency of retailers to jeopardize the performance of the whole chain. Due to the imbalances of the chain it seems that trust is more easily maintained among small and medium enterprise (SMEs) relations. Vlachos and Bourlakis (2006) consider trust as a necessary element both for industries and retailers, as on one side, manufacturers pursue it because of the necessity of establishing a durable relationships with powerful retailers, and, on the other side, retailers focus on trust to stabilise relationship so to improve the chain management (e.g.: logistics and category management).

Dependence is considered one of the critical issues relating to retailers’ and suppliers’ relations. Retailers, buying large quantities of product, can easily stress tendencies to dependency and rule over manufacturers’ choices (Burch and Lawrence 2005, Fischer et al. 2007). The issue of power balance among chain actors is one of the most debated issue at academic level (Kadiyali et al. 2000), as well as in the grey literature (Konig 2009, European Commission High level Forum 2012). Several aspects have been addressed in order to explain the power dynamics along the food chain. In particular, a specific focus is on the unequal power distribution between food processors and retailers. Kadiyali et al. (2000) identify the following key aspects as drivers of shifted power towards retail sector:

- Strong competition among manufacturers;
- Increased concentration in retail sector;
- Scarcity of shelf space compared to an increased number of new products;

-Advanced use of information technology.

Within the chain dynamics, bargaining power determines the terms of economic transaction between chain actors and can strongly affect the competition and independency within the chain actors (Bunte et al. 2011). On the contrary, according to Grunert et al.(2005), increased relations within the agrofood network induce anyway stronger cooperation attitude.

Furthermore researchers debate on the positive and negative impact of consumers' expectations on the value chain management. Looking at the end of the chain, Matoupoulos et al. (2007) emphasize the role of consumers in driving food production decisions, with particular regard to the rise of importance of health food and safety concerns (Matopoulos et al. 2007). In this view, strong collaboration can favour the introduction of products able to satisfy consumers' preferences and to rise consumers' awareness (Vlachos and Bourlakis 2006).

### **1.3.2. Innovation and differentiation**

Looking at the agrofood chain with a consumer oriented approach, innovation shall be aimed at "the development of a new product or service in which an integrated analysis and understanding of the users' wants, needs and preference formation play a key role..." (Grunert et al. 2008:591). An innovative approach is necessary to provide differentiated typologies of food and to extend the lines of products (including differentiation), in order to meet the heterogeneity of consumers preferences (Lukas and Ferrell 2000).

Food product development concerns several technical aspects and it can radically vary in terms of technological requirements due to the increase of processing phases adopted. Innovation is particularly relevant on industrial manufacture to produce processed food both to be consumed at home or away from home (Rodgers 2008). In particular, according to Rodgers (2008), the processed involve complex know-how requirements so to ensure nutritional, taste, and preservation aspects for the necessity of satisfying an adequate shelf life of the product.

According to Burch and Lawrence (2005) the traditional manufacturers may take several years to market a new product line with a very slow return on investment. Furthermore the price of food inputs can affect food processors propensity to innovation and/or reformulation. Less expensive inputs, even small differences, can have "relatively large effects on aggregate production costs" (Golan et al. 2009). Innovation and chain relationships are influenced also by profitable margin expectation. In particular, according to Boesso et al. (2009), companies offering health value added products aim at targeting consumers interested willing to pay more for specific health food attributes. Health value-added food, especially when innovative and convenient, tends to grow at a faster rate than traditional commodity businesses and most are generating strong margins.

Within this perspective, difficulties might be faced by SMEs (Martindale and Swainson 2008) that often lack budget for innovating. Nonetheless, looking at the widespread consumers' attention towards quality and local food, SMEs could be able to introduce product lines based on innovative processing of traditional ingredients (Marsden et al. 2000, Martindale and Swainson 2008, Rodgers 2008) and compete on niche of high quality products (Bhaskaran 2006).

Retailers can be more flexible and innovative due to their several production relations, and thus be able to place hundreds of new products per year. So that retailers can provide consumers with differentiated products according to price and quality and can thus be able to meet consumers' demand for affordable health food (Bunte et al. 2011).

Placing innovation within a market oriented food chain perspective, it is necessary to move from a linear concept of innovation pushed by one singular subject to an “innovation system” able to generate cooperation among internal and external (e.g.: universities, governmental institutions) actors of the chain and able to capture multiple innovation processes (Menrad 2004). Menrad in particular stresses the possibility and the needed increase of cooperation starting from SMEs until the commercial entities in the field of nutrition improvement, strongly supported by a dynamic political framework (that is an updated and clear regulatory system) and participation of research institutions.

#### *Focus on private standards as part of a differentiation strategy*

Food “product” standards – as opposed to “process” standards – specify the characteristics of the final product (Konig 2009)<sup>2</sup>. Major categories of food product quality attributes which could lead to food product standards are: shape, size, weight, safety, authenticity, energy, nutritional content and organo-leptic quality attributes (colour/appearance, taste, texture, etc.). Standards are increasingly gaining the role of strategic tools for product differentiation and market segmentation, and health attributes in particular are gaining an increasingly strategic role as element of competitive advantage (Henson and Reardon 2005).

Focusing on the effects of private standards’ adoption, it is relevant to analyse the extent to which private standards could become an issue for health and nutritionally correct food, and to analyse how standards impact on food chain dynamics for health and nutritionally correct food. Private standards adopted by multinational supermarket chains and food industries are forcing a worldwide adoption of improved quality with specific attention to safety and reduction of unhealthy inputs. These standards, for example reduction of the use of oils with trans-fat, can have “positive outcomes for health” (Gereffi et al. 2009).

Still, the adoption of a proficient role of private standards to foster a real improvement of food habits is under discussion (Nestle 2007, Henson 2008). Despite both industry and manufacturers are increasingly positioning and differentiating brands by investing on social issues, such as, health, poverty, environmental issues (Kolk et al. 2006), some authors have expressed some degree of scepticism over the real and coherent willingness of food industry and retailers towards food health provision and transparent information to consumers (Nestle, 2007).

### **1.3.3. Market trends**

Convenience food, health food, and quality food have become an important market at global level. Food industry has been strongly investing in promoting products with nutritional added quality by investing on specific attributes/product promises: functional claims and health risk reduction claims (Lähteenmäki et al. 2010, Boesso et al. 2009). Also retailers are increasingly positioned on nutritional and quality products, thereby gaining higher consumer loyalty. In particular, the following product lines have gained importance: geographical indication, organic, low calories, specific disease based (celiac, cholesterol, etc.) (Burch and Lawrence 2005). To this extent a new growing area of competition among industry and retailers has risen. Still, with particular regard towards RTE (fresh and chilled) products, retailers are positioned as leader, by

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<sup>2</sup> Standards cover a collection of technical specifications, definitions, terms and principles of classification and labelling. According to the International Organisation for Standardisation (ISO) (2004), a standard is: “A *document established by consensus and approved by a recognized body, that provides for common and repeated use, rules, guidelines, or characteristics for activities or their results, aimed at the achievements of the optimum degree of order in a given context.*” The Technical Barriers to Trade (TBT) Agreement distinguishes mandatory standards from voluntary standards: “A *standard is a document approved by a recognized organization or entity, that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory under international trade rules. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method.*” Private standards by definition are voluntary, although they may in practice become de facto mandatory where compliance is required for entry into certain markets (Smith G. 2009).



exploiting their capability to manage the shelf life and investing both on best price and own branded product lines (Burch and Lawrence 2005).

These new market trends represent a response to target the changing consumers' characteristics and habits as already described in paragraph 1.2. Among several factors Gracia and Albisu (2001) have reasoned that consumers' choices towards convenience food are driven by socio-demographic changes, as increased working time and increased proportion of working women. In accordance to path highlighted, the increased number of one-person households, the reduced time devoted to cook, on average 15 minutes in western countries (Burch and Lawrence 2005, Shiu et al. 2004), and the rise of health awareness are considered as factors that are positively correlated with the increase of processed products (Hughes 2009).

In addition to the most common marketing leverages, an increasing number of promotional activities have been conceived, so to pull consumers' purchases and to increase consumers' loyalty, such as conducting informative classes, or dedicated web pages on the characteristics of food, on cooking recipes, and sample free test (Hawkes (a) 2009). By applying this strategy to the promotion of affordable food health products for low income consumers, food industry and/or retailers could as well invest on nutrition education classes and activities, including shopping and food budgeting guidance, at the retailers' store; promotion of cooking classes of healthy food with low-cost ingredients, variably targeted at low-income population at the retailers' store; designing and conducting public health campaigns promoting healthy foods and exercise, such as walking to stores, and discouraging alcohol and cigarettes.

#### **1.3.4.Private label**

The considerable development of private labels induces to analyse the possible impact of this phenomenon on the product, commercialisation and distribution of healthy food. The significant rise of private labels' market share has an impact on industry and retailers' role in the food market and also on food industry and food retailers' chain dynamics. At present, retailers are not only responsible for the distribution and commercialisation aspects, but they are covering a prominent role also in shaping the food market provision, thanks to the direct contact with the consumers and to the power of more easily choosing what should go to the market. To some extent, retailers are increasingly covering the role and functions of the manufacturers (European Commission High level Forum 2012). As a matter of fact, private label products are now present at different price level (from low cost to high quality products) and contribute to the differentiation of products' offer. In implementing the private label strategy, retailers aim to lower retail price and to enhance product value. In Europe, in particular, retailer brands may offer consumers "products perceived to be of higher quality than the standard product at prices below recognized leading brand products of similar quality. Alternately, retailers may seek to add value and provide higher quality products when the existing products in the market provide few alternatives in meeting particular consumer demands" (Codron et al. 2005:36).

The private label phenomenon has been widely analysed in a recent study published by the European Commission. The analysis, conducted under the European Competitiveness and Innovation Framework Programme (Bunte et al. 2011), focuses on the impact of private label on the competitiveness of food supply chain. The research underlines that food industry is still leader in food quality innovation, but moderately takes up consumer demand with respect to convenience attributes and social values. To this extent private label products play a role in meeting these aspects of demand. As Burch and Lawrence (2005) underline, private labels are becoming leader innovators in satisfying highly-segmented niche markets for a range of new agrofood commodities, in particular for ready chilled meals and convenience product and are able to play a key role in including quality, health and environment as food attributes.

## **1.4. Political issues on healthy food along the agrofood chain**

Regulations and policies interact along the agrofood chain as external actors. Considering their definition policies are meant as “set of decisions, recommendations and guidelines formulated by the executive branch of government” (Nethe et al. 2012:119) or by international organizations as World Health Organization (WHO). Legislation “concerns elaboration and enactment of laws by a legislative body, regulation concerns the control by rules” (Nethe et al. 2012:119).

Looking at these instruments at regard to healthy food and poverty issues, it is needed to focus the attention both at national and international level of intervention as well as to expand the analysis at least to health, food and socio-economic ambits of intervention. Policies, laws and regulation might be able to impact on the agrofood chain with different degree of intervention as from the quality and typology of product offer and demand, up to influencing transactions, ideation of new product lines, health and nutrition of low income population.

### **1.4.1. Public policies and regulations**

A” nutrition transition”, as defined by Popkin in 1997, it is now occurring all over the world (Caraher and Coveney 2003). With this term it is identified the tendency to the adoption of diets poor of correct nutritional ingredients, but with higher fats and sugar contents that induce to the increase of non-communicable diet related diseases (Popkin et al.1997). Furthermore, according to Chopra et al. (2002) obesity prevalence has tripled in the last two decades. Current obesity prevalence in the European Union (EU) ranges from 7.4 in Italian males to 26% of Greek males (European Commission 2007).

Several official documents and policy recommendations are approaching health problem related to wrong food consumption. WHO estimates that, within the next few years, non communicable diseases will become the principal global causes of morbidity and mortality (World Health Organization (a) 2008, European Commission (a) 2010).

As well, also due to the current economic crisis, the poverty related issues are becoming of utmost urgency not only in developing countries, but also among the majority of western countries. This worrying situation has already received strong attention by the European Union and the objective of the “Reduction of poverty” was included among the five headlines of the European 2020 Strategy. The aim is to reduce poverty to at least 20 million people out of the risk of poverty or exclusion (Atkinson and Marlier 2010).

Furthermore an increasingly aging population in developed countries, health has become a pressing public policy issue. Many developed countries now spend around 15% of their GDP on health policies. The OECD has estimated that, over the last three decades, the annual increase in per-capita spending on health among its member countries has outstripped overall economic growth by approximately 70% (Stremersh 2009). As already mentioned, on September 2007, the WHO Regional Committee for Europe approved the resolution, which endorses the Second Action Plan and calls on European Member States to develop and implement food and nutrition policies in the period 2007- 2012 (World Health Organization (b) 2008). In particular, among the challenges it is recommended that the availability and affordability of healthy foods, such as fruit and vegetables, should be improved and the supply of energy-dense and nutrient-poor foods should be reduced.

Considering that inequalities in nutrition are associated with inequalities in health (Holgado et al. 2000), WHO strengthens that the achievement of food security goals should be linked to the attainment of dietary goals in the different socioeconomic groups, in accordance with the Millennium Development Goal 1, so to reduce by 50% the proportion of people who suffer from hunger. Furthermore, within the monitoring,

evaluation and research actions planned, the fourth WHO recommendation is: to improve public and private research to enhance understanding of the role of nutrition, food safety and lifestyle factors in disease development and prevention; to strengthen the evidence base for interventions and policies; to develop innovative solutions that address nutrition and food safety challenges; to describe the sociological and cultural aspects of eating; to assess the impact of social marketing techniques, new communication channels and different labelling schemes on consumers' dietary choices, especially in lower socioeconomic groups; and to develop simple, valid and economical monitoring and evaluation tools (World Health Organization (b) 2008).

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Food quality issues including organic, functional and geographically traditional ones are among the main topics under discussion among policy makers and academic literature. As well together with the risen consciousness about the importance of this market, supply chain analyses have been carried to support strategies to reach the final consumers (Marsden et al. 2000). Despite many studies involved in finding solution for quality food accessible to consumers, with particular regard to shortening food chain, the solutions provided up to date still refer to a niche of consumers (Goodman 2009).

Nonetheless, a debated issue concerns health food accessibility. Cummins et al. (2006) underline that supermarkets located in poorer neighbourhood provide fewer health products supply and at higher prices. In addition, retailers with wider listings might be located in “desert” area reachable with private cars, not always available for low income population (Cummins et al.2006). Furthermore some rural areas are often served only by independent grocery stores which do not stock health food or update their shelf with the last innovations in terms of food health (Cummins et al. 2006).

Hawkes (2007:319) underlines the necessity of identifying “potential synergies and conflicts between agricultural policies and production practices and dietary goals; potential policy interventions; and potential trade-offs”, so to stress the necessity to apply an analysis of the impact of public regulation towards the whole food chain in order to fully understand whether they are potential incentive or disincentives to promote healthy eating (Hawkes (b) 2009). According to the results of the food chain analyses implemented it is helpful to devote some attention towards new attitudes to develop health issues awareness starting at industry and retail level. Some examples could refer to successful initiatives towards consumers, from education and training on nutrition issues for food producers and retailers management, up to incentives for retailers' strategies over stores' location and accessibility.

Finally, the European Commission (2007:10) titled “White paper: A Strategy for Europe on Nutrition, Overweight and Obesity Related Issues” clearly points out that it is necessary to make: “the healthy option available and affordable: the food industry (from producers to retailers) could make demonstrable improvements in areas such as the reformulation of foods in terms of salt, fats, particularly saturated and trans fats, and sugars for consumers across the EU and to consider ways to promote consumer acceptance of reformulated products”.

#### **1.4.2.Policy intervention at European level**

Focusing on the European Union intervention towards healthy food consumption improvement, several policies, funding programmes and regulation addressing at different level consumers, food industries and retailers, can be founded, among these, some further detail is provided below.

Starting from the 2020 strategy, expected achievements have been translated into several specific policies as for example, at research and innovation level, the bioeconomy approach implementation<sup>3</sup> that focus among others into the From farm to fork initiatives for food (including seafood), health and well-being and the growing demand for safer, healthier, higher quality food” that include all food safety and quality aspects from production to consumption.

Considering the regulation at European level, it is relevant to underline the regulation n° 1169/2011 adopted by the European Parliament in 2011 that includes all the provisions on food labelling including the nutritional information (Dongo 2011). The regulation will become effective starting from 2014<sup>4</sup>. The regulation aims at clarifying and reduce consumers’ uncertainty among the huge amount of the claims used to identify the nutrition content and health claims used to emphasize nutrition functions or the impact on reduced health related disease of the product.

Among the funding programmes, through the Public Health Programme the EC has been financing projects to enhance consumers awareness on healthy food related issues aiming at promoting health, including the reduction of health inequalities generate and disseminating health information and knowledge (European Commission 2012). The EC Seventh Framework Programme instead addresses funds both to researches targeting vulnerable consumers improved awareness and behaviours as well as enhancing processing and retailing industries capabilities to increase healthy food affordable offer.

At the member states level, from the analysis provided by Capacci et al.(2012), there have been identified at least 121 measures of intervention applied by European member states. The majority of them target measures supporting informed choice (advertising controls, public information campaigns, nutrition labelling, nutrition education); with less adoption are those referring to measures changing the market environment ( regulate meals, nutrition-related standards government action to encourage private sector action, availability measures for disadvantaged consumers). Intervention devoted to food industries and retailer such as fiscal measures to incentive healthy food seem to be almost absent in Europe. Focusing at national level interventions it is interesting to provide some exemplificative public campaigns implemented in United Kingdom to foster consumers’ increased adoption of healthy dietary guidelines<sup>5</sup>. In particular the online platform named Change4Life is partner of public and private (including food industries and retailers) entities and has been adopted as recognisable brand in health improvement in United Kingdom. Moreover the ongoing healthy eating campaign named -Be Food Smart- seems to fit some of the emerged issues, by aiming at “empowers people to make positive changes to their eating habits by giving them healthier, tasty, cheap and quick meal ideas with masses of choice and flexibility”.

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<sup>3</sup> Source European Commission: [http://ec.europa.eu/research/bioeconomy/food/policy/index\\_en.htm](http://ec.europa.eu/research/bioeconomy/food/policy/index_en.htm), last view January 2013.

<sup>4</sup> The new mandatory nutrition labelling requirement will be effective from December 2016. There are also a few additional transitional provisions in Article 54 (European Commission 2012 (b)).

<sup>5</sup> Examples can be found at the following websites: <http://www.nhs.uk/Change4Life/Pages/change-for-life.aspx>, <http://www.schoolfoodtrust.org.uk/>.

## **2. Food Chain actors, baseline data**

The chapter provides an overview on baseline data for ROP consumers, food industries and retailers in Italy, by including a draft overview at European level.

The analysis bases on the most updated available statistics and grey literature at European and Italian level.

The following paragraph allows defining, among the selected actors, the most relevant typologies of characteristics to consider in the investigation and contributes to the definition of the methodologies of elaboration to adopt.

### **2.1. Defining population at risk of poverty**

The definition for low income population or population at risk of poverty necessarily take its roots from the poverty issue. Poverty is part of a comprehensive concept that is measured through the interaction of several factors.

Looking at the worldwide debate towards the appropriate definition and adequate measures to assess poverty, it clearly emerges that, according to the specific context of application, this term is associated to several environmental factors that contribute to figure the poverty attribute. Among these factors it is possible to include income, sex, education level, occupation, geographical aspects, according to some of the condition used to define materially deprivation given by Eurostat. The condition of poverty, determines, among others also, also the deprivation of adequate food intake and access to medical care, by contributing to serious disparities in health (World Health Organization (a) 2008).

The critical conditions of severely materially deprived people constitute an alarming concern also for those people that are not fully deprived as the segment of population at risk poverty. ROP population are characterized, as the poor people, according to the environmental factors already underlined, with a slight difference that stand on the reduced access to some of the facilities but still without experiencing a full or serious deprivation of them. Despite income is not the only factor that impacts on characterizing the poverty or ROP condition it is assumed as one key element to measure the poverty (or non poverty) status, and this also the reason why it is commonly used the term low income.

#### **2.1.1. ROP population in Europe**

In Europe, poverty is officially defined in relative terms as the percentage of individuals living in a household whose equivalent income is below the poverty threshold. This threshold is defined by the European Commission as “The share of persons with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income after social transfers<sup>6</sup>” (Atkinson and Marlier 2010). The Eurostat<sup>7</sup> definition of the equivalised disposable income is attached in (Appendix 1).

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<sup>6</sup> The threshold, i.e. 60 % of the national median equivalised disposable income can be calculated: i) after social transfers and ii) before social transfers. Social transfer is the social help given by central, state or local institutional units. They include: old-age (retirement) and survivors' (widows' and widowers') pensions; unemployment benefits; family-related benefits; sickness and invalidity benefits; education-related benefits; housing allowances; social assistance; other benefits (source: Eurostat,

European data including materially deprived population (defined by Eurostat according to the 2020 Strategy as of “social exclusion”) results at 24,2% in Europe in 2011 and at 28,2% in Italy (Eurostat webe site, code source: SILC [ilc\_peps01]).

Focusing on to the most updated data provided by the Eurostat specifically for ROP population (see Table 2-1), in 2011 the rate of total population at risk of poverty by poverty threshold were at 16,8% in Europe<sup>8</sup> (corresponding to 83.561.000 people), showing a pejorative inversion of trend after four years of a decreasing or stable percentage. Between 2010 and 2011 the crisis effect has induced in general to a notable increase of percentages in several countries<sup>9</sup>.

Still according to the data, the highest at-risk-of-poverty rates in 2011 belong to Bulgaria (22,3%), Romania (22,2%), Spain (21,8%), Greece (21,3 %), and Croatia (21, 1) and the lowest to Iceland (9,2%), Czech Republic (9,8%), Netherlands (both 10,3%), and Norway (all 11,2%). Italy, notwithstanding the fact that does not perform as the worse countries in Europe shows an alarming rate at 19,6% (corresponding to 11.877.000 people) and it has experienced a sharp and worrying increase of ROP population from 2010 when they accounted 18,2% (10.938.000 people). Furthermore looking at data in term of total population in Italy there are concentrated about 14% of the total population at risk of poverty in Europe, second only to Germany that accounts 12.814.000 people.

**Table 2-1: Trend of total population at-risk-of-poverty by poverty threshold in Europe and some European countries<sup>10</sup> (percentages and thousands of people)**

GEO/YEAR	2004 (%)	2005 (%)	2006 (%)	2007 (%)	2008 (%)	2009 (%)	2010 (%)	2011 (%)	2011 (thousands of people)
European Union (27 countries)	:	16,3	16,5	16,7	16,5	16,3	16,3	16,8	83.561,0
Bulgaria	:	:	18,5	22,1	21,3	21,7	20,7	22,3	1.673,0
Romania	:	:	:	24,8	23,3	22,4	21,0	22,2	4.748,0
Spain	20,7	19,8	20,0	19,7	19,7	19,5	20,7	21,8	9.986,0
Greece	19,9	19,7	20,6	20,3	20,1	19,7	20,1	21,3	2.349,0
Croatia	18	18	17	18	17,3	17,9	20,5	21,1	890,0
Italy	19,1	18,9	19,6	19,8	18,7	18,4	18,2	19,6	11.877,0
Austria	12,8	12,3	12,6	12,0	12,4	12,0	12,1	12,6	1.051,0
Netherlands	:	10,8	9,7	10,2	10,5	11,1	10,3	11,0	1.816,0
Norway	10,8	11,3	12,4	11,8	11,3	11,7	11,1	10,5	511,0
Czech Republic	:	10,4	9,9	9,6	9,0	8,6	9,0	9,8	1.022,0
Iceland	10,1	9,7	9,6	10,1	10,0	10,2	9,8	9,2	28,0

(Own elaboration of Eurostat data, Eurostat code source: SILC[ilc\_li02])

The data provided make Italy as a relevant country to be explored in terms of incidence of ROP population. The following analysis will focus on the most available updated data for year 2011; when data for year 2011 are not available, the analysis will refer to year 2010<sup>11</sup>.

### 2.1.2.ROP population in Italy

Focusing on the Eurostat’s available regional data for Italy, the highest percentage of population at risk of poverty is concentrated in the southern area, while the regions with the lowest rate of ROP population are concentrated in the north-eastern part. The region showing the lower percentage and maintain a constant

[http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Glossary:Equivalent\\_disposable\\_income](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Equivalent_disposable_income) ).

<sup>7</sup> Eurostat is the statistical office of the European Union situated in Luxembourg. Its task is to provide the European Union with statistics at European level that enable comparisons between countries and regions Web site: <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home>

<sup>8</sup> The present work applies data referring to Europe at 27 Members if not specifically expressed.

<sup>9</sup> Please note that the present work applies full stop is applied for thousands separator and comma for decimal separator.

<sup>10</sup> The table reports only the data for the best 5 and worse 5 performers in Europe, including also the European data (27 Members) and Italy. The source include the complete data for all member countries.

<sup>11</sup> Las web site vist implemented on January 2013.

decreasing rate even in 2011 of ROP population is Emilia-Romagna. Overall Italy shows an instable trend from 2004 to 2007 and a decreasing rating starting from 2007 up to 2010, with lower reduction between 2009 and 2010. From 2010 to 2011 central and southern regions contributed to a sharp worsening rate up to 19,6% in all Italy.

**Table 2-2: total percentage population at-risk-of-poverty by poverty threshold trend by regions in Italy**

GEO/YEAR	2003	2004	2005	2006	2007	2008	2009	2010	2011
Italy	:	19,1	18,9	19,6	19,8	18,7	18,4	18,2	19,6
Nord-Ovest	:	11,2	10,3	11,0	11,7	10,7	10,1	11,1	10,6
Piemonte	:	12,9	10,8	11,2	11,0	12,0	10,7	12,6	13,2
Valle d'Aosta/Vallée d'Aoste	:	9,8	5,9	5,2	8,1	9,7	9,9	8,8	8,4
Liguria	:	13,3	15,6	13,7	14,4	14,0	9,8	10,5	12,2
Lombardia	:	10,1	9,3	10,5	11,5	9,5	9,8	10,5	9,2
Nord-Est	:	9,4	9,4	9,8	9,7	9,6	9,4	9,6	9,6
Provincia Autonoma di Bolzano/Bozen	:	8,2	9,8	7,8	7,4	7,2	8,3	7,1	7,9
Provincia Autonoma di Trento	:	9,8	7,7	7,5	5,7	4,9	7,2	7,5	11,9
Veneto	:	9,7	10,1	10,3	11,2	10,7	9,7	10,5	10,8
Friuli-Venezia Giulia	:	8,8	10,0	10,2	9,9	11,1	10,6	11,9	9,8
Emilia-Romagna	:	9,2	8,6	9,5	8,7	8,9	9,1	8,3	8,2
Centro (IT)	:	13,8	13,2	13,9	14,0	13,2	13,8	13,6	15,0
Toscana	:	9,7	9,1	9,4	10,4	9,5	9,9	11,6	11,8
Umbria	:	12,7	13,7	15,7	13,2	15,0	14,5	12,1	13,5
Marche	:	11,5	13,2	13,6	11,3	12,2	11,7	11,9	14,0
Lazio	:	17,5	16,0	16,8	17,3	15,6	16,8	15,7	17,6
Sud	:	31,6	32,1	34,0	33,5	32,2	31,0	30,2	32,6
Abruzzo	:	17,6	17,5	17,6	20,6	18,2	20,3	19,2	21,7
Molise	:	22,6	27,2	29,0	30,7	28,5	30,5	23,6	24,1
Campania	:	34,8	33,1	35,6	37,4	37,9	34,9	35,8	37,3
Puglia	:	29,9	33,1	37,0	32,4	27,4	26,8	25,5	30,7
Basilicata	:	27,9	31,3	26,5	29,6	31,1	33,6	25,5	31,6
Calabria	:	37,6	37,7	36,7	34,1	36,1	34,6	33,1	32,0
Isole	:	35,8	35,8	35,4	37,0	33,6	35,4	32,6	38,9
Sicilia	:	40,4	40,1	40,3	41,9	37,0	39,9	38,3	44,3
Sardegna	:	21,9	22,7	20,6	22,1	23,4	21,7	15,6	22,6

(Own elaboration of Eurostat data, Eurostat code source: SILC[ilc\_li41])

In relation to the geographical area, Italy differently, from the European overall data, experiences different percentage distribution of ROP population according to the density of populated area. According to Table 2-3, while ROP population living in thinly populated area are below the European average, ROP concentration in intermediate and densely populated areas in Italy is remarkably over the European level for at least 5 years period. It is also of noteworthy relevance also the dramatic increase by more than 4% by 2011 for the mentioned urbanised areas.

**Table 2-3: Percentage of people at risk of poverty or social exclusion by degree of urbanisation in Europe and Italy 2007-2011<sup>12</sup>**

DEG_URB/YEAR	2007		2008		2009		2010		2011	
	Europe	Italy	Europe	Italy	Europe	Italy	Europe	Italy	Europe	Italy
<b>Densely-populated area</b>	22,9	25,0	22,3	24,4	21,8	23,2	22,5	23,7	23,3	27,6
<b>Intermediate urbanised area</b>	20,7	26,0	20,1	25,0	19,8	25,0	20,2	24,7	21,0	27,5
<b>Thinly-populated area</b>	31,3	28,8	29,8	28,4	29,5	28,0	29,0	26,3	29,3	31,7

(Own elaboration of Eurostat data, Eurostat code source: SILC[ilc\_peps13])

In order to assess the ROP threshold in monetary terms, Table 2-4 shows the correlated amount of disposable income per single person in Italy corresponding to at ROP by poverty threshold. Data shown also include the ROP threshold according to purchase power standard<sup>13</sup> (PPS). From 2004 to 2011 the amount of Euro has risen from 8.313 to 9.583. In PPS the threshold is reduced from Euro 7.487 in 2004 to Euro 9.255 in 2011.

**Table 2-4: Amount of disposable income per single person in Italy corresponding to at ROP by poverty threshold**

YEAR/CURRENCY	Euro	Purchasing Power Standard (Euro)
<b>2004</b>	8.131	7.847
<b>2005</b>	8.611	8.208
<b>2006</b>	8.714	8.323
<b>2007</b>	9.003	8.640
<b>2008</b>	9.383	9.157
<b>2009</b>	9.382	9.119
<b>2010</b>	9.562	9.119
<b>2011</b>	9.583	9.255

(Own elaboration of Eurostat data, Eurostat code source: SILC[ilc\_li01])

According to Eurostat in 2010, 62.000.000 women (24,5% of all women) and 54.000.000 men (22,3% of all men) in the EU27 were at risk of poverty or social exclusion. The proportion of women at risk of poverty or social exclusion was higher than for men in the majority of Member States. Furthermore the largest differences between women and men were recorded in Italy (26,3% for women and 22,6% for men),

<sup>12</sup> Eurostat classification used for degree of urbanization: “*Densely-populated areas/cities/large urban areas*: at least 50 % of the population lives in high-density clusters. *Intermediate density areas/towns and suburbs/small urban areas*: less than 50 % of the population lives in rural grid cells and less than 50 % lives in high-density clusters. *Thinly-populated areas/rural areas*: more than 50 % of the population lives in rural grid cells. Where, *High-density clusters/city centres/urban centres*: are clusters of contiguous grid cells of 1 km<sup>2</sup> with a density of at least 1 500 inhabitants per km<sup>2</sup> and a minimum population of 50 000 after gap-filling. *Urban clusters*: are clusters of contiguous grid cells of 1 km<sup>2</sup> with a density of at least 300 inhabitants per km<sup>2</sup> and a minimum population of 5 000. *Rural grid cells*: are grid cells outside high-density clusters and urban clusters”. (Eurostat 2012).

<sup>13</sup> Eurostat definition: “The purchasing power standard, abbreviated as PPS, is an artificial currency unit. Theoretically, one PPS can buy the same amount of goods and services in each country. However, price differences across borders mean that different amounts of national currency units are needed for the same goods and services depending on the country. PPS are derived by dividing any economic aggregate of a country in national currency by its respective [Purchasing power parities](#). PPS is the technical term used by Eurostat for the common currency in which national accounts aggregates are expressed when adjusted for price level differences using PPPs. Thus, PPPs can be interpreted as the exchange rate of the PPS against the euro.”

([http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Glossary:Purchasing\\_power\\_standard\\_%28PPS%29](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Purchasing_power_standard_%28PPS%29))



followed by Austria (18,4% and 14,7%) and Slovenia (20,1% and 16,5%), while the smallest discrepancies were in Estonia, Latvia, Lithuania and Hungary (all with differences of less than 1%).

Focusing on the ROP population Table 2-5 provides the trend from 2007 and 2011 referring to European Union and Italy according to the gender distribution of ROP in relation to the total concerned population. The data stresses that among the total female population, women in Europe and Italy have been always representing a higher percentage compared to men. It is also relevant to note that both gender groups in Italy have maintained a similar trend of growth or decrease. Still women in Italy accounts between 2,5% up to 3% more than the European average in 2010 and 2011. In absolute numbers female persons at ROP accounted at about 6.500.000 million in 2011.

**Table 2-5: Percentage trend of European and Italian population at-risk-of-poverty rate by sex**

<b>Europe</b>					
<b>SEX/YEAR</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>Total</b>	16,5	16,4	16,3	16,4	16,9
<b>Males</b>	15,7	15,5	15,4	15,6	16,1
<b>Females</b>	17,3	17,4	17,1	17,0	17,6
<b>Italy</b>					
<b>SEX/TIME</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>Total</b>	19,8	18,7	18,4	18,2	19,6
<b>Males</b>	18,4	17,1	17,0	16,8	18,3
<b>Females</b>	21,2	20,1	19,8	19,5	20,8

(Own elaboration of Eurostat data, Eurostat code source: SILC[ilc\_li02])

The detailed data that combine gender and age variables of ROP population in percentage of the total population in 2010 clearly underline that women between 18 and 65 years old are those most at the risk of poverty (Table 2-6). Furthermore the age groups of less than 18 years old and the one between 25 and 49 years old show the highest discrepancy in comparison with the European data. The Italian data also demonstrate that females between 25 and 49 years old and over 75 years old experience the highest rate in comparison to males (19% and 21,6% respectively) so that in general females show higher percentages at ROP at any age status.

**Table 2-6: Percentage of ROP population by age and gender in Europe and Italy in 2010**

<b>Europe/2010</b>				<b>Italy/2010</b>			
<b>AGE/SEX</b>	<b>Total</b>	<b>Males</b>	<b>Females</b>	<b>AGE/SEX</b>	<b>Total</b>	<b>Males</b>	<b>Females</b>
<b>Total</b>	16,4	15,6	17,0	<b>Total</b>	18,2	16,8	19,5
<b>Less than 18 years</b>	20,5	20,3	20,6	<b>Less than 18 years</b>	24,7	24,0	25,5
<b>From 18 to 24 years</b>	21,1	20,1	22,2	<b>From 18 to 24 years</b>	23,0	22,0	24,1
<b>From 25 to 49 years</b>	14,7	14,1	15,3	<b>From 25 to 49 years</b>	17,7	16,4	19,0
<b>From 50 to 64 years</b>	13,5	13,7	13,4	<b>From 50 to 64 years</b>	13,1	12,6	13,6
<b>65 years or over</b>	16,0	13,0	18,3	<b>65 years or over</b>	16,6	12,6	19,5
<b>75 years or over</b>	18,2	14,5	20,7	<b>75 years or over</b>	18,5	13,5	21,6

(Own elaboration of Eurostat data, Eurostat code source: SILC[ilc\_li02])

Other socio- demographic available data refer to the employment status, education and household type<sup>14</sup>.

Starting from the latter one, and in consideration of the classifications applied by Eurostat, single persons with or without dependent children<sup>15</sup> are the main ROP categories together with large families including two adults and three or more dependent children (Table 2-7).

**Table 2-7: At-risk-of-poverty rate by poverty threshold and household type in 2010 Europe and Italy (percentages)**

HOUSEHOLD TYPE/GEO	European Union (27 countries)	Italy
<b>Total</b>	16,3	18,2
<b>Single person with dependent children</b>	36,6	37,3
<b>Two adults with three or more dependent children</b>	25,8	37,2
<b>Single female</b>	26,1	28,2
<b>One adult 65 years or over</b>	24,0	27,9
<b>Single person</b>	25,1	24,3
<b>Households with dependent children</b>	18,2	22,6
<b>Three or more adults with dependent children</b>	17,8	22,5
<b>Two or more adults with dependent children</b>	16,4	21,4
<b>One adult younger than 65 years</b>	25,9	20,8
<b>Two adults with two dependent children</b>	14,9	20,8
<b>Single male</b>	23,9	18,6
<b>Two adults with one dependent child</b>	11,8	15,8
<b>Households without dependent children</b>	14,5	13,9
<b>Two adults, at least one aged 65 years or over</b>	12,4	11,8
<b>Two adults</b>	11,3	11,6
<b>Two adults younger than 65 years</b>	10,3	11,4
<b>Two or more adults without dependent children</b>	10,6	10,3
<b>Three or more adults</b>	9,2	8,7

(Own elaboration of Eurostat data, Eurostat code source: SILC[ilc\_li03])

Still according to Eurostat the employment rate for women aged 25 to 64 was 63,8% in the European Union in 2010, while it was 77,5% for men, with a difference of 13,7 %. Data show that the difference diminishes as the education level increases. Thus for those with a low education level (at the most lower secondary education), the employment rate in 2010 was 43,3% for women and 65,2% for men, and a difference of 21,9%. The employment rate for persons with a medium education level (at the most upper secondary education) was instead 66,6% for women and 79,1% for men, with a difference of 12,5%. Finally among those with a high education level (tertiary education), the rate was 80,6% for women and 87,4% for men, with a further reduced difference of 6,8% . This pattern was similar among the majority of Member States.

<sup>14</sup> Household definition by Eurostat: "A 'private household' means "a person living alone or a group of people who live together in the same private dwelling and share expenditures, including the joint provision of the essentials of living". EU-SILC implementing regulation number 1983/2003 on updated definitions, defines households in terms of sharing household expenses and (for non-permanent members) in terms of duration of stay and (for temporarily absent members) in terms of duration of absence."  
([http://epp.eurostat.ec.europa.eu/portal/page/portal/income\\_social\\_inclusion\\_living\\_conditions/methodology/main\\_concepts\\_and\\_definitions#](http://epp.eurostat.ec.europa.eu/portal/page/portal/income_social_inclusion_living_conditions/methodology/main_concepts_and_definitions#))

<sup>15</sup> According to Eurostat classification for dependent children: "Dependent children were in the past defined as all persons aged less than 16, plus those economically inactive persons aged 16-24 living with at least one of their parents. Now a slightly different definition is used: All persons aged less than 18 are considered as dependent children, plus those economically inactive aged 18-24 living with at least one of their parents".  
([http://epp.eurostat.ec.europa.eu/cache/ITY\\_SDDS/EN/ilc\\_esms.htm](http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/ilc_esms.htm))

The focus on the employment status and education level in Italy provided below confirm the expected results so that unemployed with low level of education (lower the secondary education) represent the majority of ROP people in Italy (Table 2-8 and Table 2-9).

The detailed data for employment status and in relation to gender show that, among ROP population, ROP females are definitely less employed than men and in particular referring to 18 and 64 year old or more inactive (Table 2-8)<sup>16</sup>.

**Table 2-8: At-risk-of-poverty rate by poverty threshold and most frequent activity and sex in Italy in 2010 (percentages)**

Italy/2010	From 18 to 64 years			18 years or over		
WORKING STATUS/AGE	Total	Male	Female	Total	Male	Female
Employed persons	9,5	10,9	7,3	9,4	10,8	7,3
Employees	8,0	9,0	6,6	8,0	9,0	6,6
Unemployed persons	43,7	47,7	39,0	43,6	47,5	38,9
Retired persons	9,4	11,0	7,2	12,3	11,8	12,9
Other inactive persons	28,2	27,4	28,4	27,1	26,7	27,2

(Own elaboration of Eurostat data, Eurostat code source: SILC[ilc\_li04])

Data on education level among ROP people in Italy outlined in Table 2-9, expresses that ROP persons with low education are the majority in terms of total percentages of ROP population (23,9). Moreover the female group of ROP, for each attained level of education, represents the majority the highest percentages of ROP.

**Table 2-9: At-risk-of-poverty rate by poverty threshold and education level and sex in Italy in 2010 (percentages)**

EDUCATION/AGE	From 18 to 64 years			18 years or over			65 years or over		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Pre-primary, primary and lower secondary education (levels 0-2)	23,9	22,7	25,1	21,9	20,4	23,3	18,5	15,1	20,8
Upper secondary and post-secondary non-tertiary education (levels 3 and 4)	13,2	11,6	14,7	12,7	11,0	14,4	8,5	5,7	11,8
First and second stage of tertiary education (levels 5 and 6)	6,3	5,9	6,6	5,9	5,3	6,4	2,7	1,9	4,1

(Own elaboration of Eurostat data, Eurostat code source: SILC[ilc\_li07])

A further interesting data is provided by the distribution of Italian total female population by number of years spent in poverty within a four-year period as Table 2-10 shows. As it is possible to see the majority of population has never spent years in poverty. It is also interesting to notice that from 2009 to 2010 the persons that has recently entered into poverty(one year) have risen of almost 1% compared to the other distributions and that they are, together with people that have spent at least four years in poverty, the ones showing the highest percentages. No data are available for 2011.

<sup>16</sup> According to Eurostat an **employed person** is a person aged 15 and over (or 16 and over in Iceland and Norway) who during the reference week performed work - even if just for one hour a week - for pay, profit or family gain; an **employee** is a person who has a contract to carry out work for an employer and receives compensation in the form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind; an **unemployed person** is someone aged 15 to 74 (in Italy, Spain, the United Kingdom, Iceland, Norway: 16 to 74 years), without work during the reference week, available to start work within the next two weeks (or has already found a job to start within the next three months), and actively having sought employment at some time during the last four weeks.

**Table 2-10: Percentage distribution of female population by number of years spent in poverty within a four-year period in Italy**

DURATION/YEAR	2007	2008	2009	2010
1 year	8,3	8,8	8,9	9,8
2 years	7,4	6,3	6,9	7,4
3 years	6,8	6,2	6,4	5,9
4 years	10,3	9,6	10,0	9,8
Never	67,2	69,0	68,0	67,1

(Own elaboration of Eurostat data, Eurostat code source: SILC[ilc\_li51])

The data on persistent at risk of poverty condition in 2010 also induce to stress the relevance of the gender factor as important characterization. In fact according to Table 2-11, female's category accounts, at every age level, the highest percentages in terms of persisting risky conditions.

**Table 2-11: Persistent at-risk-of-poverty rate by sex and age in Italy in 2010**

AGE/SEX	Total	Males	Females
Total	9,6	9,0	10,2
Less than 18 years	12,4	12,3	12,5
From 18 to 24 years	11,9	11,4	12,5
From 18 to 64 years	8,4	8,2	8,7
18 years or over	9,1	8,3	9,8
From 25 to 49 years	8,1	7,6	8,6
From 50 to 64 years	7,7	7,9	7,4
65 years or over	11,3	8,9	13,1

(Own elaboration of Eurostat data, Eurostat code source: SILC[ilc\_li21])

### **2.1.3.A focus on low income population's consumption pattern**

Having deepened the socio-demographic data for ROP population at European and national Italian level and having defined the main characteristics of the population to include in the investigation, it is now necessary to understand the food consumption patterns referring to this category of people.

Unfortunately there are not available data specific on ROP population for food consumption or expenditure. The following analysis thus refers to total Italian population on food consumption and expenditure. Furthermore it is analysed the available grey literature on data for low income population in Italy.

In order to describe the context of food consumption, at first it is relevant to explore the trend of consumption expenditure in Italy considering the whole population<sup>17</sup>. Food and beverages are amongst the most important individual consumption items, and forming one of the most recurrent expenditure items for the majority of EU households. (Eurostat 2011). In 2007 Italy weighted as the third country in Europe in terms of total private expenditure (that mainly includes food, transport and services) (Eurostat 2008) food expenditure accounted at 14,5% compared to European average at 12,5%. As Table 2-12 shows, in 2010 food expenditure was at third place (at second including non-alcoholic beverages) among total private expenditure of households. Considering that ROP consumers can only partially afford expenses over the basic needs, the percentage of food expenditure necessarily rises following the already mentioned Engel's law.

<sup>17</sup> Aggregate data at European level for specific typology of food consumption are not available on Eurostat at any year. As well Italian data are only partially available as seen in the concerned table.

**Table 2-12: Final percentage consumes' expenditure of households by consumption purpose higher than 10% - aggregates at current prices in Europe and Italy 2010**

CONSUMES/GEO 2010	European Union (27 countries)	Italy
<b>Total</b>	100,0	100,0
<b>Housing, water, electricity, gas and other fuels</b>	23,6	22,2
<b>Food and non-alcoholic beverages</b>	12,9	14,5
<b>Food</b>	11,7	13,5
<b>Imputed rentals for housing</b>	11,8	13,3
<b>Transport</b>	13,0	12,6
<b>Restaurants and hotels</b>	8,6	10,0
<b>Miscellaneous goods and services</b>	10,9	9,6

(Own elaboration of Eurostat data, Eurostat code source: SILC[nama\_co\_3c])

Looking in details at the typology of food consumption preferred by Italian households Table 2-13 provides the aggregate available data for the main food categories, where cereals and wheat are the most consumed in terms of quantities, followed by meat, potatoes, drinking milk, cheese and vegetable fats and oils. The data also underline a growing estimated consumption of fresh fruit, from 2008 to 2011(excluding fresh peaches in 2010).

**Table 2-13: Gross human apparent consumption of main food items per capita (Kg) in Italy<sup>18</sup>**

TYPOLOGY OF FOOD/YEAR	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>Cereals (excluding rice) (kg/head)</b>	158,9	159,9	161,1	169,2	158,8	172,0	160,0	:	157,6
<b>Wheat Total (kg/head)</b>	149,9	151,6	154,5	162,0	150,1	161,3	156,8	:	145,3
<b>Rice - Total (kg/head)</b>	8,3	10,4	:	:	:	:	:	:	:
<b>Meat - Total (kg/head)</b>	93,3	92,2	91,1	90,6	94,0	:	90,0	:	:
<b>Drinking milk (kg/head)</b>	62,7	63,3	62,7	60,1	:	:	:	:	:
<b>Cheese (kg/head)</b>	21,8	21,6	21,7	22,6	:	:	:	:	:
<b>Eggs (kg/head)</b>	:	:	:	:	:	:	:	:	:
<b>Vegetable fats and oils (kg/head)</b>	13,5	13,4	19,6	22,5	27,9	:	:	:	:
<b>Apples (kg/head)</b>	31,1	14,6	25,2	19,0	17,5	16,6	19,9	22,5	16,7
<b>Pears (kg/head)</b>	15,1	13,4	14,0	14,2	12,4	9,6	11,4	11,5	13,8
<b>Fresh peaches (kg/head)</b>	12,5	15,8	22,6	21,1	21,9	15,5	17,0	15,9	18,4
<b>Processed peaches (kg/head)</b>	0,3	0,3	0,3	1,4	1,5	2,5	2,6	2,5	2,1
<b>Grapes (kg/head)</b>	14,7	14,1	16,4	17,2	14,4	6,6	3,6	14,0	6,4
<b>Oranges (kg/head)</b>	29,2	30,3	36,8	37,3	38,3	13,0	18,6	21,5	25,0
<b>Dried fruit (kg/head)</b>	0,7	0,9	0,7	0,7	0,8	3,9	3,6	5,5	3,4
<b>Vegetables (excluding potatoes) (kg/head)</b>	:	:	:	:	:	:	:	:	:
<b>Potatoes (kg/head)</b>	43,5	40,3	46,6	43,1	44,7	44,1	44,3	44,1	43,9
<b>Dried pulses (kg/head)</b>	1,9	1,9	1,9	1,8	1,8	:	:	:	:
<b>Sugar (equiv white sugar) (kg/head)</b>	33,1	33,6	31,8	43,6	:	:	:	:	:

(Own elaboration of Eurostat data, Eurostat code source: SILC[food\_ch\_concap])

Due to the lack of full data on consumption, it is possible to focus at the Italian household food expenditure to assess the national trend. At first possible to notice an unstable trend, mainly decreasing from the beginning of the crisis in 2007 and with clear drop in 2011 (-1,3%). In general, even considering the

<sup>18</sup> The table shows data on gross apparent human consumption, compiled from supply balance sheets that estimate food availability to the consumer and not actual consumption by households.

European aggregate data at varied number of Member states, Italy has been always performing under European average (Table 2-14).

**Table 2-14: Final percentage consumption expenditure of households by food consumption in Europe and Italy**

TIME/GEO	European Union (27 countries)	European Union (25 countries)	European Union (15 countries)	Italy
2002	0,3	0,1	1,0	-0,2
2003	0,6	0,5	0,5	0,8
2004	1,9	1,7	1,1	0,3
2005	1,0	0,9	1,3	2,3
2006	0,4	0,3	1,0	2,0
2007	0,6	0,5	0,9	-0,2
2008	-1,0	-1,2	-0,5	-3,6
2009	-1,5	-1,3	-0,1	-2,2
2010	1,9	2,0	1,1	0,8
2011	-0,6	-0,7	-0,1	-1,3

(Own elaboration of Eurostat data, Eurostat code source: SILC[nama\_co3\_k])

Considering the national statistics on households expenditure for food, the Istituto Nazionale di Statistica<sup>19</sup> (Istat) provides national and regional data and trend report updated to 2010.

Different definitions and measurements of low income population are adopted among European member states and European Union. Istat has adopted relative and absolute poverty measures indicators based on household expenditure. According to Istat (2011) the relative poverty is measured according to the monthly household expenditure to purchase a predefined basket of goods and services. This basket includes the goods and services which are considered essential in order to achieve an acceptable living standard in Italy. According to this definition the relative poverty threshold is calculated according to the average per capita expenditure at national level. The household with more components are analyzed by applying an equivalent scale that takes into account the economies of scale produced.

Focusing on the report (Istat 2011), the findings underline that from 2008 to 2010 the share of expenditure for food and non-alcoholic beverages has been almost stable among households located in North or Central Italy (16,5% North; 18,6% Centre) while it has increased in the Southern area up to about 25% of the total households' expenditure. In relation to Emilia Romagna, that is the region with lower ROP population percentages, the expenditure for food has risen more than the other Northern regions. Concerning the food expenditure it is relevant to underline also the outcomes of the study implemented by Istituto per i Servizi del Mercato Agricolo Alimentare<sup>20</sup> (ISMEA) that provides updated data for 2011. According to this report (Sardo et al. 2012) in 2011 the households food expenditure have reduced of 1,1% compared to 2010. This alarming data is also related to the significant increase of 2,4% of food product prices (in 2010 they raised only by 0,2%). In general the report confirm the European data, by stating that in the last ten years household expenditure growth has been very low, with negative trend mainly for the food expenditures (Sardo et al. 2012).

<sup>19</sup> Istat (Italian National Institute of Statistics) produces and distributes reliable, impartial, transparent, accessible and relevant information that describes the social, economic and environmental conditions of the Country. The Institute is fully involved in constructing the European Statistical System (EC regulation 223/09). Internet source at <http://dati.coesione-sociale.it/?lang=it>

<sup>20</sup> ISMEA: is a Italian public national body that supports central and local administrations managing E.U. programs related to the European Agricultural Fund for Rural Development (FEASR) and the European Fund for Fishing (FEP). The goal is to help improve institutional governance and planning and managing capabilities ([www.ismea.it](http://www.ismea.it))

Focusing on detailed expenditure per typology of food, according to the data provided by Istat (2011), it seems that meat expenditure has risen while the one for oils and fats continues to decrease. The percentage of families that declare to have diminished the quantity and/or quality of food is stable at national level at 35,1% since 2009, among this category of people 65,3% of them declare to have reduced the quantity of food purchased while 13,6% states to have reduced both quantity and quality of food.

Considering that purchases choices also refer to the preferred and available purchasing places, Istat points out that in 2010 seven out of ten families (69,4%) refer to large retailers (supermarkets) for all food purchase and only one out of ten refer to discounts (10,1%). 48,5% of families chooses traditional retailers for bakery products, as bread. Concerning food market, 11,5% of families utilizes it for the purchase of fish, while 17% for vegetable and fruit.

Focusing on the households composition in relation to food purchases, the mean and median of expenditure rises with a growth that is less than proportional to the number of households components. In 2010 the mean and median expenditure for single persons (18,5% of food expenditure out of total expenditure) was up to 70% of the total expenditure measured for a household of two components. Considering those including 5 or more components that data report that the total household expenditure on food in 2010 was about 20,8% of the total household expenditures.

In relation to the sex, age and employment status variables, Istat confirms the European trend, by underling that the households composed by older people, single persons and in particular women, or with a retired or unemployed head of household or with an employed female head of household spend in general a higher percentage of total expenditure on basic needs than the others.

Moving to the food consumption and expenditure of low income population in Italy, in 2011 in Italy a household with two components was relative poor if the total expenditure was less than Euro 1.011, 03 per month (Istat 2012).

By applying the relative poverty measure, in 2007 Banco Alimentare<sup>21</sup> has calculated the food poverty threshold at household level. Banco Alimentare has analysed the consumption patterns of relative poor households, whose relative poverty threshold in 2007 was Euro 999,67, and identified the threshold of food poverty, which in 2007 was at national level equal to 222,29 Euros. According to Banco Alimentare, in 2007 4,4% of Italian households were food poor, corresponding to 1 million 50 thousands households or 3 million people. Table below reports information concerning the typology of household food expenditure for not food poor households and food poor households (Table 2-15).

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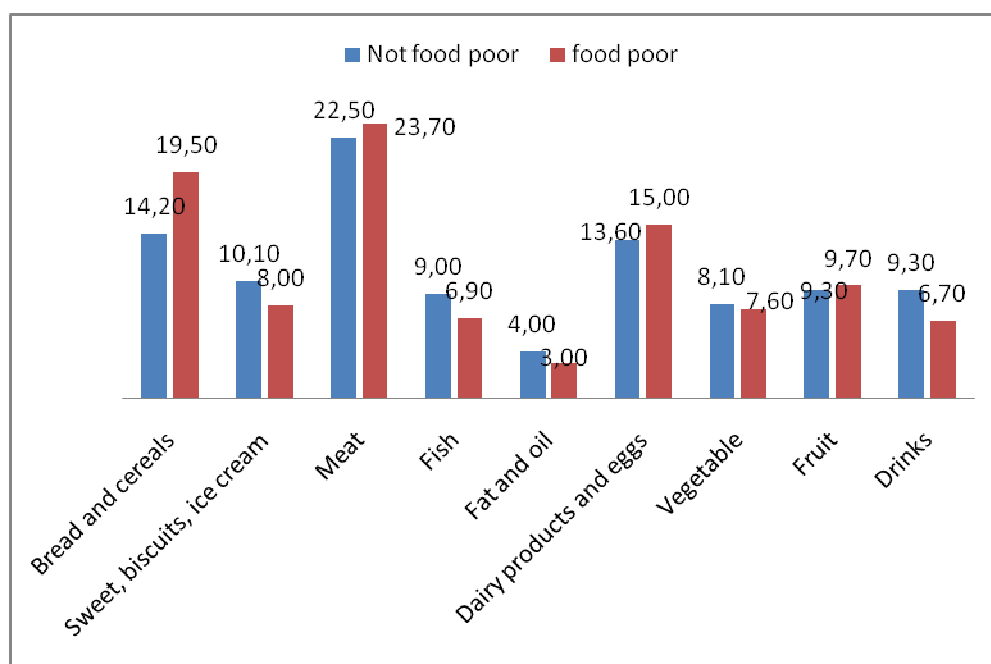
<sup>21</sup> Fondazione Banco Alimentare Onlus (Italian Food Society) has been operating in food poor alleviation. It collects the production surplus of the agrofood chain, and by means of its network of 21 organizations spread all over the country, it redistributes it to over 8000 charity organizations engaged in offering food help to the poor and the outcast all over Italy.

Table 2-15: Monthly average household expenditure for category of food (values: Euro, year: 2007)

	Not food poor households	Food poor households	Total households
Bread and cereals	62,86	28,85	61,37
Sweet, biscuits and ice-creams	44,89	11,93	43,44
Meat	99,88	35,05	97,03
Fish	39,76	10,26	38,46
Fats and oil	17,62	4,38	17,04
Dairy products and eggs	60,40	22,16	58,72
Vegetable	35,77	11,20	34,69
Fruits	41,14	14,44	39,96
Drinks	41,47	9,91	40,08
Out of home consumption	80,02	6,53	76,79
<i>Total monthly food expenditure</i>	523,81	154,70	507,58

Source: Campiglio L., Rovati G. (2009)

Figure 2-1: Household expenditure distribution for food category and food poverty status (%/year 2007)



Source : Campiglio L., Rovati G. (2009)



According to Figure 2-1 Italian households that are food poor, compared to non food poor, spend more on bread and cereals, dairy products and eggs and meat.

Finally it must be underlined that, at present, there are not available free data on ROP households' consumption and/or expenditure referring to the category of healthy food object of the study<sup>22</sup>.

Based on the data provided, it thus emerges that ROP Italian population is a relevant phenomenon to investigate also in term of food consumption pattern. In order to target the most representative categories of ROP population the data underline key variables which identify ROP population in Italy, as, in particular: gender, age, employment, education, household type, and geographical living area. According to this set of variables, following there is a list of ROP characteristics that have supported the identification of ROP population to be considered for the empirical investigation:

- ✚ Gender: women
- ✚ Age: retired people, 25-49 years old, children
- ✚ Employment status: unemployed
- ✚ Level of education: pre-primary, primary or lower secondary education
- ✚ Household type: single parent with dependent children, single
- ✚ Geographical living area: Densely or urban populated area

Unfortunately it must be underlined that there are not official national or European data on food consumption for ROP consumers.

## **2.2. Food industries in the European and Italian context**

Quoting the Eurostat report (2011) “Food and beverages manufacturing is one of Europe’s most important and dynamic industrial sectors....Compared with most industrial activities, the food and beverages manufacturing sector is fragmented, with a relatively high proportion of small and medium-sized enterprises that tend to serve local, regional and national markets; some of these specialize in the production of geographical specialities. Nevertheless, there are also a handful of large multi-national manufacturers within the sector and many of these have considerable market reach, characterised by global brands.”

The related Eurostat statistics on agrofood processing industries (excluding beverages) estimated at 267.919 the number of enterprises in 2008, with a total turnover of Euro 846.625 million. The report edited by the European Commission also explains that in 2008 “the food manufacturing sector (excluding beverages) in the EU is dominated by small enterprises: 92,7 % of enterprises employed fewer than 50 persons in 2008, while 6,0 % employed between 50 and 249 persons, leaving a residual 1.3 % employing 250 or more persons” (Eurostat 2011).

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<sup>22</sup> Completing the affirmation, it has been identified only the ISMEA (see the following paragraph for details on ISMEA institute) report (2007) where little information (without specific data) are provided on health food preferences (considered by the report as functional food) that are not suitable with the definition of healthy food adopted within this work.

### 2.2.1. Focus on food industries in Italy

Italy is one of the main relevant countries in Europe, second only to France in terms of number of enterprises manufacturing food products, by accounting a total of 54.325 firms in 2009<sup>23</sup>. Meat and vegetable and oil processing sectors are the largest, despite, the majority of enterprises is given by those operating in the processing of bakery and farinaceous food and including bakery shops. Meat processing sector also accounts for the highest turnover (Table 2-16).

**Table 2-16: Number of enterprises and turnover for food processing sectors in Italy, 2009.**

<b>Food sector</b>	<b>Enterprises (Units)</b>	<b>Turnover (Million Euro)</b>
Processing and preserving of meat and production of meat products	3.495	20.171
Processing and preserving of fish, crustaceans and mollusks	372	1.130
Processing and preserving of fruit and vegetables	1.808	8.997
Manufacture of vegetable and animal oils and fats	3.449	5.412
Manufacture of dairy products	3.141	15.231
Manufacture of grain mill products, starches and starch products	1.050	3.146
Manufacture of bakery and farinaceous products <sup>24</sup>	35.548	18.690
Manufacture of other food products	5.462	16.787
<b>Total</b>	<b>54.325</b>	<b>89.563</b>

(Own elaboration of Eurostat data, Eurostat code source:[sbs\_sc\_ind\_r2])

Looking at the size of enterprises by number of employees, in 2009 the largest number of enterprises belongs to micro and small firms. Large firms accounts for a small quantity (only 100), despite they show the highest turnover (Table 2-17).

<sup>23</sup> Data updated according to the last web site visit implemented on November 2012.

<sup>24</sup> This sector of enterprises includes also bakery shops.

**Table 2-17: Number of enterprises and turnover by number of employed persons for food processing industries in Italy, 2009.**

<b>Employment size classes</b>	<b>Enterprises (Units)</b>	<b>Turnover (Million Euro)</b>
From 0 to 9 persons employed	48.051	14.118
From 10 to 19 persons employed	4.013	10.111
From 20 to 49 persons employed	1.536	10.700
From 50 to 249 persons employed	625	25.460
250 persons employed or more	100	29.174
<b>Total</b>	<b>54.325</b>	<b>89.563</b>

(Own elaboration of Eurostat data, Eurostat code source:[sbs\_sc\_ind\_r2])

In order to understand the structure and recent development the Italian food industries, here below it is reported the review of the grey available literature.

The recent report published by Banca D'Italia - Eurosystem and edited by Viviani et al. (2012) provides an interesting analysis of the trend of food industries from 1999 to 2007. In 2007 food industries represented 10% of the entire Italian manufacturing system in terms of employment and 9% in terms of added value; these data were slightly inferior to the European average (correspondingly 13% and 12%). Between 1999 and 2007 the number of enterprises has risen with a growth rate at 0,5%, increasing from 64.000 to 72.000 units.

Focusing on SMEs, in 2007 the SMEs accounted about 96% of the total population, representing together with France the highest percentages at European level. Between 1999 and 2007 Italy, together with Spain, has been the only country with increasing number of enterprises, growing at rate of 0,4%. In 2007 SMEs employed 53% of the total labour force (and 41% of the manufacture sector). Furthermore in the same year, enterprises with less than 20 people employed were producing 33% of the total value added (compared for example to the second best in Europe that was France that produced only 18%). Despite these data, considering the entire food industry sector between 1999 and 2007, the total value added has diminished of 0,2%, in opposite to the European trend.

The following analysis of the Italian national trend of food industries until 2011 is supported by the online available ISMEA reports.

Starting from the most updated data provided by ISMEA (2012), in 2011 the contraction of national demand for food notwithstanding that exports have positively performed, has determined a reduction of production for food industries. According to ISMEA this data is confirmed also by the negative outcomes coming from the investigation on the climate of trust of operators towards food industries in 2010, where the operators' confidence has decreased almost to zero. This alarming data does not reflect the same trend at European level considering that European production has risen by 2% with particular regard to Germany, France and United Kingdom.

Despite the negative performances of 2011, the trend from 2001 to 2011 in Italy has been slightly positive compared to other sectors as the manufacture one (plus 0,7% compared to minus 1,8%). As already mentioned food industries exports has showed a positive trend by increasing of about 5,6% per year.

In total food industries exports in 2011 accounted for 80% of total agrofood exports, representing 18% of total national income. This positive trend has been anyway low compared to the average of agrofood export at European level (about 25%), and of the main international European competitors, Germany and France. This data induces ISMEA to highlight the strong dependence of the Italian food industries from the dynamics of the internal demand.

In order to deepen the reasons of the negative national trend it is of noteworthy importance to focus on prices evolution along the food chain. Despite the unstable trend of prices from 2007 at international level, the terms of trade of the Italian agriculture from 2006 to 2011 have not increased and in some years they have even reduced. Instead the production prices for food industries have increased by 3% per year determining also an increase of the final prices paid by consumers. In general it is underlined that the unbalanced and critical dynamics of the food chain have been worsening in the last years. These criticalities also relate to the inefficiencies of the logistic means and infrastructures and the increased costs for energy (gasoline and electricity) that impact on each actor involved in the supply of food by diminishing the final margin growth, including the retailers' one.

Within study published by ISMEA in 2009 according to data collected in 2007, a panel of Italian food industries have been interviewed in relation to their perceived competitive performances and typologies of relations. The study has involved 149 small medium and big food enterprises operating in the food production (main macro categories: meat/fish, dairy, cereals and vegetable/fruit), oil and wine processing. According to the findings provided the following key issues and related comments can be usefully underlined:

- Productivity: the majority of interviewed declare to have a high or adequate capacity in terms of productivity.
- Investments: majority of industries (70%) declare to have been investing (between 2006 and 2007) in improving and innovating processing production, despite the difficulties to access to credit in particular for small enterprises.
- Costs: they are experiencing costs rises in particular in relation to raw material and energy purchase.
- Employment: the majority (80%) has maintained stable or have increased the number of employed workers.
- Suppliers: The relations has maintained stable without losing their contractual power
- Distribution channels used and criticalities: Large retailers are the main used distribution channel, in particular for medium and large companies. Despite this is most used selling channel, 45% of industries declare to face notable relation's problems with retailers, in particular in relation to the margin's distribution along the supply chain.
- Competitors: the industries perceive foreign competitors as a problem due to their higher productivity capacity, concerning substitute products
- Other threats: they consider bureaucracy complexity and regulation on food safety as negative influences on their potential performances.

Focusing on the specific typology of healthy products and processed products as prepared (minimally processed or fresh cut products), frozen or ready to eat there are not available free<sup>25</sup> official data or reports, it is also interesting to underline that the section of ISMEA devoted to quality food is restricted to organic or geographical indication products.

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<sup>25</sup> Market research on ready to eat (e.g.: minimally processed products) products are available by payment on at private market research companies. Eurostat and Istat do not provides focus on these specific categories of products.

### 2.3. Food retailers in the European and Italian context

The retail sector include specialised food, beverage and tobacco retailers, non specialised retailers (grocery stores, supermarkets, discount stores, and superstore), market and stalls, and retailing and consumers services (mainly: restaurants, coffee shops and bars, take away or fast food outlets, hospital, school canteen, and catering).

According to Eurostat online data for 2009, non specialised food stores (including tobacco selling) are 552.762 units, with a turnover of 1.034.256 million Euro. Specialised stores selling meat, fish, vegetable, fruit, and bakery products, beverages and other food products (excluding tobacco) are 407.621 units, with a total turnover amounting at 110.633 million Euro (Table 2-18).

**Table 2-18: Non-specialised and Specialised retailers in Europe, 2009.**

<b>EU27 /2009</b>	<b>Number of enterprises (Units)</b>	<b>Turnover (Million Euro)</b>
Retail sale in non-specialised stores with food, beverages or tobacco predominating	426.102	900.000
Other retail sale in non-specialised stores	126.660	134.256
Total retail sale in non-specialised stores	552.762	1.034.256
Retail sale of food, beverages and tobacco in specialised stores	476.457	134.728
<b>Focus on food and beverage specialised stores</b>		
Retail sale of fruit and vegetables in specialised stores	71.166	14.421
Retail sale of meat and meat products in specialised stores	110.909	32.030
Retail sale of fish, crustaceans and molluscs in specialised stores	30.532	5.670
Retail sale of bread, cakes, flour confectionery and sugar confectionery in specialised stores	66.736	14.080
Retail sale of beverages in specialised stores	42.829	21.900
Other retail sale of food in specialised stores	85.449	22.531
Total food and beverage specialised stores	407.621	110.633

(Own elaboration of Eurostat data, Eurostat code source:[ sbs\_na\_dt\_r2])

Looking at retailing and consumers services in 2009, the units operating including beverages serving are 1.484.442, with a total turnover of Euro 316.556 million (Table 2-19). Specialised activities restaurant and mobile food services contribute to 55% of the total units operating within this sector.

**Table 2-19: Food and beverages service activities in Europe, 2009.**

<b>EU27/2009</b>	<b>Number of enterprises (Units)</b>	<b>Turnover (Million Euro)</b>
Food and beverage service activities (including beverages)	1.484.442	316.556
Restaurants and mobile food service activities	816.206	191.618
Event catering and other food service activities	64.799	44.908

(Own elaboration of Eurostat data, Eurostat code source:[ sbs\_na\_1a\_se\_r2])

According to the EC report (2011) the high number of non specialised stores and the increase of food and beverage service activities are due to several factors mainly referring to changes in household size and to the growth in personal car use. According to the report the reduction of the household size has induced an increase of eating out of home and consequently an increase of restaurants, take away outlet, etc.. The increased use of personal transportation has instead favoured the “one stop solution”, meaning the consumers prefer to shop at the superstores with easy accessible free parking and also reduce the buying frequency.

Here below detailed information for Italy based on Eurostat the most updated available data (year 2009) are provided.

### **2.3.1.Focus on food retailers in Italy**

In Italy non-specialised stores have upwards 55.000 enterprises, this large number is even exceeded by food specialised stores that amount at 72.957 units, excluding beverage and tobacco service activities. This aspect is typical of southern and Eastern Europe where independent grocery stores remained prevalent (Food: Farm to Fork Statistics, 2011). In particular meat and fruit and vegetable groceries are the most diffused within the country (Table 2-20). Looking at the turnover, specialised food stores show a very low capability compared to the European level.

**Table 2-20: Non-specialised and Specialised retailers in Italy, 2009.**

<b>Italy/2009</b>	<b>Number of enterprises (Units)</b>	<b>Turnover (Million Euro)</b>
Retail sale in non-specialised stores with food, beverages or tobacco predominating	52.982	100.791
Other retail sale in non-specialised stores	4.981	11.286
Total retail sale in non-specialised stores	57.963	112.078
Retail sale of food, beverages and tobacco in specialised stores	106.405	17.391
<b>Focus on food specialised stores</b>		
Retail sale of fruit and vegetables in specialised stores	17.591	2.571
Retail sale of meat and meat products in specialised stores	29.067	5.555
Retail sale of fish, crustaceans and molluscs in specialised stores	5.689	957

Retail sale of bread, cakes, flour confectionery and sugar confectionery in specialised stores	9.026	1.314
Other retail sale of food in specialised stores	11.584	2.024
Total food specialised stores	72.957	12.422

(Own elaboration of Eurostat data, Eurostat code source:[ sbs\_na\_dt\_r2])

Concerning the service activities Italy belongs to the five largest Member States for number of enterprises. In particular restaurants and mobile activities amount at 123.227 units (Table 2-21).

**Table 2-21: Food and beverages service activities in Italy, 2009.**

Italy/2009	Number of enterprises (Units)	Turnover (Million Euro)
Food and beverage service activities	247.045	43.384
Restaurants and mobile food service activities	123.227	24.085
Event catering and other food service activities	3.339	6.171

(Own elaboration of Eurostat data, Eurostat code source:[ sbs\_na\_1a\_se\_r2])

Further detailed on the Italian retail system are provided according to available grey literature and in particular with regard at the mapping published by FederDistribuzione<sup>26</sup> and the 2011 report of Gruppo24Ore<sup>27</sup> on large retailers.

According to FederDistribuzione (2012) between 2000 and 2011 the number of traditional retailers grew of 103.940 units, amounting at 952.068 in 2011, while in the same period large retailers grew of 4.202, accounting 28.891 units in 2011. Among the latter number are included 4.446 units representing hard discounts. The market share of large retailers (in particular hypermarkets and supermarkets), after notable growth from 2000 to 2009 (almost 11%), have maintained almost stable (with slight growing trend of 0,3% per year) between 2009 and 2011 around 57%. Traditional retailers market share, after notable lost from 2000 to 2009 (almost 11,5%) have maintained almost stable (with slight negative trend of 0,5% per year) between 2009 and 2011 around 29,5%.

Focusing on large retailers there has been a big expansion of supermarkets accounting three times the number of units of hypermarkets in 2009, that are experiencing tending negative trend. Also shopping centre or gross leasable area are still underexploited compared to other European countries (Grosso24Ore 2011). The biggest Italian groups are: COOP ITALIA (15,3% of market share in 2012), CONADGRUPPO (10,6%), SELEXGRUPPO (8,1), AUCHAN (7,8%), ESSELUNGAGRUPPO (7,8%), CARREFOUR(6,6), DESPAR (5,1), followed by EUROSPIN, PAM, and SIGMA. In order to reduce the fragmentation of the large

<sup>26</sup> FederDistribuzione officially represents enterprises operating in the distribution of food and non food products in Italy. The enterprises belonging to the association operate through: shopping centre and e hypermarkets, supermarkets, superette, , big specialized retailing, discount, cash and carry, franchising, online sells and direct selling. ([www.federdistribuzione.it](http://www.federdistribuzione.it))

<sup>27</sup> The 24 ORE Group is a multimedia publishing organisation specialized in business, financial, professional and cultural information. Its most popular and best-selling newspaper is Il Sole 24 ORE, the business daily with the highest circulation in Europe, leader in business, financial and regulatory information and key driver of the high brand profile of the Group's operations as a whole. (<http://www.gruppo24ore.ilsole24ore.com/it-it>)

distribution organization and compete against the big food industries some large retailers has also created the so called “purchase centre” in order to deal contracts with large suppliers.

Gruppo24Ore (2011) provides a comparative analysis of retail status at European level with a focus on the Italian situation. According to the report the retailing structure is still not homogeneous both for the mix of organizational patterns and the leadership position. The main organizational models refer to France, which focus of the presence of hypermarkets, Germany oriented towards discounts, and United Kingdom that has developed in terms of superstore usage. It is relevant to notice that the German model has demonstrated to be the main “exportable” system, meaning that discounts have been able to develop in several other countries through the international expansion of the German labels. By the way the model that has shown the best capability of adapting and of duplicating within other national labels is the French one, the has gained particular success in the Mediterranean area. It can be possible to conclude that the main successful formulas have those oriented to the price reduction. Despite the good initial development of hypermarkets, as already explained above, this choice is not well performing at present and in particular among the most developed countries due to the difficulties of matching the socio-demographic changes ( reduced households size, ageing population increase) and due to the discount competitiveness.

The focus provided by the report on Italy shows that supermarkets are particularly present in the central and southern part of Italy, while hypermarkets have mainly developed in the north-western area, despite they are also present in the whole country. At present the last ones are still opening in the north and also in the centre, while they are closing in the south. Looking at the square meters, they breadth is lower among the supermarkets located in the south, while hypermarkets size is almost homogeneous everywhere.

Focusing on the accessibility aspects, the large retailers (through super and hyper) are able to provide more square meters and thus more offer of products in the northern-western part, central and northern-eastern area are adequately on line with the average standards, while in the south there is an insufficient availability. Still, according to Gruppo24Ore, the lack of adequate space and offer induce consumers to choose other channels as discounts, traditional retailers or markets.

### ***Focus on Private label***

According to the relevance that the private label are gaining both at national and international level, here below are reported the main outcomes provided by the report of Gruppo24Ore(2011).

According to Gruppo24Ore, private labels, at European level, are experiencing a positive trend. Consumers consider these products as at the same level of the branded ones and choose them in terms of the optimization of quality and price attributes. The persisting economic crisis has positively favoured the expansion of the private label, despite this positive trend is foreseen with a long term impact. The reasons of the expected growing trend relate to the corresponding change of the consumers’ behaviour at the purchasing stage, driven by the strong price policy operated by retailers together with the rationalization of the shelf space in favour of the private label range of products.

Looking at the Italian performances, the mentioned strategy has induced the private label to grow up by gaining 16% of the market share, with a definitely consolidated appreciation by the consumers that has provided the 90% of consensus, meaning that this percentage of people buy at least one product sold through the private label.

In Italy, as in the other European countries, the retail chains have reorganized by introducing the followings changes: the development of the category management; the exploitation of the vertical integration, through the collaboration with suppliers; the change of the products’ range offer, both acting modifying the broadness and depth of the branded categories and orienting suppliers to an improved efficiency. In 2010



private label products have reached an increase of plus 7,6% of growth in terms of quantities of products offered. The highest increase has been registered in supermarkets and smaller surfaces, and it has concerned also the southern part of Italy, despite with less performances.

Still, according to the report, private label in Italy move in two directions: they enter in new categories of products and they segment their offer. It is furthermore assumed that concerning the packaging development, ingredients and communication areas the distribution is also operating with a relevant rate of innovation. This innovative approach is anyway assumed by few large retailers in consideration of the fact the main increase of private label products (61%) is concentrated among 4 brand stores.

### 3. Methods and Materials

In consideration of the theoretical framework and of the outlook on available baseline data outlined in the previous chapters, it is considered as appropriate to adopt a qualitative methodology with an explorative approach to investigate behaviours and perceptions of consumers, food industries and retailers.

The following paragraphs provide the detailed description of the methodologies selected and applied for data collection, recruitment and elaboration for each actor to be investigated. Thus paragraphs 3.1, 3.2, and 3.3 focus on detailed methodologies for consumers' investigation. Following paragraphs 3.4, 3.5 and 3.6 are devoted to food industries and retailers' investigation.

#### 3.1. Focus group methodology

Focusing on ROP consumers, from chapter 1 and 2 it has emerged as necessary to get direct information from this target on the possible psychological and environmental aspects affecting (both in positive and negative terms) their healthy food choices. Furthermore, according to the lack of other comparable sources of information on healthy food related perceptions and behaviours in Italy, it raises as necessary also to extend the same investigation to more affluent consumers in order to assess whether ROP consumers perceive different barriers from more affluent ones, so that to be able to catch any specific discrepancy that could deal with the socio-economic status of the respondent. To facilitate this typology of investigation it has been selected as appropriate the focus groups methodology.

According Lederman (see Rabiee 2007:655) a focus group (FG) is “a technique involving the use of in-depth group interviews in which participants are selected because they are a purposive, although not necessarily representative, sampling of a specific population, this group being ‘focused’ on a given topic”. Focus group involves organised discussion with a selected group of individuals, with similar socio-demographic characteristics, to gain information about their views and experiences of a topic. It thus allows to obtain variety of perspectives about the same topic and to understand the feelings, thoughts, values, preferences, fears, motives and attitudes of the target group object of the analysis (Gibbs 1997<sup>28</sup>). Still Rabiee (2007) emphasizes that focus group is characteristic for the exploitation of the group dynamic, that, differently from a one to one interviews, provides deep and wide data generated from the “social interaction”. In comparison to other typologies of interview Morgan (1996) underlines also that the focus group shows some weak points that mainly stand on the created interaction. In particular Morgan emphasizes that the role of the moderator during the group discussion is determinant for driving the topics to be developed as well as risky in influencing the participants' behaviours and answers. Furthermore when participants are driven to focus on specific issues, they often tend to polarize their opinion towards the leading positions arising and thus the singular attitudes tend to become more extreme at the end of the focus. The last risky aspect refers to the discussion of sensitive topics that could make respondent resistant to face in front of other unfamiliar people; despite this latter observation need to be always kept in mind, Morgan explains that at the time of his study, dated 1996, there were already growing numbers of focus group implemented on sensitive issues or involving minorities or marginalised people and that this risk might not be confirmed by the future studies.

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<sup>28</sup> On line paper published by “Social Research Update” , issue 19 (1997) available at <http://sru.soc.surrey.ac.uk/SRU19.html>

In order to make a focus group successful, it is thus needed to place attention on several key aspects that follow the conceptualization of the study that are the organisation, implementation and reporting of the group interview as clearly explained by Morgan and Krueger (1998). Here below there are summarised some of their crucial phases and aspects that have been also considered in the methodology framework adopted in this thesis<sup>29</sup>.

According to the defined purpose of the investigation, the conceptualisation of the study and thus the identification of the issues to be investigated are implemented through the support of literature reviewed. It then follows the translation of the issues selected into effective questions to be posed to within the interview's implementation. These first steps as applied within the thesis are present hereafter. The organisation of the consequent activities bases on the available budget and timing. According to the sources given, it is necessary to clearly define the selection and recruiting criteria of the attendants, in accordance with the available baseline data on the target group identified. The arrangement of the group interview includes the contacting and follows up of potential participants and it also has to place special attention towards the selection of the moderator and assistance staff. These steps as applied within the thesis are present in paragraph 3.3. Finally, after the interview/s it is needed to define the criteria and methodologies for the analysis and reporting activities to be carried out. This step as applied within the thesis is present in paragraph 3.4.

Focusing on the first step that is the conceptualisation of the issues to investigate, the topics to discuss are planned according the features raised within the theoretical framework in chapter 1 and to the needs of information emphasized in chapter 2 concerning the actual consumption patterns in relation to healthy food. There are thus identified 6 following key issues to be explored that are,

-The identification of present dietary habits: within this issue it is aimed at acquiring direct information from the attendants on common and specific food related habits in relation to their attitude, motivation, lifestyle and environmental aspects influencing their food habits;

-The definition of the ideal food in terms of food preferences: this topic is developed in order to understand how it is characterised the perceived ideal food consumption of the consumers and which are the emotional and rational motivations towards the identification of the ideal food;

-The purchasing behaviours: within this issue it aimed at investigating the motivation, lifestyle and environmental aspects influencing the consumers food purchases and purchasing stores;

-Typologies of food, motivation and perception towards processed and RTE food: this issue is focused specifically on the identification of the typologies of processed food (including, RTC, RTH, RTE food) consumed and at analysing the attendants' attitudes and perception towards processed food up to ready to food;

-Food, health and well being: within this issue it is deepened the level of awareness and perceptions that consumers declare in relation to food and its impact towards health and wellbeing; furthermore the issue is developed concerning the perception towards processed food in terms of healthy attributes;

-Barriers and possible solutions to healthy food consumption: within this last topic it is aimed at understanding the present obstacles to healthy food consumption and at identifying possible solutions to improve its consumption, including the identification of the preferable characteristics that shall be considered for the development of healthy processed products commercialisation.

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<sup>29</sup> Among the sources used it has been also referred to the web site: <http://www.tc.umn.edu/~rkrueger/focus.html>

The issues have been translated and organised into detailed specific questions/discussion to be developed by the moderator.

### **3.2. Attendants' selection and implementation of focus groups**

In order to merge the socio-economic status of the ROP attendants it is identified the ROP threshold as defined by the European Commission and described in chapter 2, as the first criterion to apply for participants' selection. Focusing on the socio-economic status, and aiming at exploring feelings, attitudes and perceptions of ROP consumers, it has been considered of noteworthy importance to implement control focus groups for each group implemented. The control groups shall represent the same characteristics of the target ones, but with a proportionally increased income range. The group including ROP consumers, is hereafter called "ROP group" and the one more affluent, is called "affluent group".

In order to restrict and define the selection criteria the ROP groups include consumers with 40–60 per cent of annual equivalised median household income (see the focus box in chapter 2 for the detailed definition of annual equivalised median household income). In terms of affluent groups, the equivalised median household income is adopted as the lower threshold for recruitment. The upper threshold for affluent recruitment is defined as 1,67 times the annual median household income. The available yearly data utilised refer the Eurostat ones for 2009 in Italy.

Hence, as an example, stated that the national equivalised household median income in Italy (according to Eurostat equivalised household median income definition and data for 2009) is about 15.640 euro/year, the lower threshold for a ROP household including a single person is 6.260 euro/year and the maximum is 9.380 euro/year. As further exemplificative case, here below it is reported the criterion as applied to a ROP household including two adults and two children the lower threshold is calculated as

$0,4 * 15.640 * (1 + 1 * 0,5 + 2 * 0,3)$  that is about 13.150 euro/year ; the upper ROP household is calculated as  $0,6 * 15.640 * (1 + 1 * 0,5 + 2 * 0,3)$  approximated at 19.700 euro/year .

In relation to the affluent group, the corresponding example for a household including a single person follows. The lower threshold for an affluent single person is the national equivalised household median income in Italy, thus 15.640 euro/year. The upper affluent threshold is 26.120 euro/year. The complete table including the threshold according to the different typologies of household components are reposted in Appendix 2.

There are now described the other criteria applied.

- Demographic characteristics of the attendants: according to picture of ROP consumers in Italy outlined, the higher discrepancy related to gender at risk of poverty, is shown by female, furthermore it is needed to consider two more aspects influencing the interviewees' selection, derived from the literature review, that are that women are the main household's responsible for food purchase and that food products with healthy characteristics are mainly purchased by women. These reasons have induced to consider adult women (included in the age's range 25 and 65) as most appropriate target. In order to arrange homogeneous and feasible meetings it has been also decided to arrange groups of respondents according to two age groups, 25<x>40 and 41<x>65.

- Previous participation in other focus-groups: in order to avoid the inclusion of professional respondents and attempting to avoid the participation of attendants mainly interested towards the incentives rather than a true participation, there have been included consumers who have not participated focus group interviews during the previous 12 months or more than three times during the past five years.

-Food buying frequency. In order to better target consumers interest towards food issues it has been fixed a minimum level of buying frequency, so that the in order to participate the consumer should declare at least to buy food at least twice a month in order to be included.

- Health status: considering the need to focus on healthy food and to avoid any confusion with health food it has been included consumers declaring not to have any chronic diseases or specific health problem. Furthermore the attendants selected needed to have declared not to follow any special diet.

- Direct or indirect (family) relations with food processing industries: in order to avoid any possible external influence on topics discussion on processed food it has been preferred to exclude persons that might have frequent personal contacts in the field of processing industries or direct relations with persons operating in that field.

-Considering the growing concentration of population at risk of poverty in the urban area, it has been decided to choose attendants living in a high densely populated urban area, and in order to guarantee homogeneity of answers it has been chosen the same one for all focus group. The area selected in the city of Bologna.

Bologna is the seventh most populated city in Italy accounting 380.181 inhabitants and with a density of population per squared kilometre of 2.701,5<sup>30</sup>. This decision has also facilitated the external monitoring of the focus group implementation due to the limited distance from the University location.

Therefore the categories of focus attendants to select include females between 25 and 65 years old, responsible for food purchase, resident the urban area of Bologna city (Italy), with an annual household income range referring to the European ROP threshold, as Table 3-1below summarizes:

**Table 3-1: Summary of the focus group attendants' selection criteria**

	ROP consumers (household income between 40% to 60% of the equivalised median household income)	Affluent consumers (household income between median income to 1,67 x median income)
Women	focus-group 1 (hereafter named as Young ROP group) (9 persons, urban, 25-40)	focus-group 2 (hereafter named as Young Affluent group) (9 persons, urban, 25-40)
Women	focus-group 3(hereafter named as Mature ROP group) (9 persons, urban, 41-65)	focus-group 4 (hereafter named as Mature Affluent group) (9 persons, urban, , 41-65)

Source: own elaboration

To assure the fulfilment of each criterion within the recruiting activities, a recruitment questionnaire and a background questionnaire has been arranged to be submitted to each participant before the focus group conduction.

### **3.2.1. Recruiting criteria and focus groups implementation**

The recruitment has been managed as follows:

<sup>30</sup> Data on Bologna city are provided by the online web site collecting official data on Italian towns: <http://www.comuni-italiani.it/citta.html>

The recruitment has been conducted by four different recruiters of the subcontracted agency, to allow the best differentiation in the FGs; the recruiters have been coordinated by a supervisor who has managed/arranged recruited respondents, monitored procedures and ensured their successful outcome. In addition, everything has been supervised by the agency's fieldwork manager.

Respondents have been recruited over the phone, individually, sometimes via e-mail, after a first contact in person or over the phone. Respondents have been recruited from: data base; personal contacts; word of mouth, especially to reach the ROP target group which is less accustomed to standard market research, through contacts from community centres or parishes.

Recruitment has taken quite a long time. First recruitment steps were taken before Christmas 2011, yet it was too early, as people tend not to be aware of what's on their agenda a month in advance; indeed, many respondents who were recruited in December were no longer available and had to be replaced most respondents were recruited two weeks before the FGs (usual timing); each respondent was contacted at least three times: first of all to get to know her/get some information, the second time to confirm participation, the third time as a recall/memo, the day before the FG.

All respondents live in Bologna, in different districts (from city centre to suburbs).

Incentives have played a key role among ROP respondents that mainly participated because of the voucher, only among affluent participants there were attendants who were keen on participating – irrespective of the incentive.

Recruitment has been particularly difficult for the ROP target group. ROP attendants have shown not to be familiar with market research. Hence they have acted as suspicious in particular among younger respondents that have been not easily to be convinced, plus showing to have to face more problems to reach the location at the scheduled date, due to personal organisation difficulties as for example small children to take care of, or meals to be prepared. Each ROP older respondent has to be contacted up to 5 times and younger ROP respondent up to 8 times, while within the affluent target group the ratio was 3to1.

The screening question about income has resulted as a bit awkward, thus a question to be asked carefully and tactfully triggering anxiety and doubts. This question has contributed to partly discourage potential participants from participating in the FG. In some cases they have answered a bit generically (people often are not well aware of their household income, plus they tend to either underestimate or overestimate their financial situation), so that the recruiter has been required to be very sensitive. Nonetheless all the selection criteria have been matched.

### *The implementation*

The four focus groups took place in January 2012. Each FG has lasted about two hours. Each meeting has been video recorded, transcribed and also on time video monitored from two experts, whose one was the author.

Participants have show willing to contribute with their own experience and to participate in FG discussion. The topics have attracted the attention of the women participating in the FG and the atmosphere has resulted as positive and participative. Talking about food leads to emotional involvement, both including the individual perceptions and the several family dynamics, that impact especially when the family includes children and when under 14 year-old. The location selection has also contributed to create a positive atmosphere; it was a rented room with all recording tools, but furnished as very informal. Participants have been provided with sandwiches, sweets and pastries. In addition, among the affluent groups, food has showed to be a familiar and daily issue, making them to feel at ease. Mature ROP have showed instead a bit

more aggressive on these issues, especially the attendants that have recently entered at risk-of-poverty, due to loss of their job or of their partner.

Problems or other observations to take into consideration when interpreting the results, has been noticed as follows: the first issue on food habits was a founder topic for the whole discussion. It was greatly appreciated by participants and it was worth spending time on it. The discussion on ideal food and purchasing behaviours was very involving as well and allowed to have some first feedback on healthy food issue. The focus on processed was smooth to address. The questions addressing food, health and well being was more complex, only few participants seemed to be very aware of the topic and it forced to raise issues already partially covered. The identification of barriers and solution took time and due to time restriction and limited interest registered from participants, few suggestions were collected on how to turn a food healthier.

### **3.3. Methodology for the focus group analysis**

According to Diccico, “the purpose of the qualitative research interview is to contribute to a body of knowledge that is conceptual and theoretical and is based on the meanings that life experiences hold for the interviewees” (Dicicco et al. 2006:314)

Looking at qualitative data collection it is of noteworthy relevance to consider the risk that “the analysis of qualitative data is subject to significant bias as it relies on interpretations and classification imposed by the researcher” (Lills 1999:87). This aspect can easily affect the lack of trust on the outcomes of qualitative researches. In order to avoid or limit this risk, the author thus aims at applying the worldly wisdoms of following the best practices referring to the full inclusion of observations collected and allowing the emergence of possible new propositions that can be grounded from the empirical data from the analysed ones.

The content analysis includes the elaboration of the main concepts and sentences merged from the interviewees’ answers. This typology of elaboration contributes to provide a picture of ROP consumers’ perceptions towards healthy food. Concerning the open questions it allows providing a description of the perception and knowledge level about healthy food production and commercialisation and support the further analyses to implement. According to the explorative aim of the investigation, focus groups and open questions from semi-structured questionnaires will be analysed with same methodology. The latter data elaborated will be also used to support, when relevant, the outcomes of the further elaborations applied to ended questions of the questionnaire.

The content analysis as defined by Weber in 1985 (see Lills 1999:88) “is a research methodology that utilises a set of procedure to make valid inference from the text. The inferences are about the sender/s of message, the message itself or the audience of the message, and the rules for the inferential process vary with the theoretical and substantive interest of the investigator”.

Several approaches referring content analysis are adopted and discussed in the literature (Patton 1990, Lills 1999, Draper 2007). Massey (2011) summarises the key approaches as grounded theory, phenomenological approaches, and thematic analysis. According to the aim of the investigation the thematic analysis seems to better match the methodologies selected for data collection with the purposes of the research. This approach in particular “involves the search for common themes emerging from group dynamics and the open interplay among participants. These themes may reflect a range of individual attitudes, opinions, and beliefs, as well as touching on otherwise unarticulated norms and social values” (Massey 2011:22) and it is also one of the most exploited approaches adopted for the focus group method of data collection. In order to coherently applying the thematic analysis, data will be analysed according to their *articulated, attributional and emergent* attributes, where articulated data are defined as “as that data that arises in direct response to the

questions and prompts provided in the discussion guide”; the attributional data “derives from comments and discussion that relate to a priori theories, operating hypotheses, or research questions that the evaluator brings to the study”; and the emergent data are the “information that contributes to new insights and hypothesis formulation and is the unanticipated product of individual comments and exchanges among group members” (Massey 2011). As emphasize also by Patton (see Massey 2011) capability of distinguishing these three kinds of data lies in the evaluator’s obligation to be explicit and methodical.

In consideration of the provided methodology it must be underlined that this study does not exploit a specific quantitative elaboration of the transcriptions.

### **3.4. Semi-structured face to face interview methodology**

In relation to food processing industries and retailers’ investigation, it is as well needed to get direct information from a privileged group of representatives operating in the two concerned ambits. In this case it has been considered of better use the implementation of face-to-face individual interviews realised through the use of a semi-structured questionnaire.

Interviews implementation refers to verbal exchange where the person who runs the discussion (the interviewer) is interested to elicit information from the other person (the informant). In research ambit individual interviews consist of a conversation with an individual, conducted by trained staff. The goal of the interview is to explore the respondent’s point of view, experiences and perspectives, and yield information. The interview technique is used to gather qualitative information and the opinions of those persons informed and with experience on the issue of the research (Evalsed EC website<sup>31</sup>).

There are several typologies of interviews structured, semi-structured and unstructured. Structured interviews base on prelisted and specific set of questions and thus imply a strong control from the interviewer. Unstructured interviews instead do not foresee any pre arranged organisation of the interviews and the informant is to free to choose and run the information given. Finally within semi-structured interviews the interviewer adopts a set of question to be developed but let also free the respondent to provide further free contribution (Dicicco et al. 2006).

Hence, according to Dicicco et al. (2006:315) “..whereas the unstructured interview is conducted in conjunction with the collection of observational data, semi-structured interviews are often the sole data source for a qualitative research project and are usually scheduled in advance at a designated time and location outside of everyday events. They are generally organised around a set of predetermined open-ended questions, with other questions emerging from the dialogue between interviewer and interviewee/s. Semi-structured in-depth interviews are the most widely used interviewing format for qualitative research and can occur either with an individual or in groups. Most commonly they are only conducted once for an individual or group and take between 30 minutes to several hours to complete”.

Thus semi-structured interviews can base on a structured list of questions, so to support the interviewer in the interviewing process (Patton 1990). In particular, this type of survey is a way of learning about and examining the relevant information on the reasoning, conceptions and representations of the persons questioned of the interviewee on the issues proposed. While group interviews might not allow seeing how experiences may vary from person to person, individual interviews reveal divergent experiences and outlier attitudes.

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<sup>31</sup> European Commission: Evalsed is an online resource providing guidance on the evaluation of socio-economic development. The source has been extrapolated at following address:  
[http://ec.europa.eu/regional\\_policy/sources/docgener/evaluation/evalsed/sourcebooks/method\\_techniques/collecting\\_information/stakeholders/index\\_en.htm](http://ec.europa.eu/regional_policy/sources/docgener/evaluation/evalsed/sourcebooks/method_techniques/collecting_information/stakeholders/index_en.htm)



As for the selection of themes to be discussed through the focus group, the structure of the semi-structured interview derives from the cues merging from theoretical framework and baseline data provided in the previous chapters. In particular the questionnaire has been structured to deepen the followings issues.

*Companies' description:* this initial section aims at collecting data to describe the main characteristics of interviewed industries and retailers. Starting from the information on the belonging food sector and typology of distribution, other information asked are the annual turnover range; the dimension of the industry/retailers in term of number of employees and the propensity of the industry/retailer to research and development (R&D) investment, asked in relation to the declared percentage of company' annual turnover invested.

*Knowledge of healthy food:* this section is aimed at obtaining information on the theme of nutrition and healthy food. In particular, the questions addressed aims at understanding which is the level of knowledge that singular respondents have on this topic, independently from the company ambit of activity. In this section questions have been posed without providing any information on the definition adopted in the study for healthy food in order to do not influence their answers. The questions assessed also explore the perceived need of skills improvement towards the level of knowledge on nutritional and healthy food issues within their company.

*Company's interest in nutrition/healthy food:* this section is aimed at analysing the nutritional or healthy claim food produced or commercialised by industries or retailers. From this section respondents have been provided with the definition of healthy food applied by this study, according to the definition for food with good nutrient profile or with good nutritional density provided in the introduction. Types of food produced or commercialized by industries and retailers is explored by asking the percentage of industries/retailers interested in such production or commercialisation out of the total industries or retailers. The focus on main foods produced/commercialized is also explored towards the food not commercialized with a nutritional claim, as to investigate, if possible, which kind of product (e.g. bakery, dairy, meat/fish, vegetable/fruits) are easy to find with this features, and which is the propensity of industries/retailers in considering nutritional claim as a characteristics of foods.

Among industries, the analysis of the commercialised health and healthy food is deepened by analysing the adopted commercialisation, e.g. company label, other company label and private label; by the presence of market leaders in nutritional or healthy food and by the use or not of nutritional claim. The propensity to invest on health or healthy food in the near future also takes into consideration, the typologies of production forecasted and the expectations on the importance that nutrition and healthy food might gain in the immediate future with respect to other products. Particular attention is paid on the feasibility to produce low cost healthy food from a technological and economic perspective.

*Knowledge and perception of ROP consumers' trends at national level:* this section is aimed at analysing the knowledge and importance of ROPs consumers for the industry and retailers. In particular, the interviewees are asked about the expectations of growth and profit potential of ROP consumers' segments in the next 3 years. Following questions deepen trends on ROP food consumption in the next 3 years by asking to select the expected typologies of food products that might be purchased by this segment of consumers. In order to comprehend the modality to obtain information on consumers' trends it is also asked to select the main sources of information on market trend utilised by the company.

*Healthy ready-to-eat food for ROP:* in this section, questions proposed concern the perception towards the importance of ready-to-eat food addressed for ROP consumers and the perceived capability of such products, if produced with healthy standards, to foster healthy habits among ROP people at national market level. The focus includes investigation towards specific typologies of food preparation (fresh, ready to cook- RTC, ready to heat-RTH, ready to eat, RTE, etc.)

*Private label and healthy food:* this section investigates the importance of private label in the production and commercialisation of healthy food by industry and retailers. The aim is to understand also the perceived potential of products sold through private label to induce improved healthy habits.

*Barriers and ways to overcome barriers to low cost healthy food production, commercialisation and distribution:* this last section is focused on food industries and retailers' perceptions of barriers limiting access to healthy food for ROP population and effective solutions to overcome them. This part of the questionnaire provides a set of propositions expressing possible barriers limiting access to healthy foods for population groups ROP and it is followed by a set of propositions on possible effective solutions to overcome them. The propositions for barriers and solution are developed within seven thematic areas, that are: industries/retailers relation; ROP consumers' segments; innovation and differentiation; market trends; private labelling; public policy regulations; and food accessibility.

The questionnaire has been organized with open-ended questions according to the definition provided by Patton (1990). Open questions allows the interviewee to provide his/her personal perception about a topic (e.g.: definition of healthy food) or to deepen or broaden the issues risen within the ended questions. Ended questions allow answers on specific quantitative information to characterise for example the typology of company (background/demographic information), to define its core production or products commercialized/distributed and to describe the typology of healthy food produced/commercialised/distributed or planned (e.g.: turnover, number of employee; number of healthy products commercialized, etc.). Other ended questions adopt a Likert scale from 1 to 7 to measure the level of agreement and disagreement concerning specific aspects of production/commercialisation of healthy food. This latter typology has been assigned also to the questionnaire's part devoted to define the barriers and ways to overcome healthy food production/commercialisation and distribution.

Final details are provided for the last section focused on ended questions on barriers and solutions to increase healthy food consumption. The section has been structured into two main separate parts: one focusing on all possible barriers and the other on all possible solutions. As already explained each part includes 7 main issues to be analysed both in terms of barriers as well as solutions focused on healthy food commercialisation. Each issue is made by 1 to 10 propositions (without a fix number of items per topic) for which the respondent is required to express his/her level of agreement or disagreement. The propositions suggested could be thus answered, according to the level of agreement or disagreement (based on Likert scale from 1= not a barrier/solution to 7= strong barrier/solution, where 4= neutral), on their effective relevance in terms of constituting a barrier or a solution towards the improvement of healthy food consumption.

### **3.5. Interviewees' selection and implementation of semi-structured interviews**

According to the baseline data provided, the selection of food industries is applied in consideration of the size class of enterprises and tempting at guaranteeing a homogenous distribution among the different categories of food. Hence food industry processors' selection has followed these criteria:

-To include small, medium and big sized companies. Respectively, that is to include companies having in 2010 an annual turnover above 2 Million and below or equal to 10 Million Euro; companies with a turnover above 10 and below or equal 50 Million Euro, or above 50 Million Euro, as according to the Commission Recommendation 2003/361/EC as published in the Official Journal of the European Union L. 124, p. 36 of 20 May 2003 and reported in Table 3-2.

**Table 3-2: The thresholds for identification of SMEs.**

Enterprise category	Headcount: Annual Work Unit (AWU)	Annual turnover	or	Annual balance sheet total
Medium-sized	< 250	≤ €50 million (in 1996 € 40 million)	or	≤ €43 million (in 1996 € 27 million)
Small	< 50	≤ €10 million (in 1996 € 7 million)	or	≤ €10 million (in 1996 €5 million)
Micro	< 10	≤ €2 million (previously not defined)	or	≤ €2 million (previously not defined)

Source of data: European Commission's definition for SMEs.

-To produce one of the following typologies of processed food product: dairy/eggs, meat/fish, vegetables/fruits, cereals/bakery. If possible already involved in the production of health, healthy, or quality food products in general;

-To produce and/or commercialise at least at national level, even better if also at international level;

-To produce and/or commercialise also through big food retailers; better if both commercialised with commercial brands and private labels.

Within industry processors, the employee to interview has had to belong to the management positions, possibly covering one of the following roles: General Director or Chief Executive, Assistant to the Director, Marketing Director, Research & development Director, Trade/commercial Director.

Food retailers' selection has included the following criteria:

-Large retailers or discounts chosen among the 5 retailers with the highest annual turnover (counting only national sales) in 2010. Also the national retailers of an international retailer with headquarter in another country have been taken into consideration.

-Traditional retailer that is small grocery store (independent store, convenience store, specialised food store).

Within food retailers, the person to interview should have had:

-a good knowledge of food market trends

-a good knowledge of their own competitors (other retailers and food industry processors)

-a wide knowledge of the different food categories sold by the retailer

Therefore, the interviewee has belonged to the management of the retailer, covering one of the following roles: General Director or Chief Executive, Assistant to the Director, Marketing Director, Research & development Director, Trade/commercial Director.

### **3.5.1. Recruiting criteria and interviews' implementation**

The recruitment has been implemented through the use of AIDA<sup>32</sup> database by applying the sector identification criteria provided by ATECO classification. AIDA database has been used to get information on food industries location turnover, number of employees and contact information (e.g.: website and phone number) according to the food sector belonging corresponding to ATECO classification. Data have been extracted for year 2010.

Food retailers have been recruited according to Grupo24Ore (2011) ranking for the highest national turnover and market share in Italy in 2010. Other source for contact and/or companies' information has been professional contacts of the author and Unibo staff.

The potential interviewees have been contacted via e-mail and telephone. It has occurred between two weeks and two month from the first contact to the interviews' implementation. In several occasions it was needed to reschedule the appointment of the interview according to the interviewees' availability and duties.

In almost all cases it has been required more than one telephone call/e-mail to identify the most appropriate representative within the company's organisational asset.

Almost all of interviewees requested detailed previous information about the purpose of the investigation and the questionnaires' contents.

In total about 150 food industries located in North and Central Italy have been contacted via e-mail or telephone. The large food retailers and discounts operating at national level have all been contacted by e-mail or telephone; among traditional retailers have contacted 3 specialised traditional retailers operating in Emilia Romagna.

Very different reactions have followed the request for interviewing. Several companies refused to release the interviews due to lack of time, difficulties to understand the topics of questionnaire, lack of interest for the topic or sensitiveness to the topic.

Concerning retailers it must be underlined that no discounts release the permission to implement the interview, mainly justified by the sensitiveness of the issue object of the study. Large and traditional retailers instead have shown more collaborative.

In total the recruitment and the interviews' implementation took about six months of work, in particular the implementation period was between February and July 2012.

#### *Implementation*

In total 21 enterprises have accepted to take part to the interview among micro/small (4), medium (8) and big (9) sized enterprises. Among retailers the availability has been provided in total by 5 large not-discount retailers and 1 traditional retailer specialised in meat commercialisation. In general the companies that have accepted to take part to the investigation were also those already interested towards the commercialisation of health, healthy or quality food products. Two companies interviewed expected to be small companies from

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<sup>32</sup> AIDA is part of Bureau Van Dijk database that is an international database collecting company information and business intelligence for individual countries, regions and the world on enterprises, banks and insurance. (web site: [www.aida.bvdep.com](http://www.aida.bvdep.com))

AIDA database, actually declared an increased turnover a little over 10 million euro, they thus have been considered as medium enterprises.

Table 3-3 shows the detailed numbers and typologies of interviews.

**Table 3-3: Total interviews implemented by typology of sector, size and retailing typology.**

<b>Categories</b>		
<b>Food industry</b>	<b>Typology of industry</b>	<b>Number of total interviews obtained</b>
<i>Dairy</i>	Small (1), Medium(3), Big (2)	6
<i>Meat/fish</i>	Small (1), Medium(1), Big(3)	5
<i>Vegetable/Fruit</i>	Small (1), Medium(1), Big (2)	4
<i>Cereals/Bakery</i>	Small (1), Medium(3), Big (2)	6
<b>Total</b>		<b>21</b>
<b>Food retailers</b>	<b>Typology of retailer</b>	
	Large	5
	Discount	0
	Traditional	1
<b>Total</b>		<b>6</b>

The interviewer has fulfilled the questionnaire meanwhile conducting the interview. Other notes and key aspects affecting the interview have been reported. The tape recorder has not been used as considered a strong obstacle to speak freely.

All data have been treated as anonymous and all full questionnaires have been uploaded on an electronic file.

Each interviewed has been conducted face to face interviews at the company location. The interviews' duration lasted on average between 1,5 and 2 hours.

Three main approaches to interviews have characterized the interviewees' attitude towards the questionnaire:

-Cooperative: The interviewee/company is still quite new to the segment of ROP consumers and very interested to share information.

-Challenging: The interviewee/company is not expert about ROP segment of consumers but he/she is willing to show his/her attention towards quality food.

-Resistant: The interviewee is not interest towards ROP segment and he/she has difficulties to follow the questionnaire.

### **3.6. Methodology for semi-structured interviews data elaboration**

According to the data collected different methodologies for data elaboration have been selected. The content analysis has been applied for open questions, following the methodology already explained for focus group elaboration; the descriptive analysis of frequencies and the multidimensional scaling unfolding technique have been applied for ended questions as described below.

The descriptive analysis has been carried out separately by sections, considering the cleavage industries/retailers as the main variable of crossed analysis. Attention has be given to: a) the importance food

producers and food retailers give to the determination of nutritional and healthy food for ROPs, in particular in terms of the propensity of the groups in producing/commercializing; b) how different target of population perceive difficulties in production/commercialisation and; c) which are the different expectations on the future trends. Other relevant characteristics that will be considered are, for example, the dimension of enterprise e.g. big versus SMEs enterprises (Annual average turnover or Number of Employees), in particular where considering the feasibility of production of nutritional or healthy food from a technological and economical perspective; or, where relevant, the kind of product (Dairy, Meat, Vegetable/fruits, Cereals/Bakery).

The elaboration of data collected in the last section concerning barriers and solutions to overcome healthy food commercialisation and consumption has been further deepened through the use of perceptual mapping approach adopting the technique of multidimensional scaling unfolding (MDU) (Borg and Groenen 2005; Molteni and Troilo 2007) . In this analysis it was adopted the non metric MDU using the algorithm PREFSCAL available into the statistical package for the social science SPSS v. 20.0 (Busing et al., 2005).

Multidimensional scaling unfolding “is a model for preferential choice. It assumes that different individual perceive various object of choice in the same way but differ with respect from what they consider an ideal combination of the object’s attributes. In unfolding the data are usually preference scores of different individuals for a set of choice objects. These data can be conceived as proximities between the elements of two sets of choice objects... Individuals are represented as ideal points in the space of perceptual map so that the distances from each ideal point to the object points correspond to the preference scores” (Borg and Groenen 2005:293).

The MDU technique is applied to this study with the purpose of analysing if there are present confirmative results towards the perceptions of respondents in relation to all the variables considered. In particular it is aimed at understanding and exploring how food industries and retailers’ representatives associate and perceive each barrier and solution that is included within each of the seven issues proposed.

Each map’s evaluation on the capability of adapting and/or of producing degenerating results is conducted through the conjoint analysis of three groups of parameters (Busing et al., 2005).

The first group, named *badness-of-fit*, includes the *Normalized Stress* ( $\sigma_n$ ) , the *Kruskal’s Stress- I* ( $\sigma_1$ ) and the *Kruskal’s Stress- II* ( $\sigma_2$ ) (Kruskal, 1964; Borg et al., 2005).  $\sigma_n$  represents the proportion of opinions that does not fit in the distances’ calculation, where  $0 \leq \sigma_n \leq 1$  (Borg and Groenen, 2005). Resulting  $\sigma_n$  values close to 0 express that the model is able to effectively represent respondent’s perceptions through the calculation of adequate Euclidean distances. In this case the resulting cognitive map, is able to collocate, with efficacy, stimuli and respondents, so that the visualized map represents at best the opinions of the interviewees.

Nonetheless it is also needed to consider that, despite low values of  $\sigma_n$  indicate that the solution achieved is well adapting to data, they cannot assure that the solution is not degenerating. Thus  $\sigma_1$  and  $\sigma_2$  are adopted as indexes that are able to better express the possibility of achieving degenerating solutions. According to the creation of these indexes<sup>33</sup> (Borg and Groenen, 2005, Busing et.al. 2005), high values for  $\sigma_1$  and  $\sigma_2$  show the intensity of a possible degeneration of the represented phenomenon.

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<sup>33</sup> It is needed to consider that, within the calculation of both indexes, if the numerator applied is represented by the raw-Stress ( $\sigma_r$ ), within the calculation of  $\sigma_1$ , the denominator is given by the sum of squared distances, while for  $\sigma_2$  it is given by the sum of the squared distances flat the value of the average distance: for this reason  $\sigma_1$  is always inferior to  $\sigma_2$ .

The second group of parameters refers to the mean of the squares of the Pearson's coefficients of correlation between preferences and distances, also named as *Variance accounted for* (VAF), the *Spearman's Rho* (RHO) and the *Kendall's Tau-b* (TAU), all included in the category named *goodness-of-fit*. VAF index in particular represents a measure that is ranged between 0 and 1, where values close to 1 express the capability of the model of approximating the opinions of the interviewees.

The last group of parameters considered in the analysis refers to those indexes measuring the degree of degeneration of the solution, that are the Shepard's Rough Nondegeneracy Index (Busing et al., 1997) and the DeSarbo's Intermixedness Indices (DeSarbo et al., 1997). The first one represents a raw index of non degeneration of the solution, and it is as best as its value is proximate to 1 within an interval range that goes from 0 to 1 (Busing et al., 2005). The second one is an index representing the goodness in terms of the degree of degeneration of a solution; within a scale of values that goes from 0 to 3, the best as it is close to 0.

The MDU technique of elaboration has been applied by including 26 questionnaires out of total 27, due to presence of 12 missing data/ evaluated propositions for the excluded questionnaire. Three other questionnaires showing between 1 to 3 missing data have been treated by substituting the missing value with the median value achieved by the proposition. The MDU has been applied thus considering 26 questionnaires and by exploiting the mean values calculated for each proposition.

## 4. Results

The chapter provides the analysis of the results achieved from data elaboration. Consumers are analysed in paragraph one and food industries and retailers in paragraph two.

Both paragraphs include information about personal data and baseline information on consumers' group and food industries and retailers characteristics. Following elaborations are developed according to the issues of interest highlighted in chapter three.

### 4.1. Consumers' outcomes

Consumers' outcomes are analysed both by providing general results for ROP and affluent consumers contents' elaboration, and comparative and specific results for each interviewed groups. As well cues will be provided according to the main two main relevant selection criteria characteristics that are age and socio-economic status.

#### 4.1.1. Socio-economic characteristics of the attendants

The groups are all characterised by varied household compositions that include single, families, couple no children. Concerning the typologies of working situations the groups instead differentiate as follows,

- Mature affluent attendants are housewives or part/full time employed, retired;
- Young affluent attendants are part/full time employed, housewives;
- Mature ROP attendants are part time employed, housewives, unemployed, or make occasional jobs;
- Young ROP attendants are part time employed, unemployed, or make occasional and informal jobs.

Concerning the education level, affluent females show equally distribution between high school diploma and bachelor degree. Among ROP females, the mature group includes only one attendant with a bachelor degree while all the others have a middle school or high school diplomas. The young ROP group includes only attendant with a middle school diploma, while the others are equally distributed between high school diploma and bachelor degree. It is thus possible to notice a notable discrepancy between ROP groups that induces to underline that the two different aging groups might show certain cultural gap within the topics discussion.

From the background questionnaire collected it also emerges that, despite defining their income as middle, half of mature affluent females consider their household annual income as not fully or just adequate compared to their expectations, while young affluent attendants consider it as at least slightly adequate or slightly more than their family needs. Looking at selected choices for ROP groups, they define their income as low, but only two mature attendants consider their household income as clearly not adequate, while the majority value it as just or not fully adequate. The young ROP group address its income as clearly not adequate or not fully adequate to their expectations.



#### 4.1.2. Eating habits

Moving towards the issue of eating habits, the young groups look quite informed and competent in terms of eating issues, as they are able to define what is “good” or “bad” for health and they appropriately use the terminology for food ingredients. Despite their awareness, they often do not practice healthy diets. The reasons for unhealthy habits relate to the higher relevance given to taste and greed attribute of food and to the fact that they foresee attention towards health as not necessary this stage of their life. Thus the emotional and rational attitude and motivation do not seem to be combined by the attendants.

The mature groups show more experience and consciousness towards nutrition issues, they show a change of attitude and motivation up to consumption behaviours that is related to the life experience and their mature age. In particular they pay attention to the balancing of food intake and healthy attributes. Finally the affluent attendants also show higher tendency towards the valuable attribute of food choice and in particular towards the organic methodology of production, the quality in general and the shortness of the food chain.

Considering the differentiation among ROP and affluent groups, the affluent one shows notable higher awareness compared to the ROP consumers. Their positive attitude towards food relate also to their investment on cooking as a hobby. Furthermore they show higher ability to conciliate taste and healthy attribute, by setting habits and rules related to the programming of meals and the search of quality ingredients.

The ROP groups declare instead to be fully driven by the attribute of quantity and pleasure of food. They all show higher disorganization and tendency towards avoiding the healthy best practices in favour of the pleasure. They associate to a body necessity their perceived need to use food as a compensation method to overcome daily life difficulties. The cooking timing and interest is lower compared to affluent groups, partially due to the lack of time and partially to the laziness and lack of interest. The healthy habits are considered more a punitive aspect of food experiences and too difficult to achieve and control.

Some common characteristics among all groups interviewed are anyway found towards the key attributes referring to freshness and safety of food. Concerning the freshness attribute all respondents associate and include within this term the attention towards seasonality of food, lack of preservatives and additives, and a genuine taste of food. Some these attribute is also included within the safety attribute, so that a safe food is genuine, transparent in terms of traceability, and possibly locally or produced in Italy.

The attention towards these attributes induce the consumers to negatively consider food that include too many transformation processes, those too rich in fats, sugars, and containing additives or preservatives. Despite these considerations they still consume several processed and unhealthy products. As well they show inappropriate or erroneous perception towards certain typology of food as for example:

*“tuna fish is full of mercury, the sea is full of mercury, but tuna fish is a big so that it retains further quantities of mercury”*

*“fresh cheese is less fat than the seasoned one”*

*“fresh juices, those with a close expiration date, they are better as they are organic and they contain less sugars”*

Looking at the personal experiences described, among all group it is possible to identify basic common habits concerning breakfast, lunch and dinner times; they are then differentiated according to the wide heterogeneity given by the family composition, working time and daily habits. At first it follows a general characterisation common to all groups.

Breakfast time, as the first moment of day and when the family first meet together, is the one where consumers place the higher investment in terms of quality and health, so that there are mentioned coffee and different varieties of milk (cow, sheep, and soy), cereals, biscuits, seeds, yogurt.

Lunch time is the most deregulated moment, in particular for young groups, food intake is mainly a duty, lunch is often consumed out of home (at the canteen, bars) and on a hurry (as in front of the computer or walking). Within this time they often appears, among all respondents, RTE meals of several types (fresh soups, minimally cut salads, sandwiches).

Dinner time is the moment devoted to family or relaxing time, within dinner meals the consumers try to combine taste and health aspects. Among those consumers with a family that include children aged up to eighteen year old there is perceived the stronger attention and difficulties towards satisfying both the balance of food with the requested taste and preferences of the family.

Snack time: among all consumers, and particularly among ROP groups, it is habit to consume snack that mainly emotionally compensate the daily life. Their consumption is thus strictly hedonic, with mainly consumption of sweets, and delicatessen, but also fruit and yogurt among the mature groups. For example a mature affluent attendant says: *“When I go shopping I buy some chocolate, pop-corn, chips, I like to treat myself to these foods”*

Looking at each focus group answers, mature affluent groups mainly show balanced and rational choices; they often do not mix carbohydrates and proteins in the same meals; they often consume vegetables and fruit (fruit is consumed both within the meals and as snack); they show adequate use of wholegrain and variety of cereals and low consumption of red meat in favour of fish and legumes; they scarcely adopt precooked or RTE food; they often purchase organic food or directly from the farmer. Quoting: *“I adore cooking, I always overdo, I cook too much. I have my breakfast sitting at the table, a rather standard table setting: cereals, yoghurt, tea with biscuits... I store a lot of energy at breakfast. At lunchtime, I eat pasta with vegetables”*

Young affluent consumers show the aim at satisfying their family and improve their cooking skills but it results as almost impossible due to lack of time, lack of competences, and in case of families they relate to children preferences and hedonic attitude towards food. During the weekend the eating habits slightly improve thanks to increased time devoted to cooking or parents help. Quoting: *“It’s the opposite for me. I’m a very bad cook and I rely on my Mom’s help during the week. Over the weekend it’s mainly fruit, yoghurt, I go by with an empty fridge, some frozen ready to heat food (the definition replaces a specific brand)... I’m a little ashamed, I can’t cook and I admire women who are passionate about it”*

Mature ROP working attendants show low involvement towards food and value’s aspect of food compared to the mature affluent ones; they often eat out of meal time; they often adopt RTC or RTE food (as cut and mixed salads; cheeses; bread and salami). Housewives show higher attention to the valuable aspects of food. Quoting: *“If it’s only the adults in the family we do not even bother to sit down, we eat in a rush. If it’s all of us, we take our meals seated”*; while another attendant says *“You eat because you have to live, not the other way round ...that’s the relationship I have with food, I eat what I fancy, based on how I feel. Eating is just a necessity, I have to eat to survive, but there’s never any idea or plan when it comes to eating: if I fancy some spaghetti I go for it, I tend to fulfil my desires”*

Among the young ROP group the majority of food choices relate to pleasure and tasty attributes and low motivation towards healthy habits. Food is often unhealthy and RTC (frozen precooked meat and vegetable), RTH (fresh vegetable soups) or RTE (snacks, pizza, salami) foods both in the case of single persons and families. Single persons also often eat out of home and devote low time to eat, for example meanwhile working. They thus show similar attitudes towards food but they expressly show food habits worse than the young affluent ones. *“I eat breakfast in front of the TV, lunch in the office in front of the PC or in the*

*lunchroom - no TV there - in front of the TV, in the evening”; “No TV in the morning, lunch and dinner with TV, in the office in front of the PC”*

Concluding, in consideration of the theoretical framework, it is necessary to devote attention towards two main spheres that refer to attitude and consumption behaviours issues, the role of moral attitude and consumption behaviours. In relation to the attitude issues arisen, the ROP attendants overcome the moral attitude to avoid unhealthy or processed food (RTC, RTH, RTE food), by placing emphasizing their need of feeling at ease with their family preferences and the need of satisfying their personal need of compensation and pleasure. In relation to consumption behaviours instead it is confirmed what assumed by Lawrence and Burker (2009) in relation to the increased RTE food consumption among low income consumers; as a matter of fact ROP consumers and in particular the young group show a notable tendency to adopt several type of processed food including a frequent use of RTC/H/E food. Furthermore these typologies of processed food are mainly devoted to feed children and satisfy their preferences of taste.

#### **4.1.3. Ideal food**

In terms of healthiness the ideal food is commonly mentioned among all groups as genuine, light, fresh, not processed. Some examples are vegetable and fruit, pasta and rice (better if whole), fish and yogurt. In terms of taste: ideal food is greed and satisfactory, it is rich of nutrients but also fat and it makes fell better. Some examples are: chocolate and sweets, fried food, salami, cheeses. The best food should be able to mix all the attribute of healthy and taste attributes.

Affluent group, and in particular the mature one, show higher tendency towards associating ideal food to healthy characteristics. As well they also relate ideal healthy food habit to real situations and rational choices that they sometimes experience. *“I love vegetable and fish...I would eat a lot of meat once, now I eat less of it and I’ve also limited the pasta intake compared to the past. My habits have changed. Nowadays I love eating yoghurt, I prepare it myself sometimes, I eat all sorts of vegetables and fruits and I love fish too”*

ROP groups instead relate ideal food to flavour’s satisfaction (lasagna, tortellini etc.). Furthermore it is interesting to notice how ROP consumers also associate ideal food habits with that ideal experience that is able to mix convenience of food preparation and also all aspects that relate to the meal organization; this aspect is better explained by the sentence given by a mature ROP attendant that states *“We are very unruly in my family: no table cloth, water that spills everywhere. The children make a lot of noise, they fall off the chair, make a mess with their food, the TV is on... ideally we should sit properly... and my hair should be combed and I should have some makeup on, just like they show in the television”* and a young ROP participant stating that she would like to eat her ideal food *“At home or in a restaurant, where somebody else does that for you “*. This ideal condition of course does not match the affordability aspect, it is just ideal to ROP consumers.

The not ideal food is easier to be defined. They refer to fried food, food rich of fat, salty food, food containing chemicals (as preservatives and additives), some traditional food, but ROP consumers mainly associate not ideal food to not seasoning food/not flavoured food.

The highlighted variety of food related habits has made difficult for the different groups to define common ideal food habits, nevertheless it is possible to summarise a list of the best practices emerged among all groups to follow in terms of “correct” food habits:

- Variety of food
- Balanced combination of ingredients in terms of nutritional aspects
- Balance between health and taste
- Balanced quantities

- Regular meals
- Adequate intake of fruit and vegetables
- Preference towards home made food when possible

These habits shall also be combined with an adequate environment (well furnished table), with an adequate social context (conviviality), time and relax.

Considering the answers given on ideal food habits, it is possible to correlate the conception of ideal food to the environmental aspects influencing life style as given from the literature review. Thus it seems that time as well as physical and mental energies (Buckely et al. 2007) are those elements that mainly lack to ROP consumers in order to reach the ideal food habits. Concluding lack of control over the family behaviours and relations to traditions, as underlined by Brunsø and Grunert (2004), are given by the attendants as determinant aspects that contribute to reach ideal food habits.

#### **4.1.4.Purchasing behaviours**

As already appeared from the previous analyses, at the basis of food purchasing behaviours there are some common personal and environmental factors that interact and influence eating habits and the preparation of food that can be summarised as follows.

The household structure (presence of children, single persons etc.) impact to all groups on food purchases with a negative connotation with an increasing number of components, thus a young ROP: *“It depends on my children, I try to avoid fights, preparing broccoli would be suicidal, so maybe I opt for spinach and baked potatoes .... I often have ready-to-use products, it’s a matter of time”*. Notwithstanding that also among couples, the necessity of satisfying the partner is also strong, so that a young affluent: *“I buy fibre-rich foods, brown rice, and whole grain breads. My husband is a little overweight but it’s good for me too, and I like these foods”*.

Time to devote to preparation of food is a common and relevant factor. The lack of time negative impacts on moms and working consumers, so that food purchases are driven according to convenience attribute, as mature ROP says, *“It depends on how stocked up the fridge is and on how much time I have for shopping, sometimes I just check what’s in the freezer and pull out a mea”*. While a mature affluent: *“ I live on my own and can decide what I want to eat, e.g. vegetable cream soup which I love ... but its preparation can be quite time-consuming, that’s obvious”*. Finally a young ROP states, *“I work 8 hours a day and during the weekend I should be stocking on them for the entire week; when you don't feel like cooking, you just grab one frozen food”*.

The cooking skill and competences also determine the typologies of food purchases, thus mature people that have higher confidence say (affluent) *“I adore cooking, I always overdo, I cook too much..”* while a young ROP, *“ I always lunch in the kindergarten, and so I have what they serve, dinner may depend on time and mood. My grocery shopping is always big; I need to stock on everything. Sometimes I have meat, I have a huge freezer, and so depending on what I feel like eating, I just open the fridge and that’s it. Maybe I surf the web to find out what to cook with the ingredients I have got ...”*

The degree of organisation and capability of planning as well impact among all consumers in terms of food choices and frequencies of purchases, so that a mature ROP attendants says, *“I always shop in the same supermarket and always buy the same stuff. I may pay attention to promotions, but never buy lots of items in one go, it’s a 3-day shopping at most. A pack of cereals lasts 3 days in my household, when it’s finished I get back to the store and buy another...”*. A mature affluent ones, *“ I’d never cook with some food I don’t like, I’d rather skip a meal if I’m working or if I have no time ... however, when I wake up in the morning I’m not*

*bothered by the thought of what I'm going to cook, I'm not like my mother. I shop for groceries because I love doing so, not because I'm concerned about my wellbeing, other things are important for my wellbeing".*

Finally the income level strongly determines purchasing behaviours in terms of quantities, qualities and places of purchasing. Thus a mature affluent: *"From time to time my son asks me to buy him some Nutella ... I may give him sometimes, but I buy Lindt's spreadable hazelnut cream, Nutella is simply out of the question instead",* while a mature ROP says, *"I'm all for convenience and good value for money".*

In addition, the focus on purchasing behaviour highlights a common characterisation among the consumers on the preferred places for food purchases. On average all attendants mainly choose large not-discount distribution channels for their main food purchases. Some differentiated behaviours for acquiring specific typologies of food have also arisen from the interviews.

Among the mature affluent group, they also choose specialised food stores that refer to specialised stores selling organic food, farmers market selling local food through a short geographical food chain. Mature affluent females thus invest time and efforts to search for what they define as quality food, both processed and fresh. In relations to their food purchases the main criteria derived for the selection are freshness and genuine, food not too processed (rarely they buy RTE food), without additives and preservatives, and with certification of origin and traceability. In general it also emerges that within food purchasing made at large retailers store, the commercial brand is a guarantee of quality and safety. Quoting, *"It means being prepared to pay money for my food, avoiding hard discount retailers"; "I buy organic and always check the ingredients' list, to see if they contain flavourings".*

Young affluent group mainly purchases food at large distribution channels (not-discount), but sometimes, when there is time, they also refer to local fresh markets for vegetable and fruit purchases. Low or no attention is given to characteristic as organic or short food chain. This group also mainly emphasises the attribute of quality and freshness as key criteria for food purchases, despite they give different meanings to these attributes, by mainly associating freshness to the good looking of fresh products and quality to the food purchased with known and trustable commercial brands. They often purchase processed food as it is convenient (easy and quick to prepare), despite they show prejudices towards preservatives methods due to lack of knowledge and trust. Finally rich flavour is also a determinant attribute. Quoting, *"It must be light, low-cal. Bread made with sour dough, not beer yeast. I do three different types of shopping, I'm a nervous wreck because of it but I keep going..."*

Looking at the mature and young ROP groups, it clearly emerges a homogeneous behaviour for the selection of places for food purchases, thus they do not show differentiated behaviours by age. Both groups mainly refer to supermarkets and hypermarkets, within not-discount retailers. It is thus interesting to underline that none of them declare to refer to discount stores and that retail's brand name of discount has never been mentioned by any group.

ROP groups also refer to few specialised stores for rarely specific typologies of food purchasing (in particular meat specialised traditional stores) and local fresh markets for vegetable and fruits purchases. Differently from the other groups the choice of local fresh market is driven from the search of products available at affordable prices compared to those sold at large retailing stores rather than to the search of quality products. It thus follows that among the main criteria for food purchasing affordability is a key attribute. Affordable food is searched and purchased through promotional offers. The preferences are towards commercial brand but also private labelled food is purchased. The attribute of natural is also considered, by meaning food with no OGM, and traceable food; thus the attribute natural is mainly associate to safety of food. The other relevant criterion that has already emerged, is that when possible it is searched convenient food that is quick to prepare and tasty. Here below some quotations from mature and young ROP groups are provided.

Mature ROP:

*“Offers and promotional leaflets”.*

*“I’ve learned that I must not go shopping when I’m hungry, because I end up filling the cart with all sorts of stuff. I never shop for groceries before lunch or dinner. I always check the promotional leaflets I find in my mail box. I use a marker to circle the items I’m interested in and, because money is tight, I take advantage of offers and promotions. But sometimes also the offers are a rip-off”.*

Young ROP:

*“Promotions, I shop at the supermarket on purpose, I have time since I work till 2 p.m., I keep track of what’s on offer and then I go to the store”.*

*“For me a quality product is something that I have tried and it’s good quality, even if it’s from the supermarket”.*

Looking at the literature review and baseline data, it seems to be confirmed the grounded affirmation of large retailers as the most preferred places of purchases, but it emerges low interest towards discounts. Among ROP consumers the attention towards promotional offers and private labelled food looks as the preferred way to combine quality and price aspects. Still environmental factors strongly influence purchasing behaviours in terms of typologies of food and frequencies of purchasing. In particular, among ROP consumers, they influence on the growing trend towards convenience food as emphasised by Geeroms et al. (2008). In other terms, among others, income, time, and competences negatively affect healthy quality food purchases as stated by Mai et al. (2011).

#### **4.1.5. Typologies of food, motivation and perceptions towards processed and RTE food**

Focusing on processed food related issues, the consumers interviewed show difficulties in properly defining it, so that they needed to be provided with examples in order to be able to list those they consume.

In particular they consider many processed foods as basic ingredients for their meal preparation, so that for example pasta, cheese, salami, pizza, and bread are not easily associated to processed food. When asking about RTC, RTH and RTE food, consumers associate it to chilled or precooked food that can be fresh or frozen (e.g.: frozen or chilled minestrone, frozen precooked meat or fish, etc.).

In general the main concerns towards processed or RTE food refer to the quality of ingredients *“I do not know what is inside it”*; the nutritional value, In particular for affluent respondents, *“preserved food has less nutrients and vitamins than fresh one”*; the price issue, relevant in particular for ROP groups, *“how many packs of food do I have to buy to feed four people??? It’s too expensive”*.

The attitude differs in particular among ROP and affluent groups:

Affluent consumers are very severe against RTE food as they show high resistance and, in particular among the mature group, they seem to do not need this typology of food (they have time and competences to prepare food by themselves). Thus RTE food is only an emergency food.

ROP consumers instead frequently use RTC, RTH and RTE food, in particular the young group. Their only concern is towards price. The main reasons for RTE food is given by the lack of competences to cook, the convenience aspect and the lack of time to cook. Thus RTE food is a chosen alternative solution to cook.

The focus on specific RTE food consumed by food sectors shows that they mainly purchase as part of the meal to prepare there are: frozen vegetables (both uncooked and seasoning cooked ), frozen fish (both

uncooked and prepared to fry-RTC), canned tuna fish and meat, chilled vegetable and cereals soups. Still independently for the economic status, single people and moms also use potatoes (dried and frozen) and frozen cooked meat and dairy products used to replace proteins intake.

Other common purchased and consumed processed products are:

Vegetable: dried legumes, oiled preserved vegetables;

Fruit: canned fruit, juices, jams, fruit mousse;

Cereals: rice made crackers, cornflakes, bread with long term expiration date, cakes, biscuits, frozen pizza;

Dairy: yogurt, cream to cook, béchamel, all sort of fresh and seasoned cheeses, desserts (fresh and frozen)

Meat and fish: salami, ready to fry meat, ready mixed fish salads.

#### **4.1.6. Food, health and well being**

All groups seem able to recognize a clear link between healthy food and well being, thus they also declare that proper eating habit determines a healthy life. Nonetheless the groups shows different approach.

Mature affluent show rigour and high awareness towards healthy habits *“We are what we eat!”*. Young affluent instead postpone healthy food habits to later aging stages *“it is very important, in particular if you have health problems, but, as soon as you get older, you will notice the negative effect of unhealthy eating”*

Moving towards ROP consumers, the mature ones are aware about the needed attention towards healthy attribute, but they consider healthy habits as a difficult task to accomplish *“It is very important to eat as healthy but it is too expensive”*. Instead Young ROP mainly associate healthy habits to the aesthetic improvement *“When I eat unhealthy my skin and hair look worsening”*.

According these outcomes it thus seems that the age is the cleavage that determines interest and consciousness towards healthy aspects. As a matter of fact mature groups consider health problems as something close to their daily life, despite it is difficult to achieve in particular for those that are at ROP. Young groups on the contrary, despite they provide a certain interest towards healthy attribute, mainly associate to the aesthetic related aspect and are not capable to perceive it as relevant and actual problem to them.

When the groups are asked to define healthy food, it is in general associated by all groups to that food that again is fresh, genuine, not too processed, but it is impossible for any of them to clearly define what healthy food is. Attempting to define it, the interviewees at first are able to identify attributes that make food as unhealthy and after that they turn them into the opposite positive attribute that make food as healthy. Thus healthy food has no additives; it is packed with trustable preservatives methods (frozen food is fine, modified atmosphere preservation is scaring), close expiration date, quality of raw material.

Independently from their usual purchases interviewees have been also asked to provide and categorize typologies of processed food as healthy of unhealthy, and list them. The resulting categorization is notable different among affluent and ROP groups. Affluent groups show difficulties in general to categorize processed food as healthy, thus demonstrating their strong resistance towards these typologies of food. In order to achieve a certain categorization they strongly needed to be spurred in order to differentiate the healthy processed. Among healthy processed food there have been mentioned ready yogurt with cereals, frozen fresh vegetables, biscuits made with spelt, while not full agreement on the healthy or unhealthy connotation has been achieved among both groups for fitness cereals, jam, canned or frozen fruit. All other

food as vegetable soups, ready to cook or heat meat, dairy and cereals products are considered unhealthy and too expensive.

Both ROP groups instead easily list varied sorts of processed food, mainly referring to those sold through the commercial brands. The list below summarizes the outcomes by food typologies (Table 4-1).

**Table 4-1: Healthy and unhealthy processed food by ROP consumers groups**

<b>Typology of processed food</b>	<b>Healthy processed products</b>	<b>Unhealthy processed products</b>
<b>Vegetables</b>	Chilled or fresh vegetable soups and Frozen minestrone	Frozen spinach, canned soups, clean and cut salads
<b>Fruit</b>	Chilled prepared fruit, fresh or organic juices	Canned fruit, jam rich of sugars, UHT juices
<b>Cereals</b>	Cornflakes, cereal snacks, chilled or fresh cereal soups, rice made pasta, spelt biscuits, rice snacks	Cornflakes with chocolate or sugars, frozen pasta, filled pasta, pizza with fats, OGM cereals.
<b>Dairy</b>	Yogurt, probiotics, Greek yogurt, fresh cheeses, seasoned cheese (Parmigiano)	Fried cheese, fresh cheese as Philadelphia, sweet pudding, creams, cheese for toast
<b>Meat</b>	White meat (poultry), hamburger and minced meat prepared by specialized food stores	Würstel, supermarket fresh meat balls, canned meat, frozen food with meat

Furthermore despite many attendants belonging both to ROP and affluent groups declare to pay attention to the nutritional contents' tables, they do not seem to be able to fully comprehend them or anyway they seem to do not fully trust what is expressed within the nutritional tables. As well it seems that nutritional claims might play a certain role in order to identify healthier food but still the attendants seem mainly driven by their beliefs and traditional knowledge.

Considering the outcomes on processed food habits and health and unhealthy food, the results show a notable dependency of ROP consumers from every sort of processed food, both traditional and not, as well as fresh RTC, RTH or RTE processed food. This dependency implies also different attitude and motivations towards the boundaries that make a product as healthy or unhealthy compared to affluent groups. Both groups anyways show low level of knowledge perceived and awareness when pushed to clearly assess the definition of healthy food and to categorize processed food in terms of nutritional attributes. This induces to confirm what expressed by Grunert and Wills (2007) and Lobstein and Davies (2009), so that the perceived lack of knowledge and information can drive to wrong food consumption in terms of nutritional attributes. In addition to the literature a poor knowledge seems to impact both on healthy and unhealthy products purchases, due to prejudices and wrong perceptions.

#### **4.1.7. Barriers and solutions to healthy food consumption**

Moving the last section of the interviews, there are now provided the main outcomes on perceived barriers and solutions towards healthy food consumption, as expressed by each focus group. Solutions provided show less deepened, both due to the lack of time and by the difficulties to translate barriers into practical solutions.

At first there is provided a list of those barriers that have been identified as common among all groups, that are: the lack of competence and adequate awareness, the lack of projection and the low efforts to devote food planning; the ties to the traditional unhealthy recipes; the lack of time; the households' components preferences; and finally the fear to have to renounce to those ingredients (as salt and fats) that mainly contribute for them to make food as tasty and satisfactory.



Focusing on the barriers as specifically emphasised by each group it arises the followings.

Mature affluent group: this segment shows less difficulties towards healthy eating, the main obstacles are given by the necessity to match the different households' component preferences, and to reduce fatness of seasoning for traditional recipes.

Young affluent group: they identify several obstacles to healthy eating due to time and capabilities to identify the objective healthy food. They struggle to avoid tasty/flavoured seasoning and fat food and to abandon a hedonic approach towards food.

Mature ROP group: they identify several obstacles that mainly relate to the lack of organization and planning skills or opportunities and to the difficulty to abandon tasty/flavoured seasoning, fat food cooked with traditional recipes. A final important emerged barrier concern the limited affordability of healthy food.

Young ROP group: as for other groups, they also struggle to avoid tasty/flavoured seasoning and fat food, and they show difficulties to avoid in particular the traditional unhealthy food. As for the young affluent group they also show a predominant hedonic approach towards food. Furthermore they identify as obstacles the lack of time, the budget constraints and the necessity to match the different households' component preferences.

According to the outcomes provided, attendants express that healthy food consumption would improve only if healthy food guarantees a good taste, being able at the same time to match low price and convenience attributes. These characteristics seem to work only in presence of an improved awareness towards healthy eating.

In order to foster a clearer recognition of healthy food, the adoption of a healthy labelling is considered as a positive tool, in particular by young ROP consumers. The label shall be able to guarantee the healthiness of food together the traceability of food, and the control over the preservatives used, *"I know that is impossible to avoid preservatives use but I want to be sure that the ones adopted are safe"*.

Concerning the solution towards the possible healthy processed food consumption, it emerges that the main interested target is the one of ROP consumers. This group mainly expect healthy RTE food to able to compensate their lack of competences, the low available time to cook, the general sense of guiltiness for not being able to guarantee healthy eating habits, and to help them to match the taste's preferences with healthy style of life. To this extent the potential healthy RTE food would be chilled and it shall contain vegetable, cereals or meat processed with a balanced tasty seasoning; furthermore it shall be sold at an acceptable price but guaranteed through its commercialisation within a trustable brand.

Affluent groups instead do not image processed healthy food as a possible healthy solution, but they focus their attention towards the increased availability of healthier raw materials in terms of quality and traceability.

The concluding remarks, about the outcomes provided by the focus groups' analysis, starts with some general considerations. In fact it has been noticed a positive attitude towards talking about food and cooking issues, the attitude seems to be influenced both by the tradition of the regency of Emilia Romagna for a special attention towards traditional recipes, but also by the media increased communication towards quality food. The attendants often adopt a language that include words as carbohydrates, fats, proteins vitamins, salt, organic food, short food chain, whole ingredients, and healthy food. Despite their association is not always correct, they seem to be aware about the basic characterization of food.

Synthesising common perceptions and habits emerged by all groups it is possible to highlight the followings aspects.

A proper alimentation is based on variety, equilibrium among health and taste, and moderate quantities; but also as time dedicated to conviviality. The key criteria for food choice refer to attributes defined as freshness and certification (including transparency), lack of additives; genuine. The meals that are mainly to exploit healthiness are breakfast and dinner. Focusing on ideal food it needs to be healthy and tasty in order to guarantee a psychological and physical well-being; despite healthy food is not clearly assessed it is not processed; genuine; fresh; transparent. Concerning processed food they all show lack of competences to define processed food anything industrial and with preservatives. Still it is consumed within several typologies of food, as among others, vegetables, juices; cereals; cheese; salami; and fish. Ideal healthy RTC, RTH, RTE food shall be able to guarantee quality of ingredients basic preservation methods; and no additives. It also necessitates to be tasty, affordable and similar to traditional recipes; finally it shall be sold through the guarantee of a private or commercial brand.

Among the groups the attendants show peculiar characterisations that can be synthesised as Table 4-2 shows.

**Table 4-2: Attendants' characteristics attitudes and behaviours expressed during the group interviews**

	<i>AFFLUENT</i>
<i>Mature 41-65 year-old women</i>	<ul style="list-style-type: none"> <li>- Equilibrated, health, positive group</li> <li>- Women belonging to medium – high social class and well educated</li> <li>- Willing to explore</li> <li>- Love food, but also art, culture, travelling</li> <li>- Equilibrated food style, where rigor and pleasure are adequately integrated</li> </ul>
	<i>AFFLUENT</i>
<i>Young 25-40 year-old women</i>	<ul style="list-style-type: none"> <li>- Active: they work, love shopping, travelling and have hobbies. Often have small children which require lots of time</li> <li>- They show interest and knowledge about food, but have little resources to devote</li> </ul>
	<i>ROP</i>
<i>Mature 41-65 year-old women</i>	<ul style="list-style-type: none"> <li>- The group with highest difficulties in life and in food choices</li> <li>- Two different difficulties: fatigue and frustration of who has recently lost buying power; tiredness and difficulty of who has always had economic problems.</li> <li>- Food becomes a duty, rather than a pleasure, which takes time and is costly, and is mainly aimed at filling stomach and taking care of family's needs</li> </ul>
	<i>ROP</i>
<i>Young 25-40 year-old women</i>	<ul style="list-style-type: none"> <li>- difficult economic situation, but with more energy compared to Mature ROP</li> <li>- Difficulties towards a clear and healthy food style: lack of a defined life project and of the capacity of renounce to the pleasure of food.</li> </ul>

A further detailed characterisation is also offered in terms of the two main socio-economic aspects searched for each focus group, which are age and income level. Table 4-3 and

Table 4-4 below provide a brief and draft synthesis of the results by grouping the results of each focus according to the mentioned variables.

**Table 4-3: Focus groups results by aging differentiation**

<b>Topics</b>	<b>Mature groups</b>	<b>Young groups</b>
<b>1.EATING HABITS PREFERENCES</b>	More competences, value aspects	Lack of competences, time, organization
<b>2.REASONS FOR FOOD CHOICE AND PREFERENCES</b>	Healthiness, freshness, safe food; family needs;	Hedonic aspect; lack of ideal food;
<b>3.FOOD SPECIFIC EATING HABITS</b>	Organization and planning; search for ingredients, large not discount retailing and alternative places	Importance on breakfast and dinner; ready to eat food; large not discount retailing
<b>4.IDEAL EATING HABITS, FOOD AND HEALTH. DIET AND WELL-BEING</b>	Equilibrium of ingredients; but also pleasure. Genuine and fresh	Taste; Pleasure and conviviality. Genuine and fresh and aesthetic improvement. Not urgent topic
<b>5.PROCESSED FOOD</b>	Industrial; UHT; Emergency food	Industrial; UHT; Convenience
<b>6.BARRIERS TO: HEALTHY EATING (a). READY TO EAT FOODS (b).</b>	a)Family; Traditional recipes b)Quality of ingredients; nutritional aspects; Preservation methods; Price	a) Time and compensation need b) Quality of ingredients; Price

**Table 4-4: Focus groups results by different socio-economic status**

Topics	ROP groups	Affluent groups
<b>1.EATING HABITS PREFERENCES</b>	Taste; price barrier; convenience; easiness	Variety; freshness; home made; search for ingredients; higher competences
<b>2.REASONS FOR FOOD CHOICE AND PREFERENCES</b>	No investment on food; family	Healthy aspect and taste; family
<b>3.FOOD SPECIFIC EATING HABITS</b>	Eating over meal time; ready to eat food; Meat is reduced due to price; large not discount retailing	Equilibrium among ingredients; less consumption of meat as a choice; <i>kmO</i> and organic; large not discount retailing and alternative places
<b>4.IDEAL EATING HABITS, FOOD AND HEALTH. DIET AND WELL-BEING</b>	Difficulties to define ideal. Genuine and fresh. Punitive attribute of healthy food and dietary aspects	Homemade food; equilibrium of ingredients. Freshness, Lightness; Genuine. Products: Vegetable, fruit, cereals, legumes
<b>5.PROCESSED FOOD</b>	Industrial; UHT; Useful and a solution; Convenience aspect	Industrial; UHT; Emergency food
<b>6.BARRIERS TO: HEALTHY EATING (a). READY TO EAT FOODS (b).</b>	a) Price; time; Organisation and planning b)Quality of ingredients; Preservation methods; Price	a)Family; Pleasure. b)Quality of ingredients; nutritional aspects; Preservation methods; Price

Finally focusing on the segment of ROP consumers it is confirmed a notable degree of heterogeneity in terms socio-demographics (households sizes, education, age) characteristics as expressed by the literature review and in particular by Holgado et al. (2000). Among the variety of lifestyles, attitudes, level of knowledge and competences it emerges also a common difficulty to achieve healthier standards of living, due both to ineffective or scarce psychological and physical efforts that also reflects difficulties in achieving healthier food habits standards. According to the outcomes it seems that being unable to change some negative environmental factors as the income level, the working time, and the lack of competences, they frequently adopt processed food as a partial solution so to overcome and compensate some of these problems. The availability of affordable and healthy oriented processed food seems to be as necessary and relevant in order to reduce the risk of inadequate food intake and prevent diseases. Although above all, it is clear that public campaigns implemented to raise awareness and education towards food issues and healthy life styles are still not fully effective among the ROP groups.

#### **4.2. Food industries and retailers interviewees' outcomes**

The paragraph provides the results from of the interviews conducted with the semi-structured questionnaire to food industries and retailers' representatives. According to the six sections included in the questionnaire

and already described in chapter 3, the results from section 1 to 5 of the questionnaire base on the outcomes of the descriptive analysis supported by the content analysis for open questions. The last section, section 6, describes also the outcomes obtained by the implementation of the multidimensional scaling unfolding technique.

#### 4.2.1. Food industries and retailers' characteristics

Recalling some of the data already introduced, food industries interviewed are most concentrated in the cereals/bakery and dairy production (both 29% - 6 enterprises), they are followed by meat sector including 19% or 5 enterprise while vegetable/fruit category is the less represented (19% or 4). Among the 6 retailers interviewed, 83% (5) belong to large non-discount retailing and one to the traditional retailing (17%).

Concerning the turnover classes for processing industries, large enterprises are the most represented (43% or 9 companies), followed by medium companies (38% or 8 companies); small enterprises are 19% (or 4 companies) (Table 4-5). It is also relevant to add that big companies' turnover is included within a range that goes from over 50 million euro up to over 4.000million euro. Focusing on retailers, apart a traditional specialised small retailer, all large non discount retailers' turnover is above 2.000 million euro.

**Table 4-5: Annual average turnover year 2010 (Industries and Retailers)**

<i>Turnover</i>	<b>Food industry (21)</b>	<b>Food retailer (6)</b>	<b>Total (27)</b>
Up to 2 Million Euros			
Above 2 Million Euros up to 5 Million Euros	10%		7%
Above 5 Million Euros up to 10 Million Euros	10%		7%
<b>Total small enterprises</b>	<b>19%</b>		<b>15%</b>
Above 10 Million Euros up to 20 Million Euros	19%	17%	19%
Above 20 Million Euros up to 30 Million Euros	14%		11%
Above 30 Million Euros up to 40 Million Euros	5%		4%
Above 40 million Euros up to 50 Million Euros			
<b>Total medium enterprises</b>	<b>38%</b>	<b>17%</b>	<b>33%</b>
Above 50 Million Euros	43%	83%	52%
<b>Total big enterprises</b>	<b>43%</b>	<b>83%</b>	<b>52%</b>
NA			
Total	100%	100%	100%

In terms of number of employees, the distribution of food industries and retailers reflects the similar distribution of the turnover, according to the definition given for SMEs. The majority of food industries (43%) employ more than 250 employees, while 38% accounts between 50 and 250 people working. As for retailers, 83% has more than 250 employees, while the 17% is represented by one company employing between 50 and 249 persons (Table 4-6). The company employing less than 10 employees is a new small company in terms of turnover that is partner of a big company, the employed staff that has been declared by the interviewee is less than 10 employees, but the processing activities are implemented through the support of the partner company.

**Table 4-6: Number of employees (annual workers units 2010 ) (industries and retailers)**

<i>Number of employees</i>	<b>Food industry (21)</b>	<b>Food retailer (6)</b>	<b>Total (27)</b>
10 or less	5%		4%
11 to 49	14%		11%
50 to 249	38%	17%	33%
250 or more	43%	83%	52%
NA			
Total	100%	100%	100%

Going in further details on the turnover composition, Table 4-7 summarizes, in the second column, the percentage of turnover which is sold and commercialised as a private label by industries to retailers; while in the third column summarizes the percentage of retailers' turnover sold to consumers through private label products. Looking at industries, up to 19% declare not to commercialise products as private label, 19% sell up to 20% of total turnover. Companies selling between 20% and 40% or between 40% and 60% are both at 24% of representativeness. Only 5 % sell from 80% to 100% through the private labels. Still about 90% of food industries are involved in the production of products sold through the private label. It also relevant to add to table's results that the commercialisation through private label involve industries independently from the size, as the company addressing the highest percentage of turnover is a medium company, while 5 out of 9 big industries have declared between 20% and 60% of turnover through products sold through the private label.

Focusing on the retailers, the importance of the private label is more relevant. Half of the retailers (50%) declare an incidence up to 20% of turnover coming from private label. About 33% (3) of companies declare a percentage of private label turnover between 20% and 40%. Moreover, the specialised retailer (17% or 1) declares that the private label represents more than 60% of the annual turnover (Table 4-7).

**Table 4-7: Percentage of turnover of private label year 2010 (Industries and Retailers)**

<i>Percentages</i>	<b>% of turnover sold to retailers and commercialised as private label (Industries)</b>	<b>% of turnover sold to consumers through private label (Retailers)</b>
None	19%	
0% to 20%	19%	50%
20% to 40%	24%	33%
40% to 60%	24%	
60% to 80%		17%
80% to 100%	5%	
N.A.	10%	
<b>Total</b>	<b>100%</b>	<b>100%</b>

The latter descriptive information concerning the companies' characteristics is the one about the percentage of turnover invested on R&D both by food industries and food retailers. As already expected this typology of information is very sensitive for any enterprise to release and often difficult to calculate as precise. As a matter of fact the widest majority of total interviewees have not been able to provide a clear data (85% of the total). It is anyway interesting the information concerning given by one food retailer, where 1 large company have declares to invest between 10% and 20% of turnover on R&D investment.

To better explore the meaning of R&D activities among the retail's interviewees, it has been also asked to clarify the meaning for R&D activities, but he majority has not provided a definition or has clearly expressed difficulties to assess a specific activity rather than including them in several ambits as quality control, product design, research projects etc. One retailer has associated them to the numbers of persons employed in the private label development.

#### **4.2.2. Respondents knowledge of healthy food**

Within this section it is aimed at providing the results on the level of knowledge of interviewees and their personal interest towards healthy food. The interviewees have thus provided their opinions, through open and ended answers, with their personal understanding and conception about healthy food and their perception towards expectations on their company's involvement in relation nutrition and healthy food. To this extent, among the open answers provided to the question "*Could you please tell me what is your understanding of*

*healthy food?*” it is possible to notice high use of words as “good”, “health”, “healthy”, “ingredient”, “product”, “natural” and “quality”.

In particular the industries’ respondents often refer to healthy food as a food that has to be good in terms of taste and with good quality of ingredients. The quality of ingredients in particular is mentioned referring to the respect of food safety standards; and on the control of ingredients/raw materials. In order to support the achieved outcomes, here below there are reported some exemplificative quotations:

*“Balanced ingredients, good and healthy, healthy and controlled ingredients”*

*“Naturally rich of nutrients good for our body, good for the taste. This can be reached thanks to an integrated chain where the producer knows well the suppliers”*

*“Healthy food does not hurt, no chemical ingredients; good ingredients; good for environment; does not affect health”*

*“There is not a product that is good in absolute terms, it has to be proportionally correct on its ingredients. The limit has to be on fats and sugars”.*

*“As more natural as possible, foods produced with high quality raw material in order to guarantee a safe preservation”*

Food retailers as well have provided answers mainly focused on safety of ingredients, but they also stress the balanced use of ingredients with attention towards the organoleptic attributes of food. Here below there are reported some exemplificative quotations:

*“Food transformed with adequate safety standards, satisfactory equilibrium among organoleptic properties and nutritional power, no additives”*

*“Equilibrate organoleptic and ingredients qualities; daily quantitative of nutrients not create diseases”*

*“Enough calories and equilibrate, equilibrate contents of fats”*

It is thus possible to derive that, the majority of respondents are able to partially include the definition of healthy food applied within this investigation, in accordance with healthy food definition applied in the study for food with a good nutrient profile and food with a good nutritional density (see the first page of the introduction), but they still mainly associate healthy food to the respect of food safety standards. As well many representatives show confusion when they try to correlate the quality attribute with healthy food, by surprisingly attributing the adjective “natural” to characterise healthy food and defining it as food developed through the use of basic and not too complex ingredients.

The importance of nutritional and healthy food issue for industries and retailers respondents is further deepened by two ended questions. The following tables present the frequencies on questions related to training activities on nutritional and healthy food to be implemented inside the own company.

Nutrition issues are considered to be an interesting training subject within the company for almost all respondents (Table 4-8). Most of the respondents think that different subjects could be in charge of organizing this kind of training, and this is the reason why Table 4-9 reports percentages over 100%. At first they would like to get their companies involved themselves: this attitude can be found more in food retailers than in food industries even if in both cases the percentages are clearly over 50%. The involvement of firm’s associations/chamber of commerce and universities is also considered to be an interesting source. Finally, food industries’ representatives consider in particular as relevant to cooperate for training activities with public entities, including universities (52% of preferences) (Table 4-9).



**Table 4-8: Percentage of interviewees interested towards training/education on healthy food issues (Industries and Retailers)**

Expression of interest	Food industry (21)	Food retailer (6)	Total (27)
yes	95%	100%	96%
no	5%		4%
Total	100%	100%	100%

**Table 4-9: Percentage of preferences for the subjects to be responsible of training classes for the companies on nutrition (Industries and Retailers)**

Category	Food industry (21)	Food retailer (6)	Total (27)
your company	62%	83%	67%
your suppliers / your buyers	19%		15%
your company's associates	38%	33%	37%
others (public bodies, universities)	52%	33%	48%
% of industries/retailers	171%	150%	167%

According to the answers given on healthy food definition and the perceived need for training and skills' improvement on healthy and nutritional aspects, respondents show a strong interest towards healthy issues and perceive as relevant and needed a further involvement of their company towards this aspect.

The results provided on the level of knowledge towards healthy issues induce to emphasize a high perceived lack of personal adequate knowledge of the employees operating in food industries and retailing activities and the perceived lack of an adequate provision of training. This result is of noteworthy relevance considering that the wide majority are employed as directors of marketing or commercial areas. The situation emerged can also be induced by the difficulties to combine the huge heterogeneity of processed food products available in the market with a still fragmented heterogeneous regulation, as also underlined within the literature review devoted to policies and regulations state of art. Hence, concerning the present regulation system, operators are needed to combine and constantly adapt different regulation's levels, including, among others, the several regulations in terms of food safety issues together with those involving the typologies of communication of nutritional contents. The difficulty in accomplishing the many facets of the regulatory system is further emphasised also by the absence of a concerned official definition for healthy food.

#### 4.2.3. Company's interest in nutrition/healthy food

Section two moves from the investigation towards the personal attitude of the interviewee to the company's one. It is thus aimed at analysing the typology of involvement in terms of health or healthy food produced and commercialized by industries or retailers, both in the case of the adoption of a specific claim or not.

Table 4-10 reports the selected typologies of production/commercialisation carried out by each company, through the use of a specific claim. The list of products provided includes both those with nutritional and health claim that could be associated to the healthy food category<sup>34</sup>. According to the table, industries and retailers are already involved in producing/commercializing several typologies of products. In particular food industries mainly produce/commercialise low/no fat products (57% of them), products containing high content of fibres and low/no sodium (33%) followed by the other categories, where the less managed is the one related to health functional food (as probiotic added food).

As expected from the literature review, retailers already commercialise all food categories proposed with notable percentages; the majority (83%) select low/no sodium food, low/no fat food, low/no sucrose food, and functional food. The less commercialised is the one containing micronutrients. All of them sell food with nutritional/health claim.

<sup>34</sup> The question offered a limited list of products to tick to the interviewee that is the one provided in the table, the respondent could add products to the list within the open comments.

These data confirm a relevant investment on health and healthy products, considering also the used adoption of claims to differentiate this type of products. The discrepancy between industries and retailers allows considering that these productions are still very fragmented among industries, and that none of them is fully specialised in these categories of food.

**Table 4-10: Percentage of companies producing/commercialising nutritional or health claim food per typology of food product (year 2012)**

Type of nutritional or healthy food	Food industry (21)	Food retailer (6)	Total (27)
low/no sodium food (nutritional claim)	33%	83%	44%
low/no fat food (nutritional claim)	57%	83%	63%
low/no saturated fat food (nutritional claim)	19%	67%	30%
low/no sucrose food (nutritional claim)	24%	83%	37%
contains (high) fibre food (nutritional claim)	33%	67%	41%
contains (high) micronutrients (vitamin and minerals) (nutritional claim)	24%	50%	30%
contains (high) bioactive compounds, such as polyphenols, phytosterols, carotenoids – as lycopene, probiotics (nutritional claim)	14%	83%	30%
food with health claim/ functional food (health claim)	29%	100%	44%

Furthermore according to the open comments provided by the interviewees, several food industries also produce products for specific diseases (as celiac or diabetics), organic, biodinamic and certification of origin products, and ethnic oriented products (as Halal certified products).

They also underline that in some cases they do not apply a claim to their commercial brand but they are requested to adopt the related claim by the retailers. As opposite others do apply the claim to the products commercialised with their brand and not for those sold to the private label in some cases as a choice and in others as expressly not requested by food retailers. To this extent it is also stressed by one interviewee that among the contracted retailing companies to sell private labelled products, the companies commercialising at European level show higher attention towards healthy food and claims for French and United Kingdom markets rather than Italian and also German ones.

In general dairy producers specialised in cheese production declare to face several problems in matching EFSA requirement in relation to the claim regulation for health enhancing attributes due to the necessarily need of utilising fats and salt to process cheese. To this extent, without being able to adopt a health or nutritional claim, they try to stress the communication towards a balanced intake of food/meal rather than balanced ingredients.

Only one small dairy company, out of the 21 interviewed, does not produce any of the mentioned products, despite it is underlined that they produce cheeses with traditional recipes. One small processing fruit company declares to do not use any claim due to the granted already perceived healthiness' of this product.

Focusing on retailers one applies nutritional/health claims to two different lines of products, one specific for health and the other related to conventional food; another company has specified to have chosen not to apply claims on private labelled products.

Concluding, the information provided by the open questions, in addition to the product listed in the table, stress the literature's outcomes in relation to the growing market trends for quality food products (Burch and Lawrence 2005 and Boesso et al. 2009), by showing a notable present differentiation both of quality products commercialised and of the variety of marketing strategies adopted at national and international level.

Moving to the next results shown in Table 4-11, there are now investigated the percentages of products sold by food industries through the commercial brand, the private label or other companies' brand. Low/no sodium food and low/no saturated fat food are mainly sold through private labels, while low/no sucrose food and functional food are equally sold with the commercial brand and through the private label. All the remaining products are mainly commercialised through the own commercial brand. In general only minor quantities are sold through other companies' brands.

The answers provided allows noticing a quite diffused relation between food industries and food retailers for product development (production and commercialisation), despite none industry seems to be strongly dependent from food retailers for its products commercialisation. This aspect might also induce to address the fact that, at Italian level and among the interviewed companies, retailers are still not playing as drivers in pushing innovation and differentiation towards health/healthy products development.

**Table 4-11: Percentage of industries by typologies of brand adopted for healthy/health products' commercialisation (year 2012)**

<b>Type of nutritional or healthy food</b>	<b>Your company brand</b>	<b>Other company brand</b>	<b>Private label</b>
low/no sodium food (nutritional claim)	24%	10%	33%
low/no fat food (nutritional claim)	43%	19%	38%
low/no saturated fat food (nutritional claim)	14%	14%	19%
low/no sucrose food (nutritional claim)	19%	10%	19%
contains (high) fibre food (nutritional claim)	24%	5%	14%
contains (high) micronutrients (vitamin and minerals) (nutritional claim)	24%		14%
contains (high) bioactive compounds, such as polyphenols, phytosterols, carotenoids – as lycopene, probiotics (nutritional claim)	14%	10%	14%
food with health claim/ functional food (health claim)	19%	5%	10%

In order to characterise the relevance of the food industries interviewed in terms of market share for the healthy and health food products, there have also been explored the percentages of industries that are market leader or first follower in the commercialisation of the products proposed. Among the industries interviewed 1 to 4 of them are market leaders at national level for the different categories of products, apart from functional food, and with a peak for low/no fat food. Nobody is first follower (Table 4-12).

In detail, those industries that are reported as leader are big and medium enterprises that also market leader for other conventional products. These data can be interpreted by considering that among the industries interviewed there are few mature firms investing on innovative product lines to match new consumers' niches and able to exploit their experience to become leaders for the new products launched.

According to open explanations provided to this question it has been also underlined by the interviewees that many of the health/healthy food products are very new to the market and that this is also a reason why there is still little competition to become market leaders.

**Table 4-12: Number of industries market leader (highest share of the market at national level) or first follower (second highest share of the market at national level) by typology of healthy/health products (year 2012)**

Type of nutritional or healthy food	Fist follower	Market leader
low/no sodium food (nutritional claim)		2
low/no fat food (nutritional claim)		4
low/no saturated fat food (nutritional claim)		2
low/no sucrose food (nutritional claim)		1
contains (high) fiber food (nutritional claim)		1
contains (high) micronutrients (vitamin and minerals) (nutritional claim)		2
contains (high) bioactive compounds, such as polyphenols, phytosterols, carotenoids – as lycopene, probiotics (nutritional claim)		
food with health claim/ functional food (health claim)		1

The focus devoted to food retailers and provided in Table 4-13, is aimed at acquiring an overview towards the relevance of healthy food products as those defined and included for this investigation (both sold through private label and other brands) in terms of impact on total turnover. According to results, the majority of retailers (67%) declare that healthy products commercialisation represents only up to 10% of the total turnover. This outcome thus confirms still a limited relevance of healthy food in terms of turnover.

**Table 4-13: Percentage of retailers according to turnover percentages for commercialised healthy food products**

Turnover %	Food retailer (6)
from 0 to 10%	67%
above 10% up to 20%	17%
above 20% up to 30%	
above 30% up to 40%	
above 40% up to 50%	
above 50%	17%
NA	
Total	100%

Having analysed the present situation, it is useful to analyse how the interviewees expect their companies to further invest on healthy food production and commercialisation within the next three year (Table 4-14). The results show a high discrepancy between the percentages of retailers that expects to increase investments on healthy products compared to the ones of food industries. Thus is possible to underline a strong growing attention by food retailers to increase and differentiate the shelf offer, in particular towards health and healthy food rather than the functional one. Instead the intention by the food industries to invest in healthy product is confirmed, but limited to specific products. It is also interesting to notice how 24% of industry's interviewees show increasing interest towards health food, rather than healthy food.

Furthermore, according to the companies' open comments for the future planning on production/commercialisation, it emerges that only two small food industries have not yet planned on healthy food development. These industries are anyway already specialised in traditional and organic food production. Focusing on further explanations, two food industries operating in meat and cereals sectors and one large retailer specify that are planning to develop these kinds of products for the specific market segment of children, the so called *baby food* products, that according their view is a very interesting target to focus on. Finally the wide majority have specified that is planning to commercialise these typology of products through a recognisable claim.

Finally, these outcomes also spur to pose attention towards the out coming relevance of a present low degree of communication and collaboration occurring between food industries and retailers for the Italian market.

**Table 4-14: Percentage of companies planning to produce/commercialise nutritional or health claim food per typology of food product (between 2012 and 2015)**

Type of nutritional or healthy food	Food industry (21)	Food retailer (6)	Total (27)
low/no sodium food (nutritional claim)	19%	100%	37%
low/no fat food (nutritional claim)	24%	100%	41%
low/no saturated fat food (nutritional claim)	14%	83%	30%
low/no sucrose food (nutritional claim)	5%	83%	22%
contains (high) fiber food (nutritional claim)	10%	83%	26%
contains (high) micronutrients (vitamin and minerals) (nutritional claim)	10%	67%	22%
contains (high) bioactive compounds, such as polyphenols, phytosterols, carotenoids – as lycopene, probiotics (nutritional claim)	5%	50%	15%
food with health claim/ functional food (health claim)	24%	67%	33%

In order to better explore the reasons behind the choices of investment towards healthy food, at first, it is of noteworthy importance to show how food industries and retailers' representatives interviewed express their perception on margin expectations for healthy food. As shown in Table 4-15, the majority of food industries are convinced that healthy food shall guarantee high margins, and expect them to be even higher than the ones given by the conventional food. On the contrary the majority of food retailers expect them to be able to achieve margins on average with conventional food. According to the open comments added to this answer it is in particular stressed by food industries that quality food is referred to niches of consumers interested towards health issues and that the final margin needs to cover the high impact of costs of raw materials, R&D investments and the implementation of marketing strategies compared to the conventional already mature products.

**Table 4-15: Interviewees' margin expectation on healthy food**

Margin expectation	Food industry (21)	Food retailer (6)	Total (27)
below average of other processed food	10%		7%
on average of other processed food	24%	67%	33%
above average of other processed food	67%	33%	59%
NA			
Total	100%	100%	100%

According to the previous results, the following focus on the investment perspectives shall provide further elements to assess the interviewees' perceptions. It is in fact relevant to clarify which are the interviewees' perceptions towards the required investment efforts for producing healthy food. Furthermore it is also helpful to analyse whether, among food industries, the perceptions vary in relation to the size of the referring company (small, medium, or big). Within this question it is also requested, for the first time to the interviewees, to stress the answers on investment issues in relation to the production of low cost healthy food. It is thus expected to explore a first correlation with the affordability issue.

As shown in Table 4-16, food retailers do not show a homogeneous conception about the feasibility of low cost production of healthy food, but, from the available answers, about half of them are oriented through an adequate degree of feasibility. Instead the majority of food industries confirm to consider somewhat difficult up to extremely difficult both from and economic and technological side to produce low cost healthy food.

**Table 4-16: Percentage of the interviewees on the level of difficulty perceived to produce low cost healthy food from a technological and economic perspective**

<b>Level of difficulty</b>	<b>Food industry (21)</b>	<b>Food retailer (6)</b>	<b>Total (27)</b>
Extremely difficult	5%		4%
Slightly difficult	48%	33%	44%
Somewhat difficult	14%		11%
So and so		17%	4%
Somewhat easy	10%		7%
Slightly easy	5%	33%	11%
Extremely easy	19%		15%
NA		17%	4%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

In particular, focusing on food industry's respondents, the difficult feasibility to produce low cost healthy food is perceived as relatively high by any typology of companies, but it is perceived as more difficult in particular by about 75% of medium enterprises and large companies, compared to small enterprises (Table 4-17). High difficulties are shared among all the categories of food considered, apart from a more balanced view offered by the fruit sector (Table 4-18).

**Table 4-17: Percentage of food industries' interviewees, by company size, on the level of difficulty perceived to produce low cost healthy food from a technological and economic perspective**

<b>Level of difficulty/Industries' turnover</b>	<b>Small company (€ 2m &lt; x ≤ € 10 m)</b>	<b>Medium company (€ 10m &lt; x ≤ € 50m)</b>	<b>Big company (€ 50m &lt; x)</b>
Extremely difficult			11%
Slightly difficult	50%	75%	22%
Somewhat difficult			33%
So and so			
Somewhat easy	25%	13%	
Slightly easy			11%
Extremely easy	25%	13%	22%
NA			
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

**Table 4-18: Percentage of food industries' interviewees, by main food category, on the level of difficulty perceived to produce low cost healthy food from a technological and economic perspective**

<b>Level of difficulty</b>	<b>Dairy/eggs (6)</b>	<b>Meat/fish (5)</b>	<b>Veg/fruits (4)</b>	<b>Cereals/bakery (6)</b>	<b>Total (21)</b>
Extremely difficult		20%			5%
Slightly difficult	67%	40%	25%	50%	48%
Somewhat difficult		20%	25%	17%	14%
So and so					
Somewhat easy	17%			17%	10%
Slightly easy	17%				5%
Extremely easy		20%	50%	17%	19%
NA					
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

The open comments provided allows at understanding that the main difficulties relate to the acquisition of quality ingredients and to the processing process, with particular attention towards the technology for guarantee preservation of food. The latter needs strong research investment in particular when it is aimed at reducing fats and preservatives and it is considered difficult to invest on products sold at low price if the margin expectations are instead higher for healthy food compared to the conventional one. The raw materials improvement in particular sectors, as the dairy and meat sectors, is limited, and in general, in order

to maintain low costs, interviewees consider as a better solution not to focus on new ingredients' development, but in differentiating and improving the composition of already selected recipes.

Finally according to the comments provided to the open question on possible increased problems of SMEs to produce and commercialise towards low cost healthy food commercialisation, interviewees, both industries and retailers, offer various typologies of observations. They focus both on aspects relating to singular companies' strategies as well as on strategies taking into considerations the dynamics occurring along the agrofood chain, by including industries, retailers and consumers. Here below some exemplificative comments for different typologies of companies are provided:

Small and medium enterprises' comments:

*"SMEs are motivated to invest in innovation to reach niches of market, they need to segment. They need to risk"*

*"It is more costly for SMEs but as well they are more motivated, big companies work only on health food not on healthy food"*

*"It is hard for everybody, the problem relates to large retailers that absorb all the profits..."*

*"Their company is very interested on these issues, the problem comes from the market and large retailers"*

*"R&D costs and investment"*

Big enterprises' comments:

*"SMEs would not have a problem in the production, but they would have a problem in having the products commercialised in big retailers"*

*It depends, a small enterprise could focus its strategy on nutritional food niche, but the mission should be clear. We have 10 people employed on R&D"*

Retailers' comments:

*"SMEs and Big companies have similar problems. SMEs are more dynamic and reactive to market needs, but limited skills in R&D. SMEs allow shortening the chain of production/commercialisation, and the chain is faster in its reaction"*

*"It depends on the positioning strategy, with some SMEs we can work on specific products, according to category"*

*"The only problem is consumers' awareness"*

Starting from the latter focus provided on SMEs difficulties to produce and invest on low cost healthy products, it is possible to achieve interesting cues concerning innovation and differentiation issues and the dynamics affecting agrofood chain for healthy food product commercialisation.

As underlined within the theoretical framework, product differentiation and innovation is considered by all food industries as a tool to gain higher turnover, and added quality food production is strongly related to increased margin expectations, and, at present, they are mainly devoted to niche of consumers willing to pay for products with added value as stressed by Lukas and Ferrell (2000). To this extent, despite all interviewees are interested in investing in healthy or health food productions, it is not possible to assume from the results achieved that high innovating products tend to grow faster than traditional ones as stated by Boesso et al. (2009).

As stressed by Burch and Lawrence (2005) and Bunte et al. 2011) the results show that food retailers can play a powerful role in driving products' differentiation and in influencing healthy food industries' choices, with particular regard at SMEs. In consideration of the detected commercial relations on healthy food product commercialisation, again the attention raises towards present criticalities on the coordination and collaboration between food industries and food retailers.

#### 4.2.4. Knowledge and perception of ROP consumers' trends at national level

This paragraph focuses on the outcomes about the issue on ROP consumers segments as perceived by industries and retailers' representatives.

The first analysis explores how the respondents expect the different consumers' segments, including those at ROP, to increase in the next 3 years both in terms of growth and profit potential. Food industries' results, shown in Table 4-19, highlight that based on the average rate reported, children (aged between 4 and 13), ethnic groups, and elderly people will be the segments that might provide the highest growth and profit (average rate 5,1), they are followed by single people and people with specific health problem, and people over 50 years old (average rate 5). Within the open possibility named "Others", six interviewees have also emphasised the segment of families by ranking them with a score at 6,2 of the average rate. The ROP segment is instead considered as the less interesting one in terms of profit potential (4,2) , despite they are growing in terms of number, as both underlined in chapter two and also by the interviewees within the open comments.

**Table 4-19: Percentage of industries' interviewees on the expected trends of growth and profit potential of consumers (between 2012 and 2015) (1= very negative; 7=very positive)**

Consumers segments	1	2	3	4	5	6	7	Total respondents	Average	NA
Babies (0-3 years old)	20%	5%	15%	15%	5%	15%	25%	20	4,3	1
Children (4-13 years old)	10%	5%		14%	19%	29%	24%	21	5,1	
Adolescents (14-18 years old)	10%	5%	5%	24%	14%	29%	14%	21	4,7	
Single women no children	5%	5%		19%	38%	19%	14%	21	5,0	
Single men no children	5%	5%		24%	29%	24%	14%	21	5,0	
Single women with children	5%	5%		33%	29%	19%	10%	21	4,7	
Single men with children	5%	5%		40%	25%	20%	5%	20	4,6	1
Women over 50s	5%	5%	5%	19%	24%	24%	19%	21	5,0	
Men over 50s	5%	5%	10%	10%	30%	20%	20%	20	5,0	1
Elderly people	5%	5%	5%	10%	33%	19%	24%	21	5,1	
Low-income people / At risk of poverty people	5%	14%	10%	24%	33%	5%	10%	21	4,2	
People with specific health problems (i.e. obesity, hypertension, other diet-related chronic diseases, etc.)	5%	5%		25%	25%	20%	20%	20	5,0	1
Ethnic groups		11%	5%	16%	21%	32%	16%	19	5,1	2
Others (families)					17%	50%	33%	6	6,2	15

Retailers' results, available in Table 4-20 below, show similar scores compared to food industries as they rank at first elderly people (5,3 average rate), followed by people over 50, people with specific health problem, and single men. The higher discrepancy relates to children and ethnic groups that instead score notable lower rates. ROP consumers' segment is considered even as more negative in terms of profit potential than industries (3,8 average rate).



**Table 4-20: Percentage of retailers' interviewees on the expected trends of growth and profit potential of consumers (between 2012 and 2015) (1= very negative; 7=very positive)**

Consumers segments	1	2	3	4	5	6	7	Total respondents	Average	NA
Babies (0-3 years old)	20%	5%	15%	15%	5%	15%	25%	6	4,3	
Children (4-13 years old)	10%	5%		14%	19%	29%	24%	6	4,3	
Adolescents (14-18 years old)	10%	5%	5%	24%	14%	29%	14%	6	4,8	
Single women no children	5%	5%		19%	38%	19%	14%	6	4,8	
Single men no children	5%	5%		24%	29%	24%	14%	6	5,0	
Single women with children	5%	5%		33%	29%	19%	10%	6	4,5	
Single men with children	5%	5%		40%	25%	20%	5%	6	4,5	
Women over 50s	5%	5%	5%	19%	24%	24%	19%	6	5,2	
Men over 50s	5%	5%	10%	10%	30%	20%	20%	6	5,0	
Elderly people	5%	5%	5%	10%	33%	19%	24%	6	5,3	
Low-income people / At risk of poverty people	5%	14%	10%	24%	33%	5%	10%	6	3,8	0
People with specific health problems (i.e. obesity, hypertension, other diet-related chronic diseases, etc.)	5%	5%		25%	25%	20%	20%	6	5,0	
Ethnic groups		11%	5%	16%	21%	32%	16%	5	4,0	
Others (families)					17%	50%	33%	2	5,5	2

In order to clarify the perception of interviewees towards the ROP segment of consumers here below there are reported some comments provided in relation to the open question “Given the expected increasing number of low-income people/at risk of poverty people, to what extent do you think that they can be an interesting consumers’ segment in the next 3 years?”

Food industries’ answers:

*“It is needed to increase their purchase power, vegetable and fruit are performing better than other food products”*

*“There is low/medium attention of the consumers for healthy food towards dairy products. Moreover, in dairy sector these products have high prices, particularly for high quality products*

*“It is necessary to lower prices in general, not only for poor people”*

*“Promotions would work very well, as offers, they ensure low prices within the current crisis”*

*“The number of ROP people will be increasing, but they may not represent a key target group for the companies which are focused on high quality food. The main limit is presented by the margin expectation and high price connected to high quality food. In addition, this target group is still mainly focused on the good taste of food, rather than on nutritional level of food”*

*“There is a big conflict between large retailers and industries, large retailers do not care about quality, by the way ROP are increasing. Discounts buy (+7%) more than large retailers (-3%), but in Italy consumers ask for low quality. In Emilia-Romagna there are less discounts than north of Italy”*

*“The level of quality of discount products has increased. They are certified Halal. It is not the health claim the one that attracts but the nutritional one”*

*“Our products are not expensive also ROP people can access to them”*

*“Our product is very expensive, it would be needed to sell different parts of meat and implement R&D to develop different processes”*

Retailers’ answers:

*“Only if they increase their purchasing power”*

*“ROP will have to increase awareness. We already know that they are growing and we are already making promotion to suggest cheaper products with good nutritional properties”*

*“ROP people do not provide margin, healthy or ready to eat product have a high service costs”*

*“In terms of number they will increase a lot, in terms of profit not. For ROP people we are still focused on "first price brand", healthy issues are still too weak among every categories of consumers”*

*“I do not know, they grow in terms of numbers not in terms of margins”*

The answers provided are interesting due to several aspects. Looking at the food industries it is possible to see a categorisation according to the belonging to the food sectors. Fruit and vegetable is perceived as to be an interesting sector for developing healthy food products for ROP consumers while the dairy one not; this perception seems to relate mainly to the characteristics of the ingredients to process. In general food industries pose attention towards the growing number of ROP people but the growth is negatively correlated in terms of growing margins' expectations. Among the relations with retailers it raises a problem in terms of agreement on food quality offer, and furthermore it seems to be highlighted the fact that ROP consumers might be refer to discounts rather than large retailing stores. The difficulty to relate quality food to ROP consumers is also present. Retailers clearly provide homogenous answers that stress in particular, as already analysed for industries, the lack of attention towards ROP consumers, due to the negative correlation between the increase of ROP population and the increase of margins.

The next results strictly focus on ROP consumers, by investigating the interviewees' expectations on their future consumption trend (Table 4-21 and Table 4-22). Still food industries foresee very low growing consumption trend for healthy food (as described in the questionnaire: *good nutrient profile food, and good nutritional density food with and without claim* ) products among ROP, this data is mainly justified by the lack of awareness and price as barriers. Better performance are shown by health food, this affirmation is correlated to the open considerations that emphasize that this segment, as all the other ones, will experience increased number of non communicable diseases (as diabetes, celiac, etc.) and that will be forced to buy specific health enhancing products. Finally it is relevant to focus on the category of food reaching the second highest average rate (4,4) that is ready to eat food. Healthy food reaches the corresponding higher score (on average 3,8) only when commercialised with a claim.

**Table 4-21: Percentage of industries' interviewees on the expectations on future trends on ROP food consumption (between 2012 and 2015) (1= very negative trend of sells; 7= very positive trend of sells)**

Typology of food	1	2	3	4	5	6	7	Total respondents	Average	N.A.	Total interviews
good nutrient profile food commercialized with nutritional claim (for example, low/no sodium food, low/no fat food, low/no saturated fat food, low/no sucrose food)	24%	10%	19%		14%	24%	10%	21	3,8		21
good nutrient profile food commercialized with no nutritional claim (for example, low/no sodium food, low/no fat food, low/no saturated fat food, low/no sucrose food)	29%	14%	19%	10%	14%	14%		21	3,1		21
good nutritional density food commercialized with nutritional claim (for example, contains (high) fiber food, contains (high) micronutrients (vitamin and minerals), contains (high) bioactive compounds, such as polyphenols, phytosterols, carotenoids – as lycopene, probiotics, Omega, etc.	14%	14%	24%	5%	14%	24%	5%	21	3,8		21
good nutritional density food commercialized with no nutritional claim (for example, contains (high) fiber food, contains (high) micronutrients (vitamin and minerals), contains (high) bioactive compounds, such as polyphenols, phytosterols, carotenoids – as lycopene, probiotics, Omega, etc.	29%	14%	14%	14%	14%	14%		21	3,1		21
food with health claim / functional food targeting specific diseases (such as, coeliac disease, diabetes, hypertension, etc.)	10%		14%	29%	5%	33%	10%	21	4,6		21
organic / demeter-biodynamic food	33%	14%	14%	14%	5%	14%	5%	21	3,0		21
ready-to-eat food (that is food prepared in advance, intended to be consumed as it is and which does not require additional cooking)	15%	15%	5%	10%	10%	30%	15%	20	4,4	1	21
traditional food, PDO, PGI	48%	24%	5%	5%	10%	5%	5%	21	2,4		21
fair trade food	40%	25%	10%	10%	10%	5%		20	2,4	1	21
environmentally sustainable food	43%	19%	10%	5%	5%	10%	10%	21	2,8		21

Retailers show similar perceptions on ROP future trend of consumption to the ones expressed by industries, but they also show a higher interest towards organic and biodynamic food, by ranking it just after food with health claim and RTE food. It must be noticed that one retailer has added one category of food to the proposed ones that is the private labelled product, for which the interviewee expects very high growth of consumption among ROP consumers. Still also retailers perceive healthy food, as not attractive for ROP consumers. It is anyway interesting to notice that, although the scores are very similar, in case of *good nutrient profile food*, the commercialisation of this product scores the same average rate with and without the use of claim while for *good nutritional density food*, the option adopting the claim scores even lower than without.

**Table 4-22: Percentage of retailers' interviewees on the expectations on future trends on ROP food consumption (between 2012 and 2015) (1= very negative trend of sells; 7= very positive trend of sells)**

Typology of food	1	2	3	4	5	6	7	Total respondents	Average	N.A.	Total interviews
good nutrient profile food commercialized with nutritional claim (for example, low/no sodium food, low/no fat food, low/no saturated fat food, low/no sucrose food)		17%		17%	33%	33%		6	3,7		6
good nutrient profile food commercialized with no nutritional claim (for example, low/no sodium food, low/no fat food, low/no saturated fat food, low/no sucrose food)				50%	33%	17%		6	3,7		6
good nutritional density food commercialized with nutritional claim (for example, contains (high) fiber food, contains (high) micronutrients (vitamin and minerals), contains (high) bioactive compounds, such as polyphenols, phytosterols, carotenoids – as lycopene, probiotics, Omega, etc.		17%		17%	50%	17%		6	3,5		6
good nutritional density food commercialized with no nutritional claim (for example, contains (high) fiber food, contains (high) micronutrients (vitamin and minerals), contains (high) bioactive compounds, such as polyphenols, phytosterols, carotenoids – as lycopene, probiotics, Omega, etc.			17%	17%	50%	17%		6	3,7		6
food with health claim / functional food targeting specific diseases (such as, coeliac disease, diabetes, hypertension, etc.)						83%	17%	6	5,2		6
organic / demeter-biodynamic food				17%	50%	33%		6	4,2		6
ready-to-eat food (that is food prepared in advance, intended to be consumed as it is and which does not require additional cooking)				17%		67%	17%	6	4,8		6
traditional food, PDO, PGI		17%	17%		67%			6	3,2		6
fair trade food		50%			50%			6	2,5		6
environmentally sustainable food		40%	20%		20%	20%		5	2,6	1	6

Considering the outcomes of the latter result, as provided by Table 4-23, the majority of interviewees adopt several sources of information to update on consumers trends (apart 3 small industries), with an evident preferable source that are the marketing agencies and national source of market data.

**Table 4-23: Percentage of industries and retailers on the adopted information sources to update knowledge on consumers' trends**

Type of nutritional or healthy food	food industry (18 out of 21)	food retailer (6)	Total (24)
Market data from national/international marketing agencies/other sources	72%	100%	31%
Professional seminars / events	50%	67%	21%
General newspapers	11%		3%
Specialised newspapers / magazines / newsletters	22%	67%	13%
Associations/formal networks you belong to	22%		6%
People working in other companies	39%		11%
Colleagues working in your company	11%		3%
Word of mouth	6%		2%
Other	28%	17%	10%

Considering the outcomes of chapter two, it seems to be confirmed that the attention towards ROP consumers is still low compared to the high market share that they represent in Italy (18,2 in 2010), despite the current economic crisis and public opinion are forcing the supply food chain towards this segment of consumers. As well the impression obtained from the interviews is that both representatives are not able to capture the high heterogeneity of ROP consumers that is instead stressed by the literature and confirmed by Eurostat data, showing very different socio-demographic characteristics among ROP consumers, as, among others, the presence of educated and young people, of single parents, and families.

#### **4.2.5. Healthy RTE food for ROP**

This section of results focuses on ready to eat food commercialisation. As already considered within the focus group the extension of ready to eat food is quite difficult to adapt to Italian culture of food and for some industries not specialised in this typologies of preparation it was needed to clarify this term. In general as for consumers, it has been mentioned prepared food that necessitate very little further actions for the consumers in order to be ready to eat, thus RTC, RTH and RTE food (e.g.: precooked food chilled, frozen and fresh).

Independently from the typology of food commercialised by their company, interviewees are positive towards the adoption of healthy RTE food to improve ROP consumers' healthy consumption (in total 55% think that they can effective up to extremely effective), they thus confirm the higher trend of RTE food consumption expressed in the previous paragraph. The expectations are also confirmed as similar among industries and retailers (Table 4-24).

**Table 4-24: Percentage of interviewees on the perceived level of effectiveness of healthy ready-to-eat food to stimulate ROP consumers' consumption of healthy food**

<b>Level of Effectiveness</b>	<b>Food industry (21)</b>	<b>Food retailer (6)</b>	<b>Total (27)</b>
Not effective	10%		7%
Slightly effective	10%	17%	11%
Somewhat effective	10%		7%
Moderately effective	10%	33%	15%
Effective	29%	33%	30%
Very effective	19%		15%
Extremely effective	14%	17%	15%
NA			
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Notwithstanding the previous outcomes, they in general are not convinced that the image of healthy RTE food can be perceived as compatible by ROP consumers in order to foster a healthy diet. Still considering the strong Italian tradition in relation the culture of food and the perceived scepticism towards processed food, food retailers negatively correlated the image of RTE food with a healthy diet. Food industries show better tendency, despite not too strong, towards the possibility of combining these two aspects. In total only 31 % consider the proposed association as compatible up to extremely compatible (Table 4-25).

**Table 4-25: Percentage of interviewees on the perceived level of compatibility of the image of ready-to-eat food with healthy food and diet for ROP consumers**

<b>Level of compatibility</b>	<b>Food industry (21)</b>	<b>Food retailer (6)</b>	<b>Total (27)</b>
Not compatible	10%		7%
Slightly compatible	5%	50%	15%
Somewhat compatible	5%	17%	7%
Moderately compatible	38%		30%
Compatible	14%	33%	19%
Very compatible	14%		11%
Extremely compatible	10%		7%
NA	5%		4%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Focusing on the possible typology of preparation of healthy RTE food, according to Table 4-26 and Table 4-27, the difficulties to identify a specific typology of healthy RTE food to be targeted for ROP consumers still persist in particular among retailers. Despite the attention posed on healthy snack as a possible attractive food, all the others are rated as very low by retailers. Industries show instead more positive perceptions towards fresh and chilled healthy RTE food. By the way, within the open comments, the wide majority of them considers as necessary the use of a claim to communicate the healthy benefit and are strongly sceptical in relation to the commercialisation of the healthy RTE food without a claim even if sold at low price.

**Table 4-26: Percentage of industries' interviewees on the expected capability of healthy RTE food by typology of preparation to increase of ROP consumers' consumption over healthy food (1=this preparation will not increase healthy food consumption among ROP consumers at all; 7=it will definitely increase healthy...)**

<i>Type of food preparation</i>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>Total respondents</b>	<b>Average</b>	<b>NA</b>
fresh healthy food (no-chilled) ready-to-eat food	21%		11%	5%	11%	37%	16%	19	4,6	2
chilled healthy ready-to-eat food		5%	11%	21%	16%	37%	11%	19	4,9	2
hot healthy ready-to-eat food/meals from grocery stores or "food away from home" (food sold for immediate consumption at dine-in or carryout restaurants)	16%	16%	11%	26%	21%	11%		19	3,5	2
healthy snack	21%			26%	26%	16%	11%	19	4,3	2

**Table 4-27: Percentage of retailers' interviewees on the expected capability of healthy RTE food by typology of preparation to increase of ROP consumers' consumption over healthy food (1=this preparation will not increase healthy food consumption among ROP consumers at all; 7=it will definitely increase healthy...)**

<i>Type of food preparation</i>	1	2	3	4	5	6	7	Total respondents	Average NA
fresh healthy food (no-chilled) ready-to-eat food	33%	17%			33%	17%		6	3,3
chilled healthy ready-to-eat food	17%	33%			50%			6	3,3
hot healthy ready-to-eat food/meals from grocery stores or "food away from home" (food sold for immediate consumption at dine-in or carryout restaurants)	33%	33%	17%				17%	6	2,5
healthy snack		33%		17%	33%	17%		6	4,0

The outlook provided thus show a certain degree of fragmented opinions towards the compatibility of RTE food with ROP consumers, despite respondents seems to recognise the wide increase of consumption of prepared or RTE food within all Italian segment of consumers, including the ROP one. Considering the high costs related to the production and commercialisation of RTE food, including also the investment to produce and communicate them as healthy, industries consider as the most appropriate food the minimally processed (fresh RTE) or the chilled one. Retailers instead think that mainly healthy snack commercialisation could be able to influence consumers' attitudes and diets.

#### **4.2.6. Private label and healthy food**

The section on private label and healthy food aimed at is analysing the importance of private label in the production and commercialisation of nutritional or healthy food. The following tables focus on the opinions of all interviewees on the adoption of private label for healthy food, healthy RTE food and low cost healthy RTE food commercialisation.

By analysing the results, as reported in Table 4-28, Table 4-29, and Table 4-30, interviewees consider the private labelled food as with a strong potential of development, also for healthy food commercialisation, their positive and convinced opinion towards the adoption of private labelled decreases when this category of products is sold at low cost and when it is associated to RTE food. The use of the private label as a brand strategy to target ROP consumers does not seem to fit with the interviewees' expertise. In particular the expected negative association of RTE food in relation to healthy diets for consumers, as expressed above, seems to worsen if RTE food is associated to private labelling, even if healthy.

As last information, in relation to the question referred to retailers on the preferable typology of private label adoption to commercialise healthy low cost RTE food, all retailers agree that they would commercialise this typology of food under the already present private label and they would not differentiate these product through a new one.

**Table 4-28: Percentage of interviewees on the perceived rate of the turnover potential of the healthy food with private label**

<b>Rate of turnover potential</b>	<b>Food industry (21)</b>	<b>Food retailer (6)</b>	<b>Total (27)</b>
Extremely negative			
Slightly negative	5%		4%
Somewhat negative	5%		4%
So and so			
Somewhat positive	10%	17%	11%
Slightly positive	52%	83%	59%
Extremely positive	29%		22%
NA			
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

**Table 4-29: Percentage of interviewees on the perceived rate of the turnover potential of low cost healthy food with private labels**

<b>Rate of turnover potential</b>	<b>Food industry (21)</b>	<b>Food retailer (6)</b>	<b>Total (27)</b>
Extremely negative	10%	0%	7%
Slightly negative	5%	0%	4%
Somewhat negative	0%	0%	0%
So and so	14%	0%	11%
Somewhat positive	5%	17%	7%
Slightly positive	38%	67%	44%
Extremely positive	29%	17%	26%
NA	0%	0%	0%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

**Table 4-30: Percentage of interviewees on the perceived rate of the turnover potential of RTE low cost healthy food with private label**

<b>Rate of turnover potential</b>	<b>Food industry (21)</b>	<b>Food retailer (6)</b>	<b>Total (27)</b>
Extremely negative			
Slightly negative	5%	17%	7%
Somewhat negative	48%	17%	41%
So and so			
Somewhat positive		33%	7%
Slightly positive	19%	33%	22%
Extremely positive	29%		22%
NA			
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Finally it is interesting to analyse the open answers given to the question “*How would you target the above produce to low-income/risk-of-poverty population?*” (referring to healthy RTE low cost products) that are reported below:

Food industries’ comments:

*“I do not know, on well known private labelled products already do it through the first price”*

*“Single and single no children, elderly people”*

*“It is hard to explain, below the margin, they would go to discount”*

*“Through the creation of specific lines of commercialisation. But they should not be commercialised only to ROP, but rather to all consumers. Packaging should be important”*

*“I would target young people, they can grow and increase their income; large retailers need to increase loyalty/customise“*

*“I do not know. People loyal to large not discount retailers are not low income. Furthermore many people do not trust the private label, as me, even if I knows that they are good products”*

*“The market is not ready yet, private label does not work on these types of products”*

*“People do not believe in low cost Healthy RTE”*

All retailers’ comments:

*“Price is the key, you have to focus on that”*

*“I do not know”*

*“ROP is not the ideal target group for ready-to-eat food. It is needed for higher knowledge and information of ROP on healthy food”*

*“We already target them with the campaign that associate good price and good taste and other promotional campaign to increase consumers' loyalty”*

*“Focus on the competitive advantages of the produce attributes; Nutritional claim as one of the many attributes to focus on, not the only one”*

*“It could work with products for children; the price could be placed between the private label and the premium price”*

The comments provided confirm the wide heterogeneity of opinions. Furthermore they show the difficulty of the respondents to wonder on the assessment of a new product line not yet present in the market and to associate it to the specific segment of ROP consumers that is not yet well known. Splitting these two aspects, food industries are sceptical towards the adoption of private label, as they consider that ROP consumers might mainly purchase food at discounts rather than large retailer and that the consumer would not trust or understand a healthy RTE product sold with this strategy. Retailers show even more confusion when talking about the new product lines, in general they consider that healthy food attribute should not be the key issue to target ROP consumers, but mainly price through promotional strategies. Focusing on the ROP segment some respondents, both industries and retailers, are able to identify specific categories as children, single people, young people, elderly people, while other admit or show not to have enough information on ROP segment. Only the traditional retailer seems to be already conscious about this segment up to have already implemented specific promotional strategies to guide consumers towards good quality food available at low price and gain their loyalty.

According to the literature review it is confirmed the growing relevance of private label that is already perceived by industries as grounded and competitive typology of commercialisation. To this extent the industries also confirms the statement of Burch and Lawrence (2005) and Codron (2005) so that the private label can be very effective in providing and developing innovative products as healthy food, but this brand strategy is still perceived as not fully appropriate for segmenting ROP consumers.

#### **4.2.7. Barriers and solutions to improve healthy food consumption among ROP consumers**

The following analysis shows the results combined with the descriptive analysis and the multidimensional scaling unfolding technique. According to the seven features identified and the respective barriers and solutions propositions offered to strengthen healthy food consumption among ROP consumers, it will be



assessed the perceived relevance of the barriers and solutions according to the results of the descriptive analysis and it will be correlated to the perceived association that the respondents provide for the combination of barriers and solutions identified through the MDU technique.

### ***Food industries and retailers' relations***

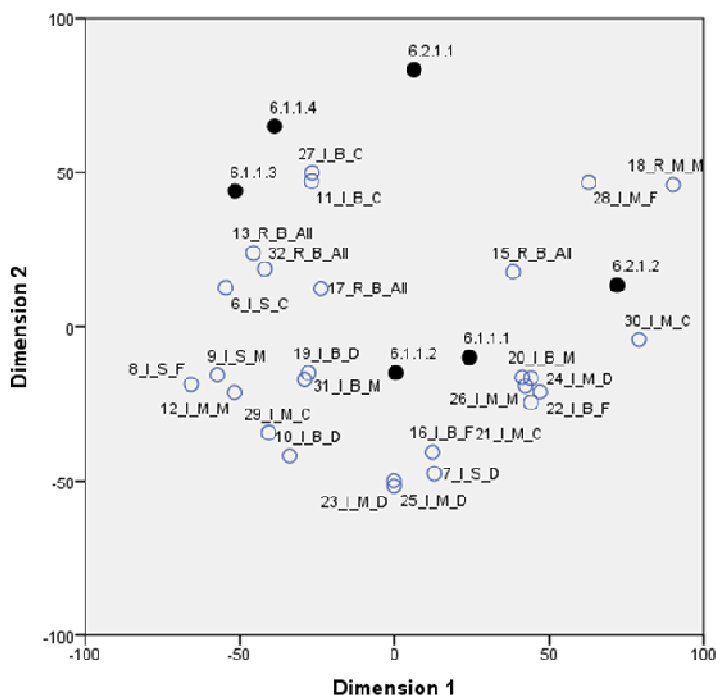
Focusing on the issue on barriers and solutions related to food industries and retailers' relations proposed, available in Table 4-31, there have been two main categories of barriers and solutions.

One category of barriers is focused on the upper part of agrofood chain, so involving the dynamics occurring from the supply of ingredients to the transformation of products. These barriers involve the issues referring to the bargaining power of supplier and to the industries' capabilities to drive product innovation (barriers 6.1.1.1 and 6.1.1.2). The other category groups instead the relations occurring within the following stage of the agrofood chain that involve, as actors, food industries and retailers. They are addressed in terms of power relations between retailers and industries and in terms of the degree of collaboration/coordination relations for the commercialisation of healthy food (barriers 6.1.1.3 and 6.1.1.4). The solutions proposed refer to two specific aspects. One relates to the increased availability of ingredients to process low cost healthy food (solution 6.2.1.2), while the other solution focuses on the improvement of coordination among food industries and retailers (solution 6.2.1.1). These propositions are now analysed both in terms of the scores resulting from the descriptive analysis (Table 4-31) and in relation to the association that respondents apply as investigated with the MDU technique (Figure 4-1).

**Table 4-31: Descriptive analysis, Food industries and retailers' relations. Barriers and Solutions**

6.1.1	<b>Barriers Food industry and retailers' relations</b>	<b>Industries</b>				<b>Retailers</b>			
		<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>
6.1.1.1	High bargaining power of ingredients' suppliers for low cost healthy food (due to, i.e., limited number/monopoly of suppliers, scarce/no possibility to switch to other suppliers, high price of alternative suppliers)	20	3,2	0	20	6	2,8	0	6
	Industry favours relationships with retailers over the same "old" products rather than proposing new products, such as low cost healthy food	19	2,5	0	19	6	2,8	0	6
	Retailers' increasing power over what will be commercialised impedes food industry interest over low cost healthy food	21	5,0	0	21	6	3,3	0	6
	Lack of coordination and commercial agreement between industry and retailers (in terms of production and commercialisation) limits interest both of industry and retailers over low cost healthy food	21	5,7	0	21	6	3,0	0	6
6.2.1	<b>Solutions Food industry and retailers' relations</b>	<b>Industries</b>				<b>Retailers</b>			
	<b>Propositions</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>
6.2.1.1	Better coordination and commercial agreement between industry and retailers (in terms of production and commercialisation) increases interest both of industry and retailers over low cost healthy food	21	5,9	0	21	5	5,2	1	6
6.2.1.2	Increased availability of ingredients for low cost healthy food	21	4,9	0	21	5	4,6	1	6

**Figure 4-1: MDU Output. Issue: Food industries and retailers' relations<sup>35</sup>**



*Badness-of-fit:*  $\sigma_n=0,657$ ;  $\sigma_f= 0,256$ ;  $\sigma_s= 0,627$

*Goodness-of-fit:* VAF= 0,742;  $\rho_i= 0,821$ ;  $\tau_b= 0,654$

*Nondegeneracy and intermixedness:* Shepard's rough index= 0,763; DeSarbo intermixedness index= 0,266

Among the barriers and solutions proposed, the highest average rates are addressed both by food industries and retailers to the propositions referring to the commercialisation aspects, as reported in Table 4-31.

Despite they results as the highest rates among both categories, food industries scores them at notable higher values (respectively 5 and 5,7) compared to retailers (respectively 3,3 and 3). As well the other propositions are scored by retailers just few decimals below.

According to Figure 4-1, interviewees recognise the two main groups of barriers proposed, by separately grouping barriers 6.1.1.1 and 6.1.1.2, and 6.1.1.3 and 6.1.1.4. Furthermore they seem to associate to each of them one corresponding solution (respectively 6.2.1.2 and 6.2.1.1).

Looking at disposition of the interviewees, the map shows also how the majority of food industries are committed to the propositions referring to dynamics and relations occurring within the upper part of the agrofood chain and they are located almost horizontal. This outcome is coherent with the characteristic of food industry that are the most exposed in terms of cost-effectiveness to match economies of scale and innovation adoption. Looking at the healthy food production, food industries, as already emphasised by the results on innovation and differentiation issues above, need to deal with the balancing the cost for raw materials and the development processing methods, thus through high investment on R&D activities.

<sup>35</sup> This and the following map express the variables marked with black filled bullets; while respondents correspond to the blanked bullet. Each respondent visualized is also labelled according to the corresponding categorization in relation to the identification number (randomly associated), the typology of company (I= industry R= retailer), the size of the company (B= big, M= medium, S= small),and the food sector belonging ( All= not specialized, M= meat, C= cereals, D= dairy, F= vegetable/fruit). Thus the following exemplificative label “22\_I\_B\_F” means that this respondent is a big food industry operating in the vegetable/fruit sector.

Food retailers, instead, are closer to the barriers referring to commercialisation aspects. Considering the intrinsic attitude and interest of retailers towards the commercialisation issues, the map also confirms a certain coherent characterisation of these interviewees at regard to the propositions offered.

From the visualised distances among observations and variables, both food industries and retailers look for the majority closer to the barriers rather than to the solutions proposed.

Considering both the scores given through average rates within the descriptive analysis and the results from MDU technique, it is thus possible to derive that respondents consider as slightly more relevant the barriers and solutions related to the improvement of coordination and power relations at the commercialisation stage, despite food industries are aware that these relations are also affected by the control and the performances related to their capability of developing innovative products but limiting the production costs. Furthermore this result is consistent in relation to the previous resulting negative expectations perceived by food industries in terms of performances for low cost healthy food and the general scarce confidence on a future interest of ROP consumers towards healthy food, in particular if RTE ones. Finally, food industry seems to appear as the main vulnerable actor involved as it is the one most influenced by the dynamics of relations occurring along the food chain.

In relation to the literature review, the agrofood chain relations emerge as critical in terms of dependency, power relations and commercialisation choices occurring among food industries and retailers. As also stressed in the analysis of the previous parts of the questionnaire, the difficulties to produce low cost healthy food products are strictly related to the capability of gaining acceptable margins to adequately compensate the costs for raw materials and the investment on R&D activities. This opportunity is perceived as notable difficult to achieve due to the power of retailers to decide over the final price and the shelf allocation of the products. It thus confirmed the high risk of dominant positions of retailers towards food industries as expressed by Fischer et al (2007) and Burch and Lawrence (2005). In accordance to Grunert et al. (2005) the interviewees show interest and involvement towards improved collaboration, despite from the questionnaire it has not been possible to identify the practical solutions to turn the expectations into specific intervention. In general food industries seem to foster improved agreement, as they declare to occur with other retailers operating in foreign countries. The present situation outlined, induces to consider as very difficult for food industries to invest on the development of low cost healthy food considering the high risk of these products to gain a shelf allocation and meet the consumers' demand.

### ***Segment of ROP consumers***

Concerning the barriers and solutions towards the features involving ROP consumers' segment, the interviewees have been provided with three propositions referring to potential barriers and one solution (Table 4-32).

Among the barriers two of them refer to the healthy food price related aspects as perceived by ROP consumers, by addressing the risk that consumers might perceive high price for the healthy food products offered despite if sold at low price, and also the potential comparison that consumers might address between prices of conventional food in relation to quality food (barriers 6.1.2.1 and 6.1.2.2.). The third barrier merges the potential negative perception of consumers of the quality for processed products (barrier 6.1.2.3).

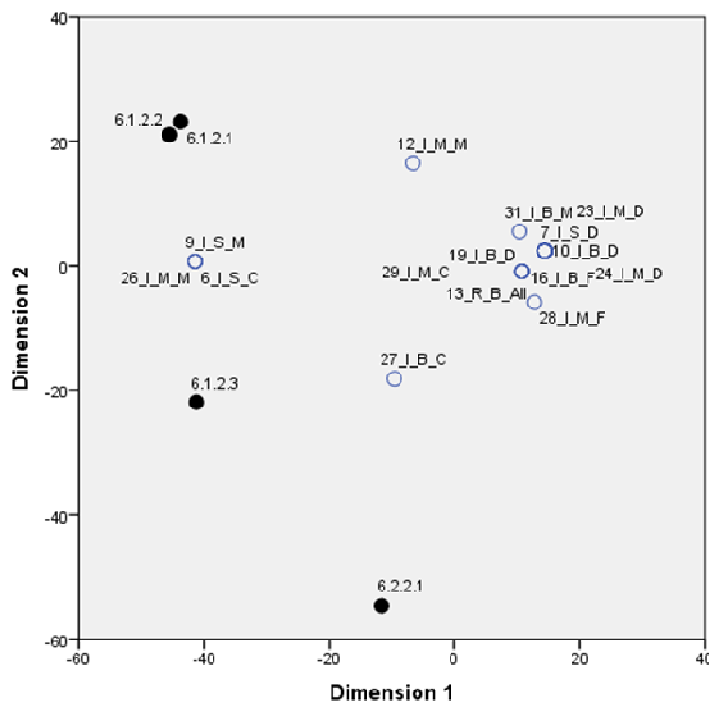
The solution addressed to ROP consumers segment strictly focuses on the price issues with reference to the increased affordability of healthy food products (solution 6.2.1.1).

Following there are shown results for the descriptive analysis (Table 4-32), and Figure 4-2 shows the output provided with the implementation of multidimensional scaling unfolding technique.

**Table 4-32: Descriptive analysis, ROP consumers' segment. Food industries and retailers' barriers and solutions**

6.1.2	Barriers ROP consumers' segment	Industries				Retailers			
	Propositions	Total respondents	Mean	NA	Total interviews	Total respondents	Mean	NA	Total interviews
6.1.2.1	ROP consumers' perception of high price of healthy food, even if low cost	21	5,3	0	21	6	6,0	0	6
6.1.2.2	ROP consumers' perception of a high gap price between healthy food, even though low-cost, versus their familiar food	21	5,2	0	21	6	5,8	0	6
6.1.2.3	ROP consumers' perception of low quality of low cost healthy food	21	5,2	0	21	6	5,0	0	6
6.2.2	Solutions ROP consumers' segment	Industries				Retailers			
	Propositions	Total respondents	Mean	NA	Total interviews	Total respondents	Mean	NA	Total interviews
6.2.2.1	Affordability of healthy food would stimulate ROP and low-income consumers' interest over this kind of food	21	6,4	0	21	6	6,3	0	6

**Figure 4-2: MDU Output. Issue: ROP consumers' segment**



*Badness-of-fit:*  $\sigma_n=0,004$ ;  $\sigma_1= 0,067$ ;  $\sigma_2= 0,324$   
*Goodness-of-fit:* VAF= 0,911;  $\rho_1= 0,661$ ;  $\tau_b= 0,574$   
*Nondegeneracy and intermixedness:* Shepard's rough index= 0,231; DeSarbo intermixedness index= 2,713

Among the barriers proposed for ROP consumers' segment issue, the highest average rate is addressed both by food industries and retailers to the proposition referring to the ROP consumers' perception of high price of healthy food, even if low cost (6.1.2.1).

Despite this result, it must be underlined that food industries gave very similar scores to all three propositions. Instead among retailers' results it is possible to notice wider differences, in particular referring to third proposition concerning the perceived low quality of healthy food. These different results can be partially explained by the perceptions that respondents have previously provided, in particular considering how retailer have offered very negative expectations in terms of increase of profit in relation to ROP consumers. This probably induces retailers to focus in particular on the price issue as a barrier rather than awareness. Concerning the solution offered both actors has scored for it very high average rates (Table 4-32).

Moving to Figure 4-1, by looking at the respondents and variables' allocation within the map, the results show a degenerating tendency.

Nevertheless, the interviewees identify two barriers in a closer position (6.1.2.1 and 6.1.2.2), while the third barrier is located in more distant position (6.1.2.3). Looking at the barriers it is possible to confirm that the interviewees group them into one group of barriers related to the price related issues and the other one focused on the quality of low cost healthy food. The majority of respondents look close and overlapping; they are located equidistant from the three of them. The solution is also located very distant from the barriers and the respondents (6.2.2.1).

According to the average rates provided for the concerned barriers and solution, it thus clear that both food industries and retailers show a strong concern over the affordability of healthy food for ROP consumers, while they give less relevance to the risk of difficulties to perceive the quality attribute of low cost healthy food. The fact that they are positioned far from all the variables, further explains that, despite they are fully aware about the barriers it is not possible for them to match the barriers and solutions. This affirmation is supported by the fact that on one side processing industries are very concerned on high quality ingredients and process innovations as necessary to produce healthy food, on other side retailers do not expect ROP consumers to increase their expenditure on healthy food and still do not consider them as target segment to invest on. In general it seems that both actors, although they are aware of the relation between price and quality to improve ROP consumers' adoption of healthy food, they considers this segment as too risky in terms of return of investment and margins.

In consideration of the market oriented approach as defined by Grunert et al. (2008), the results show that ROP consumers are at present not considered as the end users to target for healthy food product commercialisation. The low interest towards this segment of consumers has to be analysed in relation to several aspects. At first as already mentioned the fact that industries attribute to healthy food expected high margins and high costs in terms of process and product innovation induces to confirm that this typology of quality food is commercialised targeting niche of consumers with a higher purchasing power than ROP ones, by confirming the assumption of Goodman (2009) and Boesso et al. (2009).

### ***Innovation and differentiation***

Focusing on the propositions offered for barriers and solutions on the innovation and differentiation issues there have been proposed 5 barriers and 4 solutions (Table 4-33). The barriers explore several issues. Two barriers address the choice of the positioning strategies, including the adoption of private standards as a way to differentiate and communicate the healthy attribute (barriers 6.1.3.1 and 6.1.3.2). One barrier relates to the price of ingredients to produce healthy food (barrier 6.1.3.3). Two barriers focus on the perceived risks relating to the financial return on investment and the low margin expectations for low cost healthy food commercialisation as compared to those for conventional food (barriers 6.1.3.4 and 6.1.3.5).

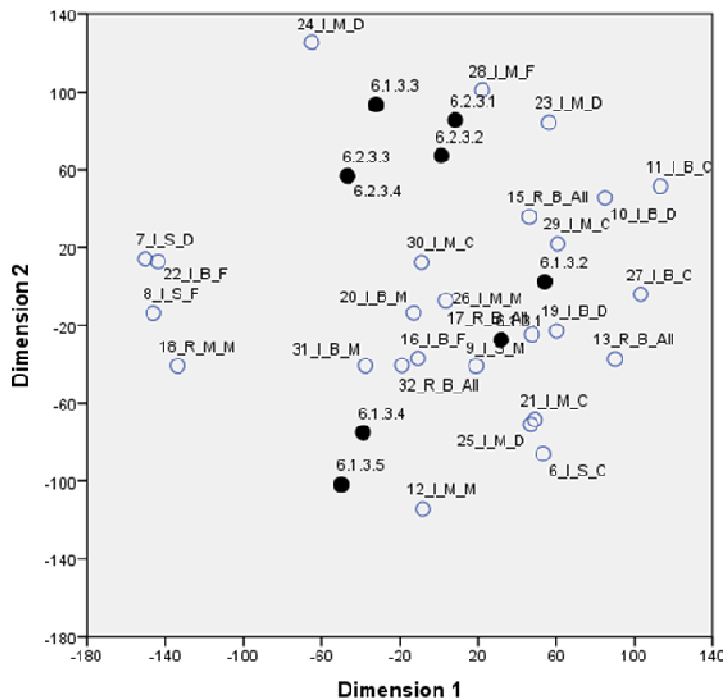
Among the solutions proposed, one solution refers to the adoption of improved collaboration among industries and retailers to develop product innovation and to develop marketing strategies to target the ROP consumers' segment (solution 6.2.3.1). Two solutions focus on the adoption of private standard as a way to strengthen the characterisation of the healthy attribute and to attract ROP consumers (solution 6.2.3.2); and private standards' adoption as a strategy, both for industries and retailers, to limit the potential raise of competitors within the market of low cost healthy food (solution 6.2.3.3). The last solution offered focus on the expectation for a potential reduction of prices of ingredients to produce healthy food (solution 6.2.3.4).

There are now discussed both the results from the descriptive analysis and MDU technique shown in Table 4-33 Figure 4-3: MDU Output. Issue: Innovation and differentiation and Figure 4-3.

**Table 4-33: Descriptive analysis, Innovation and differentiation. Food industries and retailers' barriers and solutions**

6.1.3	<b>Barriers Innovation and differentiation</b>	<b>Industries</b>				<b>Retailers</b>			
	<b>Propositions</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>
6.1.3.1	Industry and retailers think that low cost healthy food cannot be sufficiently well differentiated/do not have valuable competitive advantage over other food	20	3,3	0	20	6	2,7	0	6
6.1.3.2	The lack of private standards focused on healthy food production, commercialization and distribution limits consumers' interest on healthy food	21	3,7	0	21	6	3,2	0	6
6.1.3.3	High price of ingredients to be used for low cost healthy food	21	5,5	0	21	6	5,8	0	6
6.1.3.4	Industry and retailers believe low cost healthy food have high risk of financial returns	20	4,3	0	20	5	5,6	1	6
6.1.3.5	High margin-performance of other food in comparison to low cost healthy food for industry and retailers	20	5,6	0	20	5	5,4	1	6
6.2.3	<b>Solutions Innovation and differentiation</b>	<b>Industries</b>				<b>Retailers</b>			
	<b>Propositions</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>
6.2.3.1	Defining complementary roles in innovation processes between industry and retailers for low-cost healthy food production/commercialisation; for example, food industry focused on quality innovation and retailers focused on understanding and flexibly adjusting to food market response to low cost healthy food	21	5,5	0	21	6	5,7	0	6
6.2.3.2	Commercializing food produced with healthy food private standards can increase ROP consumers' intention to buy healthy food	21	4,5	0	21	5	6,0	1	6
6.2.3.3	Raising industry and/or retailers' standard in favour of healthy food can create barrier to marketplace entry of other industry and/or retailers	21	5,0	0	21	5	6,4	1	6
6.2.3.4	Decreased prices of ingredients for low cost healthy food	21	5,4	0	21	6	4,8	0	6

**Figure 4-3: MDU Output. Issue: Innovation and differentiation**



*Badness-of-fit:*  $\sigma_n=0,138$ ;  $\sigma_f= 0,372$ ;  $\sigma_2= 0,966$

*Goodness-of-fit:* VAF= 0,578;  $\rho_c= 0,770$ ;  $\tau_b= 0,602$

*Nondegeneracy and intermixedness:* Shepard's rough index= 0,757; DeSarbo intermixedness index= 0,042

Looking at the results from the descriptive analysis, food industries and retailers rank barriers in a different way. Food industries' respondents consider as most relevant barriers, those referring to low margin expectations for low cost healthy food commercialisation as compared to those for conventional food (6.1.3.5); and position at the second place the high price of ingredients to be used for low cost healthy food (6.1.3.3). Food retailers instead address as main barrier the high price of ingredients to be used for low cost healthy food (6.1.3.3), followed by the proposition stating that industry and retailers believe low cost healthy food have high risk of financial returns (6.1.3.4). The average rates are in general quite near to each other for the first two barriers identified, as they vary between 5,5 and 5,8.

Concerning the most relevant solutions the two actors still address different propositions. Food industries identify address as the most relevant solutions the improved collaboration among industries and retailers to develop product innovation and to develop marketing strategies to target the ROP consumers' segment (solution 6.2.3.1) and the expectation for a potential reduction of prices of ingredients to produce healthy food (solution 6.2.3.4). While food retailers consider as most relevant solutions the ones referring to private standards' adoption, where at first they place private standards as a strategy, both for industries and retailers, to limit the potential raise of competitors within the market of low cost healthy food (solution 6.2.3.3). and at the second place they address private standard as a way to strengthen the characterisation of the healthy attribute and to attract ROP consumers (solution 6.2.3.2).

Looking at Figure 4-3 it is possible to confirm that respondents have clearly grouped the barriers proposed as follows: 6.1.3.1 and 6.1.3.2; 6.1.3.4 and 6.1.3.5 while 6.1.3.3 is clearly located in an isolated position. The latter barrier is anyway very close to the four solutions proposed. Furthermore the solutions are allocated all in a very close position, and 6.2.3.3 and 6.2.3.4 are so close to overlap each other. This categorisation emerged allows assuming that interviewees have been able to recognise and associate the relations among the barriers proposed.

Among the solutions, the interviewees recognise them as close associated to each other. It thus seems that interviewees consider the group of solutions as strongly correlated. Looking at the propositions, it is possible to deduce that it is needed to identify a strategy to produce and commercialise low cost healthy food products able to match the requirements of food industries and retailers. This best strategy shall combine and balance all the proposed possibilities including the improvement of collaboration and coordination, the improvement of quality standard and the capability to maintain the low production cost. Considering the position of barrier 6.1.3.3 it anyway arises that in order to improve differentiation and innovation the solutions shall aim at addressing as key element the one related to the production costs, in order to allow increased margins' performances. Considering the descriptive analysis, the map confirms the concern of food industries and retailers towards the cost-effectiveness optimisation in terms of barriers.

Looking at the respondents, the majority of industries and retailers are located proximate to the barriers relating to the positioning strategies and the margin potential. This aspect induces to assume that the respondents perceive these barriers as the one that mainly concern their sphere of influence. Hence, despite the price of ingredients is considered as a very critical issue, the respondents do not consider this aspect as strictly dependent from their choices compared to the other issues. Coherently they might overcome the price of ingredients' barrier through better coordination and quality standard improvement, as confirmed by solutions expressed as most relevant within the descriptive analysis. As well from the average rates provided by retailers in terms of solutions, it also emerges their core attitude towards the commercialisation aspects rather than the production ones. Hence retailers' attention towards the improvement of food quality is mainly devoted to improved differentiation and competitive positioning of healthy food products in the market.

Focusing on the issues related to private standards adoption, it seems that retailers are more sensitive than industries, but they mainly consider private standards as an added value to improve their competitive performances, while industries are scarcely convinced about their efficacy.

Looking at the outcomes provided from the literature review and of the results shown up to this stage, it seems that the lack of collaboration and coordination towards the fostering of an innovation system that would involve internal and external actors of the chain, as described by Menrad (2004), is perceived as an actual and critical issue. As well the solutions are still far to be identified and thus translated into practice. Furthermore in terms of product development, as also emphasised by Rodgers (2008), industries confirm the fact that innovation issues involve and force to face the capability to match the innovation adoption and the market requirements expressed by retailers. Still the main concern of industries and retailers is focused on the optimisation of costs allocation (for ingredients and R&D) to guarantee high margin and return on investment. Looking at the cues provided by the literature in relation to the private standard adoption by Nestle (2007) and Hanson (2008), it seems to be confirmed a certain degree of scepticism towards the fact that that these standards might be able to contribute to a real improvement of healthy food habits. Notwithstanding the fact that retailers confirm to consider them as a valuable option to differentiate and position quality food as describe by Henson and Reardon (2005).

### ***Market trend***

The barriers and solutions focused on market trends issues are proposed as follows.

There have been proposed two barriers, one addressing the lack of clear positioning strategies on low cost healthy food among industries and retailers (barrier 6.1.4.1.) and the other on the lack of competition among the two actors on low cost healthy food commercialisation (barrier 6.1.4.2).

The solutions offered are 5. Two solutions clearly refer to the overcome of the two barriers proposed by defining positioning strategies (solution 6.2.4.1) and increasing competition (solution 6.2.4.2) on low cost healthy food commercialisation. The other three solutions instead focus on the role of food industries and



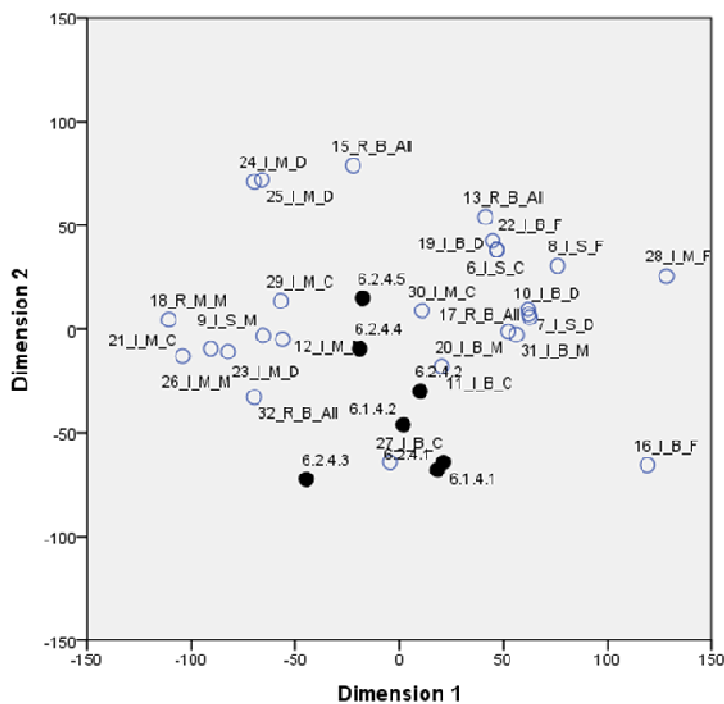
retailers as active promoters of healthy food adoption and consumption among ROP consumers. Thus one solution refers to the active contribution of industries and retailers to the implementation of public campaigns to foster consumers' awareness (solution 6.2.4.3). The other solutions suggest the improved communication for low cost healthy food use among ROP consumers, in particular with the provision of recipes to cook/eat healthy meals (solution (6.2.4.4), and /or with the implementation of teaching classes and guidelines provisions on the use and purchase of low cost healthy food (solution 6.2.4.5).

The propositions and their descriptive analysis are represented in Table 4-34, while Figure 4-4 provides the results of MDU technique.

**Table 4-34: Descriptive analysis, Market trend. Food industries and retailers' barriers and solutions**

6.1.4	<b>Barriers Market trend</b>	<b>Industries</b>				<b>Retailers</b>			
	<b>Propositions</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>
6.1.4.1	Not sufficient industry and retailers positioning strategy focused on low cost healthy food	21	5,3	0	21	5	5,8	1	6
6.1.4.2	Not sufficient industry and retailers competition over healthfulness brand reputation/positioning	21	4,5	0	21	5	4,6	1	6
6.2.4	<b>Solutions Market trend</b>	<b>Industries</b>				<b>Retailers</b>			
	<b>Propositions</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>
6.2.4.1	Food industry and/or retailers' increased positioning strategy focused on low cost healthy food	21	5,9	0	21	6	5,7	0	6
6.2.4.2	Industry and retailers competition over healthfulness brand reputation/positioning favours propensity to healthier food (re)formulation	21	4,6	0	21	6	6,2	0	6
6.2.4.3	Introducing and/or strengthening the supporting role of retailers and/or food industry in favour of public health campaign and healthy food consumption	21	5,7	0	21	6	5,8	0	6
6.2.4.4	Retailers' and/or industry provision to consumers of food recipes for low cost healthy food/meals	21	4,1	0	21	6	5,3	0	6
6.2.4.5	Conduct nutrition education classes and cooking classes, including shopping and food budgeting guidance, at the retailers' store, targeted at ROP/low-income population	21	3,8	0	21	6	4,3	0	6

**Figure 4-4: MDU Output. Issue: Market trend**



*Badness-of-fit:*  $\sigma_n=0,068$ ;  $\sigma_1= 0,260$ ;  $\sigma_2= 0,750$

*Goodness-of-fit:* VAF= 0,649;  $\rho_1= 0,765$ ;  $\tau_b= 0,618$

*Nondegeneracy and intermixedness:* Shepard's rough index= 0,704; DeSarbo intermixedness index= 0,759

Looking at Table 4-34, among the two propositions offered as barriers, both food industries and retailers address as most relevant the one referring to the lack of a positioning strategy focused on low cost healthy food (6.1.4.1). Concerning the solutions they score differently the first one, as food industries refer to the food industry and/or retailers' increased positioning strategy focused on low cost healthy food (6.2.4.1); while food retailers highest average rate is given by the proposition on the improved competition over healthfulness brand reputation for low cost healthy food (6.2.4.2). They both consider as second best the proposition the one referring their active contribution to the implementation of public campaigns to foster consumers' awareness (6.2.4.3).

As confirmed by the outcomes of the descriptive analysis, food industries and retailers are mainly concerned by the marketing aspects related to the marketing strategies towards brand positioning and the improved competition among industries and retailers.

The analysis based on the MDU output provided in Figure 4-4 shows that respondents have associated each barrier to one specific solution, while locate the remaining solutions in more isolated positions. As well, looking at the meaning of the propositions the output confirms that interviewees have coherently interpreted the meaning of the propositions. As a matter of fact they closely relate the barrier and the solution 6.1.4.1 and 6.2.4.1, both concerning the positioning strategy for low cost healthy food. As well they locate next to each other the barrier 6.1.4.2 and the solution 6.2.4.2 both relating to the competitiveness of industries and retailers towards the positioning of a potential healthy food brand.

Concerning the other solutions offered the output confirms that interviewees recognise as related solutions 6.2.4.4 and 6.2.4.5 both referring to marketing strategies towards low cost healthy food promotions. They instead isolate solution 6.2.4.3 referring to the implementation of public campaign sponsored by the private sector.

Looking at the positions of the respondents within the map, it is also possible to underline some differentiation among the typologies of respondents, while food retailers are positioned in a dispersed way, the food industries are quite concentrated, apart from the vegetable/fruit sector that is mainly grouped on right upper part of the map quite isolated from all propositions. To this extent it is confirmed that industries operating in the vegetable and fruit sector are less influenced by the market trend issues, probably due to the intrinsic characteristics of the food sector that, commercialising products worldwide perceived and associated to healthy benefits, already adopt grounded positioning strategies towards the healthy food, and adopt marketing strategies devoted the health enhancement attribute of their products.

According to the results provided and the previous ones given by the open comments of food industries and retailers, it seems that the two actors are not interested in improving the marketing leverages to target ROP consumers, as they consider ROP consumers to be mainly sensitive to related pricing strategies, as occasional promotional offers. Thus the suggestions proposed by Hawkes ((a) 2009) to invest in promoting healthy food adoption through further promotional campaigns seem to be still far from the strategies of food industries and retailers. The outcomes on ROP consumers' segment also confirm that there is still poor awareness both among industries and retailers in terms of ROP consumers' knowledge driven by a negative perception of ROP consumers as potential market segment.

### **Private label**

The focus on the private label issue proposes a small set of proposition as shown in Table 4-35.

Among the two barriers proposed, one involve the possible perceived risk that the increasing interest for private labelled products might limit the industries' interest on investing on low cost healthy food commercialisation with their commercial brand (barrier 6.1.5.1). The other barrier instead focuses on retailers' scarce interest on introducing low cost healthy food within their private label lines (barrier 6.1.5.2).

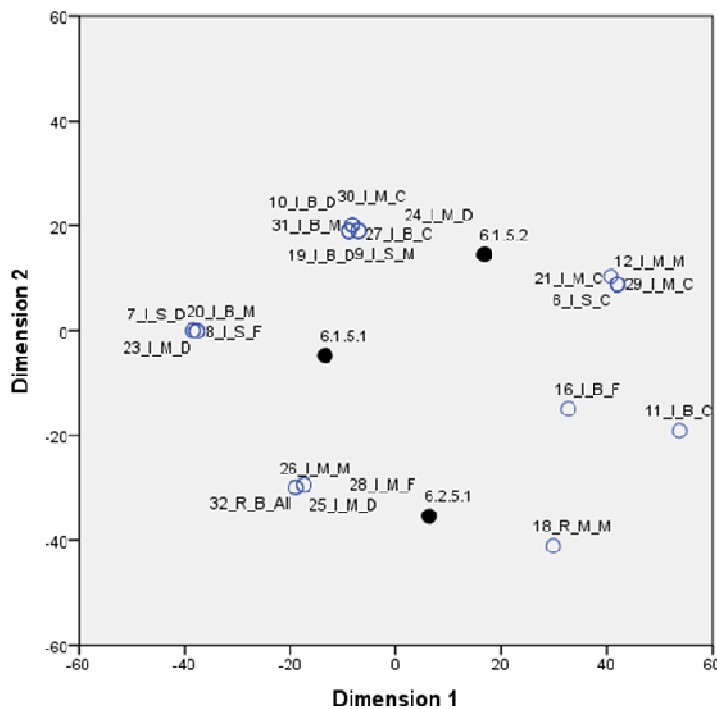
The only solution proposed explores the perception of the two actors towards introduction of low cost healthy food within the private labels (solution 6.2.5.1).

The propositions the descriptive analysis are represented in Table 4-35 Table 4-34, while Figure 4-5 provides the results of MDU technique.

**Table 4-35: Descriptive analysis, Private label. Food industries and retailers' barriers and solutions**

6.1.5	<b>Barriers Private label</b>	<b>Industries</b>				<b>Retailers</b>			
	<b>Propositions</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>
6.1.5.1	Consumers' increasing interest for private label vs. commercial brands limits food industry's intention to invest on low cost healthy food	21	3,6	0	21	6	3,0	0	6
6.1.5.2	Retailers' scarce interest on private label lines for low cost healthy food	20	4,7	1	21	6	4,2	0	6
6.2.5	<b>Solutions Private label</b>	<b>Industries</b>				<b>Retailers</b>			
	<b>Propositions</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>
6.2.5.1	Inserting in the market low cost healthy food within private label	21	5,9	0	21	5	5,0	1	6

**Figure 4-5: MDU Output. Issue: Private label**



*Badness-of-fit:*  $\sigma_n=0,003$ ;  $\sigma_1= 0,055$ ;  $\sigma_2= 0,154$

*Goodness-of-fit:* VAF= 0,977;  $\rho_i= 0,918$ ;  $\tau_b= 0,803$

*Nondegeneracy and intermixedness:* Shepard's rough index= 0,533; DeSarbo intermixedness index= 0,008

According to the results, both food industries and retailers have identified as the main relevant barrier the one referring to retailers' scarce interest on private label lines for low cost healthy food (barrier 6.1.5.2).

Looking at the rates, it is interesting to notice how both actors assess low scores to both barriers, while the food industries average rate for the solution is considerable higher for food industries than food retailers.

Figure 4-5 shows that respondents recognise the two barriers as separate, but closer in comparison to the solution. Furthermore the interviewees are allocated for the majority are concentrated close to barrier 6.1.5.2, few of them are closer to barrier 6.1.5.1 and to the solution 6.2.5.1.

According to the corresponding propositions, and in accordance to the descriptive analysis results, at present the interviewees consider as main barrier the lack of interest of food retailers towards low cost healthy food commercialisation through the private label. This result is coherent also with the results given by the previous map, showing the outcome on market trend, where the interviewees have addressed the lack of competition and positioning strategies for low cost healthy food commercialisation. The lack of interest is explained, as expressed by analysing the results of the previous sections of the questionnaire, by the fact that food industries and retailers are not convinced that in the next future the commercialisation of low cost healthy food will increase among ROP consumers and that the commercialisation of healthy food products could induce higher consumption of healthy food among ROP consumers in particular if strongly processed, as RTE products. The fact that anyway retailers expect adequate turnover potential from low cost healthy food, as resulted within the previous sections, can be partially confirmed by the position taken not too far from barrier 6.1.5.1 referring to growing interest towards private label as a barrier to invest on healthy low cost products for food industries.

Among the respondents closest to the solution proposed there are two retailers. The fact that one is located isolated on the right side of the map is that specialised retailer that has declared to have already introduced promotional campaign and labels addressed to ROP consumers is another confirmative result of the map.

In relation to the aspects raised from the literature review and already discussed in the previous analyses devoted to private labels, it is confirmed that the commercialisation of healthy food products through the private label could one of the possible solutions to improve healthy food consumption, as it is also shown by the choices and perceptions of the traditional retailer interviewed, but this strategy is still far from the present strategies adopted by large retailers due to the negative perceptions and beliefs towards ROP consumers' segment interest towards healthy food.

### ***Public policies and regulations***

The propositions concerning barriers and solutions relating to public policies and regulations issues are the most numerous compared to the other sections.

There have been identified 5 barriers and 10 solutions. Among the barriers, the first refer to the lack of an official definition of healthy food (barrier 6.1.6.1). Three barriers focus on the lack of awareness on healthy food issues as addressed to each actor investigated, thus inadequate degree of awareness of industries (barrier 6.1.6.2), of retailers (barrier 6.1.6.3), and of ROP consumers (barrier 6.1.6.4). The last barrier addresses the lack of adequate public intervention to foster the promotion of healthy food among ROP consumers ( barrier 6.1.6.5).

Looking at the barriers proposed, the first three focus on the improvement of awareness among all actors, thus among industries (solution 6.2.6.1), retailers (solution 6.2.6.2) and ROP consumers (solution 6.2.6.3). The fourth solution focuses on the identification of an official definition for healthy food (solution 6.2.6.4). The following solutions focuses on the implementation of public intervention to raise ROP consumers' awareness, where one stresses the implementation of promotional campaigns for healthy food consumption implemented by private or non-governmental actors through public funds (solution 6.2.6.5), while the other places the implementation of governmental public campaign to promote healthy food (solution 6.2.6.6).

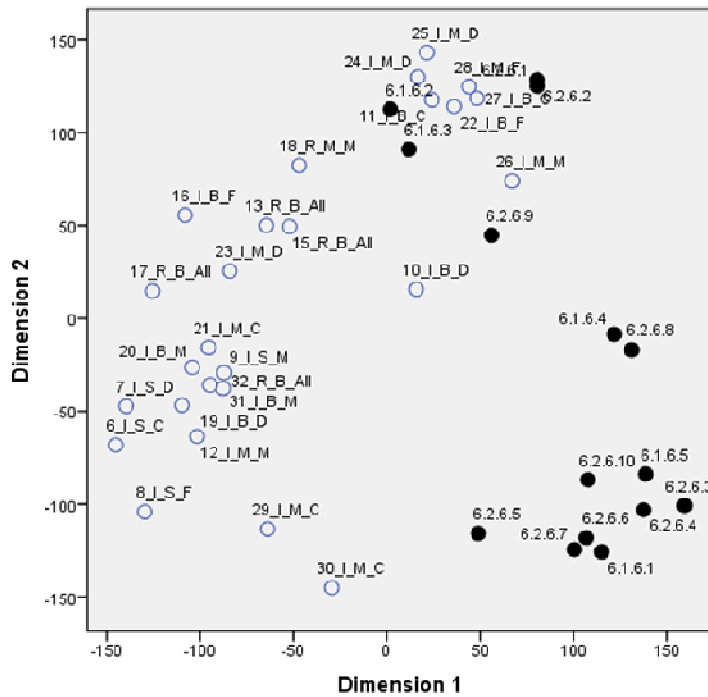
The remaining solutions focus on policies and regulations devoted to support food industries and retailers commercialisation of low cost healthy food. In particular they address the fact that, above all, the introduction of public policies and regulation can contribute to increase the commercialisation of low cost healthy food (solution (6.2.6.7); the identification and introduction of financial incentive and disincentives to push the commercialisation of low cost healthy food (solution 6.2.6.8); the introduction of policies for leveraging the prices of ingredients/raw materials to produce low cost healthy food (solution 6.2.6.9); and as last the introduction of a regulation for the use of the claim for healthy food commercialisation (solution 6.2.6.10) (Table 4-36).

There are now discussed both the results from the descriptive analysis and MDU technique shown in Table 4-36 and Table 4-33 Figure 4-3: MDU Output. Issue: Innovation and differentiation.

**Table 4-36: Descriptive analysis, Public policies and Regulations. Food industries and retailers' barriers and solutions**

6.1.6	<b>Barriers Public policies and regulations</b>	<b>Industries</b>				<b>Retailers</b>			
	<b>Propositions</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>
6.1.6.1	Lack of an official definition of healthy food	21	6,0	0	21	6	6,5	0	6
6.1.6.2	Industry's inadequate awareness and knowledge over nutritional issues	21	3,4	0	21	6	2,3	0	6
6.1.6.3	Retailers' inadequate awareness and knowledge over nutritional issues	21	3,3	0	21	6	2,0	0	6
6.1.6.4	ROP consumers' inadequate awareness and knowledge over nutritional issues	21	5,3	0	21	6	5,2	0	6
6.1.6.5	Lack of adequate public policy intervention over the promotion of healthy food for ROP and low-income people	19	6,4	0	19	6	6,7	0	6
6.2.6	<b>Solutions Public policies and regulations</b>	<b>Industries</b>				<b>Retailers</b>			
	<b>Propositions</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>	<b>Total respondents</b>	<b>Mean</b>	<b>NA</b>	<b>Total interviews</b>
6.2.6.1	Improving industry's awareness and knowledge over nutritional issues	21	4,3	0	21	6	6,2	0	6
6.2.6.2	Improving retailers' awareness and knowledge over nutritional issues	20	4,8	0	20	6	5,3	0	6
6.2.6.3	Improving consumers' awareness and knowledge over nutritional issues, with specific focus on ROP	21	6,6	0	21	6	6,8	0	6
6.2.6.4	Agreement over an official definition of healthy food	21	6,3	0	21	6	6,0	0	6
6.2.6.5	Promotion of low cost healthy food recipes (for example, low budget, limited available time) by web, funded/promoted through national schemes	21	4,7	0	21	6	5,5	0	6
6.2.6.6	Providing publicly funded communication campaign on low cost healthy food	19	6,1	0	19	6	6,5	0	6
6.2.6.7	Public policy and public regulations can contribute to guarantee low cost healthy food production, commercialisation and distribution	21	5,7	0	21	6	6,7	0	6
6.2.6.8	Identifying financial incentives and disincentives to leveraging the supply chain in the direction of low cost healthy food	20	5,8	1	21	5	4,2	1	6
6.2.6.9	Introduction of policies affecting commodity (ingredients) prices could result in product reformulation to less expensive healthier inputs	20	3,7	1	21	5	3,4	1	6
6.2.6.10	Introduction of a regulation in favour of labelling healthy food	20	5,2	1	21	6	6,7	0	6

**Figure 4-6: MDU Output. Issue: Public policies and regulations**



*Badness-of-fit:*  $\sigma_n=0,078$ ;  $\sigma_1= 0,280$ ;  $\sigma_2= 0,884$   
*Goodness-of-fit:* VAF= 0,584;  $\rho_1= 0,671$ ;  $\tau_b= 0,533$   
*Nondegeneracy and intermixedness:* Shepard's rough index= 0,591; DeSarbo intermixedness index= 0,373

According to the results for the descriptive analysis both food industries and retailers clearly consider as most relevant (assessing both average rates over 6) the barriers on the lack of adequate public policy intervention over the promotion of healthy food for ROP and low-income people (6.1.6.5) and the lack of an official definition of healthy food (6.1.6.1).

Looking at the solutions the two actors allocate the same choice for the best average solution that is improving consumers' awareness and knowledge over nutritional issues (6.2.3.3). While they differ for the second choice as follows, food industries select the solution referring to the provision of an official definition of healthy food (6.2.4.4), while food retailers rank at the same rate the propositions referring to the general implementation of public policy and public regulations to contribute to guarantee low cost healthy food production, commercialisation and distribution (6.2.6.7), and to the introduction of a regulation in favour of labelling healthy food (6.2.6.10)

From the map visualised in Figure 4-6, it is possible to visualise three main groups of variables: group 1 located at the right and including barriers 6.1.6.1 and 6.1.6.5 and solutions 6.2.6.3, 6.2.6.4, 6.2.6.5, 6.2.6.6, 6.2.6.7 and 6.2.6.10, group 2 including barrier 6.1.6.4 and solution 6.2.6.8; and group 3 formed by barriers 6.1.6.2 and 6.1.6.3 and solutions 6.2.6.1, 6.2.6.2, and 6.2.6.9 located at the top of the map.

It thus seems that respondents focus three categories of barriers that are: one related to the lack of public policy intervention towards the promotion of healthy food among ROP consumers and the lack of a definition of healthy food (within group 1). Another group of barriers is related to the lack of awareness within the offer side, thus distribution and retailers (within group 3). The last category includes the barrier given by the lack of awareness among ROP consumers (within group 2).

Looking at solutions associated to the barriers, the interviewees coherently attribute them to group 1 and 3. Though within group 1 they identify all the solutions devote to increase awareness among ROP consumers to

be implemented through public policies and the provision of a definition of healthy food followed by a regulation on healthy claims. In group 3 they include the solutions devoted to the increase of awareness of food industries and retailers and political intervention towards price reduction. Instead in group 2 respondents associate to the barrier on the lack of awareness of ROP consumers the adoption of financial incentive and disincentives to push the supply chain to increase healthy food offer. This latter association does not seem very coherent and could thus induce to think that these two variables have been partially misunderstood by the interviewees.

In consideration of descriptive analysis' results, despite the interviewees consider as most relevant the barriers included in group 1, they are located quite far from these barriers and solutions. In particular more than half of the interviewees are equidistant from the three groups. This allocation can be explained by the fact that respondents are aware that the adoption of a shared definition of healthy food is lacking but they are not sure about the feasibility of a shared European definition suitable for any processed food. In addition it seems that in general they perceive not to be able to influence the public policy intervention towards ROP consumers and European regulations, while the fact that another group of interviewees is located close to group 3 implies that they feel concerned in relation to their needed increase of awareness and that can probably actively work to reduce their awareness' gap. This last proposition is also coherent with the answers provided to the previous questions on the interest towards healthy food and the high perception of needed training on healthy issues.

### ***Food accessibility***

This last section focused on food accessibility issues, and it is composed by few propositions.

There have been offered two main barriers to evaluate that refer to the limited accessibility to low cost healthy food for ROP consumers (barrier 6.1.7.1) and instead to their easy accessibility to unhealthy food (barrier 6.1.7.2). The solution proposed refers to the expected improvement of access to low cost healthy food for ROP consumers (solution 6.2.7.1) (Table 4-37).

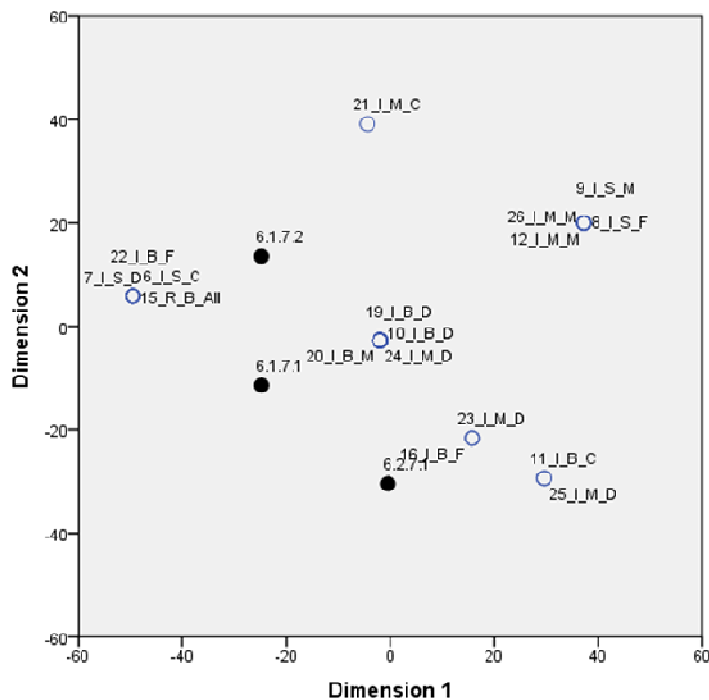
The results of the descriptive analysis are provided in Table 4-37 and the results from the MDU technique in Figure 4-7.

**Table 4-37: Descriptive analysis, Food accessibility. Food industries and retailers' barriers and solutions**

6.1.7 Barriers Food Accessibility		Industries				Retailers			
Propositions		Total respondents	Mean	NA	Total interviews	Total respondents	Mean	NA	Total interviews
6.1.7.1	ROP consumers' lack of access to low cost healthy food	21	4,3	0	21	6	1,2	0	6
6.1.7.2	Consumers' easy access to <u>not</u> healthy food	20	4,4	0	20	5	3,0	0	5
6.2.7 Solutions Food Accessibility		Industries				Retailers			
Propositions		Total respondents	Mean	NA	Total interviews	Total respondents	Mean	NA	Total interviews
6.2.7.1	Improving ROP consumers' access to low cost healthy food (for example, increasing commercialisation and distribution in areas with ROP making low cost healthy food easily reachable by ROP)	20	5,3	1	21	5	4,6	1	6



**Figure 4-7: MDU Output. Issue: Food accessibility**



*Badness-of-fit:*  $\sigma_a=0,011$ ;  $\sigma_j= 0,261$ ;  $\sigma_3= 0,172$

*Goodness-of-fit:*  $VAF= 0,939$ ;  $\rho_c= 0,829$ ;  $\tau_b= 0,707$

*Nondegeneracy and intermixedness:* Shepard's rough index= 0,559; DeSarbo intermixedness index= 0,021

Both food industries and retailers perceive the same most relevant barrier (Table 4-37), that is the one referring to consumers' easy access to unhealthy food (barrier 6.1.7.2). Considering the general low average rate reached by these propositions it is already possible to consider that respondents do not consider this issue as very relevant for the Italian ROP consumers.

Figure 4-7 confirms that interviewees clearly position barriers and the solution proposed, despite they do not associate any of the barriers and/or the solution.

The interviewees are overlapping each other, so that the map from the map is not possible to clearly distinguish all respondents. In addition they look grouped in at least three main areas, but spread within the map.

Considering the descriptive analysis and the meaning of the propositions, the interviewees seems to be aware that ROP consumers might have limited access to healthy food but they do not assess any specific barrier or solution with a strong correlation. As already mentioned in the literature review the issue of accessibility has been raised by several international authors, but it seems that, as perceived by the interviewees, there is not strong evidence concerning this barrier in Italy.

In order to conclude the overview towards food industries a food retailers it follows the content analysis of some exemplificative open comments given by the interviewees towards barriers and solutions to improve healthy food consumption among ROP consumers that have been collected as final comment at the end of the questionnaire.

Open comments on barriers by food industries' representatives are:

*“The main barrier are the large retailers, they load inefficiency costs on industries”*

*“There are three barriers:1 high cost of raw material; 2 lack of R&D for SMEs; 3 high price for ROP”*

*“The main barrier is the lack of trust among consumers”*

*“The problem of relation with retailers is only Italian. Abroad there is coordination. Large retailers do not invest in innovation”*

*“The main barriers refer to the cultural gap of consumers towards RTE food”*

*“The main barrier refers to R&D”*

*“Distribution does not invest, does not risk, they can't just change packaging. Abroad the regulations and recommendations are respected in Italy not.....The retailer chooses the price not the quality. It is needed a leader to start. Probably it is better the industry as starter. Distribution is not interested in healthy food. In Italy accessibility is not a problem”*

*“Low price and healthy food do not seem very compatible”*

*“It is very difficult to compete with big retailers because their power is increasing. Usually we propose retailers the innovations, but often they do not accept them and/or do not display appropriately. Retailers often decide the price of food. Private label should be targeting ROP, whereas there is in general a very strong competition between PL and commercial brand”*

*“Large retailers need to below the margins; they are forcing to go under costs to maintain margins”*

From these comments it is possible to underline that industries' interviewees identify few specific criticalities. The first and most relevant refers to the perceived negative dynamics and powerless relations with retailers. This perception also impact on the other criticality raised that refer to the high cost of raw material and R&D investment to product healthy food. As latter issue, but with less emphasis, it seems to be confirmed as a barrier the scarce awareness on healthy issues among ROP consumers.

Open comments on solutions by food industries' representatives follow:

*“Better relations with large retailers are apriority; Control on claims is needed; high consumers' consciousness is essential; the solution is a ready to eat healthy food, not a recipe”*

*“Incentives are the solution, in that case they would start promptly; it is very hard to get an agreement on healthy food definition; consumers' education shall start at school”*

*“Only industries can start investing in healthy food, large retailers do not invest on new food products they invest in communication ( e.g.: ethic aspect); a label legislation would only tie the industries; it is impossible to agree on a common def. of healthy food; some retailers are already investing on health dedicated areas; commercial agreement with retailers would be good but it is just utopian”*

*“Increased availability of ingredients is essential, good communication is the one made directly in the store; public campaign are strongly needed; the future trend is on elderly people”*

*“Consumers are increasingly interested in the nutritional table/information, so it is needed to focus on this. We shall place specific attention on protein and fats. In other countries meat market is much more segmented based on nutritional information.*

*“To diminish the possible negative impact of costs of ingredients and in order to have low cost healthy food, healthy food should be not added with nutrients, but rather with limited or no amount of salt/sugar/sodium, etc.”*

*“The solutions need to come from industries. The market is broken between high quality and prices and lowest prices and prices. It is needed to understand the new consumers' conformation”*

*“Solutions need to be found among the relations and public policies issues: agreements with retailers are essential; traceability of product is essential”*

*“In Italy there cannot be competition, the market is too small; public standard are needed; the introduction of private label is not the only solution; the introduction of nutritional labelling is important”*

*“Improved awareness for everybody”*

Looking at the solutions identified within the comments, it first emerges a wide heterogeneity of necessary interventions. As well it is heterogeneous the identification of the subjects that could be in charge of implementing these solutions. It thus emerged that despite there are identified few specific barriers, the solutions are fragmented and should probably involve several issues and subjects. In a general outlook all agrofood chain actors (internal and external) might be involved in driving the improved availability of low cost healthy food. On the other way around, by looking at the singular answers, these comments induce to highlight a notable degree of fragmentation among the interviewed. By matching comments on barriers and solutions, it thus seems that the problem of scarce availability of low cost healthy food is still quite new. Finally it must be considered that sometimes it is difficult to assess whether some of these open answers are clearly addressed to the issue on healthy food consumption or if they relate to the general perception towards food market.

Retailers' representatives by the open comments on barriers provided are:

*“There are two main barriers: refer to the commercialisation aspect, by meaning that the main problem is consumers' awareness; while the other refers to the production, thus innovation; industries must invest on R&D”*

*“Commercialisation: positioning strategy Production: ingredients costs. consumers awareness is the key, it is not hard to find supplier but large retailer do not see a market for ROP healthy food; the government do not intervene; plenty of unhealthy snack; retailers do not perceive this as a problem; the problem is to provide low price products”*

*“The presence of a an official definition of healthy food would work only on few products; in Italy there is no problem to access food; industries are the ones which can invest and communicate”*

Looking at the comments expressed by the retailers it emerges a quite homogeneous perception towards the fact that the two key actors to focus on for the improved commercialisation and consumption of healthy food are industries that lack of investment on R&D and that have problems to produce low cost healthy food . The other actor is the ROP consumer, which lacks of adequate interest and awareness towards healthy issues.

Open comments on solutions from retailers' representatives follow:

*“The solutions stand on: 1 Consumers: Increased consumers awareness and transparency. 2 Industries: Industries' investments and communication. 3 Legislation: In Italy legislation is poor, impossible to harmonize at European level”*

*“Industries should invest on innovation, large retailer can focus on suitable/cheap products; first price ready to eat products are already present. the ROP phenomenon must be considered but it is hard to mix healthy aspects with low cost issue”*

*“Retailer strategy is “buy less but more expensive”; solutions are: 1 increased consumer's awareness through public campaigns 2 industries' innovation and identification of the market”*

*“Better informed consumers; private label on nutritional food is only partially the solution”*

Finally, looking at the open comments on the solutions to strengthen healthy food consumption as given by food retailers' respondents, it seems that, differently from the industries, retailers do not consider themselves as possible contributor to foster improved healthy food consumption. Furthermore they address mainly the public governmental organisations as the only possible drivers to foster healthy habits. They thus consider the public intervention as necessary and relevant in order to improve ROP consumers' awareness as well as to improve regulation and transparency towards healthy food commercialisation.

By matching the open answers provided by food industries and retailers it is possible to underline a notable heterogeneity of opinions among each interviewee and also different attitude and perception when the comments are analysed, according to industries and retailers' grouping. This outcome might confirm the difficulty of the interviewees to provide a clear overview on low cost healthy food commercialisation and consumption due to the complexity of features that this topic rises and to the high number of actors that involves at different level.

## 5. Final remarks

The attention towards healthy food consumption among consumers at risk of poverty is one of the top issues among experts and policy makers' agenda in consideration of the fact the social inequalities drive, among others, to inequalities in food intake that increase the risk of health diseases. Despite there are present studies investigating low income population and food related aspects among several western countries, it still misses a similar focus devoted to low income population living in Italy.

Still focusing on the market oriented agrofood chain approach adopted, the literature reviewed shows the lack of studies applying this approach also within the empirical investigations and thus by including consumers as actors of chain. Hence, the final remarks attempt at matching the results achieved from the analysis given for ROP consumers, food industries and food retailers in order to provide an agrofood chain outlook on the improvement of affordable healthy food commercialisation and consumption issues.

According to the issues investigated for each actor, it is possible to identify some aspects relevant to be discussed through an agrofood chain approach. In particular the issues to focus on involve the agrofood chain analysis of the socio-demographic characteristics of ROP population and the related level of knowledge expressed by food industries and retailers' interviewees; the analysis of ROP consumers, food industries and retailers' attitudes towards the production, commercialisation and consumption of food for ROP consumers; the analysis of the level of knowledge towards healthy food as present among the actors investigated; the analysis of attitudes towards the production, commercialisation and consumption of healthy food for ROP consumers; and finally the agrofood chain analysis towards the price related issues in relation to the production commercialisation and consumption of low cost healthy food.

### *The unknown market*

Starting from the analysis of the socio-demographic characteristics of ROP population, the results show how all interviewees perceive this as a very sensitive issue. Focusing on ROP consumers answers, a perceived unease condition raises as particularly critical among those interviewees that have recently entered at risk of poverty status due to the recent loss of their job or of their partners' one. This typology of interviewees in fact still needs to adapt to their new low income condition and in reaction to this traumatic change they show to be strongly determined in reducing the quality and quantities of food consumed. Instead those consumers that are mature and that experience a stable at ROP condition look accustomed to their limited income availability. To this extent, in comparison to the young ROP group, mature ROP define their income just as not fully adequate. Almost half of younger ROP females instead perceive their income as clearly not adequate. It must be also considered that some of the young ROP consumers at ROP might expect in the future to be able exit from this condition. Focusing on food industries and retailers, they show a poor level of knowledge of ROP consumers. They in fact do not show a grounded awareness towards the socio-demographic characteristics of households at ROP and sometimes they perceive them as closer to material deprivation rather than considering them at risk of poverty. None of the interviewees has shown to be confident with this category of consumers both in terms of personal level of knowledge and in relation to their company's view. Nobody showed to be aware about the large number of ROP people in Italy and many of them looked as surprised when learning about their current percentage rate at national and European level

Considering these results it is clear that the lack of awareness among food industries and retailers in relation to the ROP category of people strongly limit the adoption of a market oriented agrofood chain approach among the actors involved towards this potential market segment. Furthermore from the results it is possible

to derive also that the several external sources of information as market research agencies or categories' associations are still not involved in deepening the ROP consumers as a market segment. Still ROP people interviewed, despite admit their difficulties due to the low income condition have shown not to refer to specific social intervention, as for example public campaigns targeting to their income condition. Despite this scarce attention towards ROP consumers, data shows how their increasing trend in terms of growth number, in particular in Italy. This fact, as already emphasised by the growing political attention of other western countries and international organisations, could induce national public intervention to push the agrofood chain actors to improve reciprocal attention and awareness.

Concerning the attitudes towards the production, commercialisation and consumption choices towards food for ROP segment, ROP consumers confirm to apply varied and heterogeneous food habits. Their daily food consumption mainly relate to personal and household preferences, available time, personal and household life styles, budget to devote and availability of products. In general ROP consumers' food intake has some basic fixed ingredients/products that include cereals (pasta, bread, rice) meat, vegetables and cheese and sweets. The less often consume fruit and fish. In consideration of the personal and external variables emerged, ROP consumers often use processed food (being fresh, frozen chilled RTC, RTH or RTE food) as a suitable solution to match the majority of the variable influencing their food choices. The majority of consumers interviewed however show several prejudices and fears towards the composition of processed food and towards their capability to be healthy. In particular the convenience attribute of processed food allows ROP consumers to save time and overcome lack of competence in cooking. The huge differentiation of products' offer allows them both to easily vary meals and ingredients to satisfy all food preferences, and to adapt meals according to the different households' life styles. ROP consumers' choice of food products anyway strongly relate to the loyalty and trust over the commercial brand. Looking at food industries and retailers' interviewees it has emerged a notable attention towards processed food in terms of safety issues and quality and traceability of ingredients. The production and commercialisation choices seem to be influenced by retailers' strategies and requirements. Yet the collaboration for new product development seems inadequate. According to some interviewees, both belonging to food industries and retailers, the innovation adoption is still mainly driven by food industries, while retailers private label lines mainly follow the replication of commercial brand products. Coherently with the attitude already explained towards of ROP population, they show negative expectations in terms of ROP consumers' potential to increase their profit due to their inadequate budget to devote to food. Focusing on processed food they also show do not believe that ROP consumers are a segment that could be loyal to the typology of processed food purchase. Among those representatives showing more problems to differentiate ROP consumers from those that are severely deprived, the expectation on possible ROP people' consumption is even worse. They in fact relate to ROP consumers as mainly focused on the use of very basic and cheap ingredients, as for example pasta with tomato sauce and eggs instead of meat products. The majority of respondents expect ROP consumers to buy private labelled products and first price offers, without posing attention to the commercial brand.

Looking at the preferred places of purchase and stores brands, ROP consumers declare to commonly choose large not discount retailers (mainly supermarkets and hypermarkets), and to rarely refer to specialised traditional retailers for specific food purchases. Despite there are some preferred and familiar store brands, the weekly selection relates also to the current promotional offers. According to the answers provided by industries and retailers' representatives instead expect ROP consumers to mainly refer to discounts and they expect them to refer to large not discount retailers only in presence of promotional offers. The issues proposed could create a barrier both for consumers and food industries and retailers, if it is considered the strong decisional power and dependency that retailers induce. To this extent it would be also interesting to get and compare the overview of the representatives of discount large retailers which unfortunately have refused to take part to the investigation.

The analysis shows a cleavage that seems to clearly fragment the perceptions of the agrofood chain actors interviewed. According to the picture achieved it seems that food production, commercialisation and consumption of food do not successfully match each other among the concerned actors. A first reason relates to the lack of knowledge on ROP consumers both in terms of their habits and their consumption potential. Furthermore another reason refers to the fact the relations among food industries and retailers are perceived as poor not competitive in terms of quality offer, so that the competition among these two actors is mainly driven by the need food industries have to overcome the economies of scale reached by food retailers through substitute products of the commercial branded products, rather than pushing product innovation adoption. Finally the perceived power of retailers in terms of commercialisation decisions limits food industries' innovation adoption due to the perceived increased risk of financial return. The different aspects arisen again induce food industries and retailers to conflict with the adoption of a market oriented agrofood chain approach and they also contribute to reduce the competitive advantage and optimal exploitation of the chain for all the concerned actors. The overcome of these barriers seems mainly to relate to the improved capability of retailers to understand the emerging market segments and adapt their offer, through the improved differentiation of private label and commercial branded products.

#### *Healthy food: thought different*

The focus on the level of knowledge towards healthy food emerges as only partially adequate among the majority of interviewees. Consumers, despite not always in a correct way, discern among good and bad food/ingredients, and they define what unhealthy food contain and that healthy diet shall include a balanced use of ingredients. Their perception towards quality food includes mainly the genuine, fresh and natural attributes. To this extent quality food is associated the one that is organic, not too processed, safe and traceable. Differently food industries and retailers provide definitions of healthy food that are mainly associated with the safety and quality control of ingredients, and in some cases they consider healthy as food choices the use of basic or not too processed ingredients. Several interviewees also refer to natural attribute of food. Few of them also consider a healthy diet the one that is balanced in terms of nutrients, but they not include ingredients or food enriched of nutrients.

Considering the outlook provided, despite several issues identified by the interviewees refer to healthy food habits and they partially include the definitions adopted by for food with good nutritional profile or good nutritional density, they are never complete and often misleading. The agrofood chain outcome thus allows highlighting the presence of spread lack of harmonisation towards healthy food definition. Furthermore the confusion towards the meaning of healthy food could determine a scarce development of innovation in terms of differentiation of healthy food products offer and it could limit the demand for healthy food. Finally the present situation could even induce food industries and retailers to mislead the strategies towards the commercialisation of these products and discourage the correct consumption of healthy food. This result could refer to several reasons that are the lack of an official definition of healthy food, but also to the lack of adequate policies intervention towards the increase and improvement of awareness among the actors. In relation to these barriers it is needed an enhanced political intervention towards the implementation of awareness campaigns at different chain level and/or to improve the short term effectiveness of those already ongoing.

ROP consumers show a negative attitude towards healthy food consumption grounded by a strong lack of motivation to eat healthy. In particular they attribute to healthy food a punitive connotation as healthy food habits are associated to devoted time to food purchase and preparation, to the respect of healthy rules for the choice, preparation and combination of ingredients and finally a proper organisation and planning capability. In addition ROP consumers perceive that a higher propensity towards healthy food habits would also force them to overcome a hedonic approach towards food and in general to spur a change of their household life style. ROP consumers' motivation towards improving healthy food habits is present but it is fully overcome

by the scarce time and competence to devote to cook, and the expected efforts to change their life style. In addition to these aspects, since ROP consumers are sceptical towards processed food they would need to be guaranteed by the commercialisation of healthy food through a commercial brand and in case by a healthy labelling. Finally few consumers have declared to follow a clear unhealthy diet, while the majority feel just to not always fit into a healthy diet. Considering the answers provided by food industries and retailers' representatives, their attention towards the development and commercialisation of healthy products is spread among both actors. Despite this attitude food industries clearly express difficulties to produce and invest in healthy food production due to the need of combining the relation with the upper and following stages of the chain. They thus focus on the high cost of ingredients and the lack of interest towards healthy food innovation among retailers due to the economic expectations. This aspect is also particularly relevant among some SMEs. Nonetheless both industries and retailers representatives already show consciousness of the spread negative attitude towards healthy food, which involve not only ROP population, but the majority of consumers. As a matter of fact they show that, at present, healthy food commercialisation (according to the list of product proposed) target niches of consumers already interested/motivated toward health related issues or people with specific health problems. Furthermore the retailers' negative attitude limits the intention to devote adequate shelf space to healthy food and to commercialise them with their private label.

The spread negative or *selective* attitude towards healthy food among the agrofood chain actors further emphasise the present risk of fragmenting and distancing the different chain actors. The negative attitude driven by the lack of motivation of consumers on one side and the scarce interest towards a massive diffusion of healthy food commercialisation certainly create a barrier towards the empowerment of healthy food habits. Furthermore this situation seems to induce the creation of a vicious circle so that no one of the actors of the chain is able to push the other actors to take action towards a change of attitude. Thus this barrier could only be overcome through a parallel and shared change of attitude. This typology of intervention would probably also need to involve other actors external to the agrofood chain, as the public or private entities with expertise on socio-economic and health issues. Finally, among the policies to be adopted, a shared precondition among all agrofood chain actors refers to the introduction of an official and recognisable healthy food labelling that would guarantee the effective healthiness of processed food both in terms of healthy issues and safety ones.

### *The price challenge*

The other key issue is the price analysed in relation to the production, commercialisation and consumption of healthy food at low price so to be affordable for ROP consumers. Starting from ROP consumers, this is a very sensitive issue and it gains even more importance among those interviewees that have recently entered at risk of poverty status. Still price determine consumers' choices, as seen also dealing with the selection of place for food purchasing. Furthermore price limits the use of certain typologies of quality and healthy food. In particular, referring to processed products, it limits the desirable consumption of processed food among big households. Among big households the high price of quality and healthy products limits the quality/quantity of healthy food purchased, up to induce the reduction of personal quantities of food in order to guarantee the higher quality food to children (e.g.: the case of meat consumption). Moving at food industries and retailers' interviewees, the price issue becomes as well very relevant. For these actors the price definition should guarantee a profitable compromise in relation to the gain of an adequate margins that allows overcome all cost for raw materials and for investment on R&D. Considering the different perceptions, food industries look as the most concerned due to the lack of power perceived in relation to retailers to define the final price for the consumers. In addition it must be considered the present discrepancy between the personal perceptions of healthy food in terms of margin expectations as expressed by food industries and retailers. The first ones expect higher margins while the latter ones expect them on average compared to conventional food. By focusing on low cost healthy food, food industries and retailers seem to consider almost impossible to match higher quality of processed food with low prices. In fact, despite



healthy food is produced at low cost, the price fixed to guarantee acceptable margin would not be able to match the willingness to pay for low cost healthy food of ROP consumers. On the other side it is possible to assume that food retailers' preferably expect consumers at ROP to spend less in terms of quantities but still willing to pay more in terms of quality; to this extent low cost healthy food commercialisation seems to conflict with their expectations.

By adopting an agrofood chain perspective the price related issues raised seem to create a strong barrier to all actors. Apart from the aspect of improving ROP consumers' purchasing power, there are several considerations that add. Along the chain, the interventions could be driven by the fact already emphasised that, according to the worrying increasing number of ROP consumers among Italian population and at European level, these consumers are necessarily becoming a relevant market segment. Thus despite they could not be able to guarantee high economic margins they still can guarantee the purchase of large volumes of food and thus they could assure an interesting profitability. Furthermore the interest shown by food industries and retailers towards the introduction of public regulations could be also explored towards the adoption of public intervention in order to leverage the ease accessibility to healthy food versus the unhealthy food one, and to improve the competition among food industries and retailers for the commercialisation of low cost healthy food.

### *Concluding*

From the agrofood chain outlook on the key emerging issues provided, it clearly emerges that development of low cost healthy food products and their improved consumption is still a very new feature among the Italian agrofood chain internal actors, and furthermore that it still gain poor attention among the external national public and private actors operating at national level. This scarce and late interest impact on the whole chain functioning. Hence, the inadequate level of knowledge on population at risk of poverty and the inadequate translation and implementation of healthy food habits strongly limit food industries, retailers and ROP consumers to become responsive and to take actively part to the improvement of production commercialisation and consumption of healthy food.

Nevertheless, the lack of interest towards the enhancement of healthy food consumption is also worsened by other factors that characterise the singular chain actors' behaviours. In particular on one side looking at ROP consumers, the personal attitude and motivations to food choice, as well as, for purchasing and consumption behaviours show the necessity of notable changes to be implemented already even without the availability of low cost healthy food products. Surely the commercialisation of these products would favour healthy food habits among ROP population, but it is also urgently needed to comprehend how to improve personal perceptions towards the importance of the implementation of healthy habits and its relevance at any age status. On the other side, from the food industries and retailers representatives' perceptions emerges that the difficulties in managing relations and innovation adoption do not only invest the healthy food production and commercialisation, but they roots and impact on several typologies of food innovation. Thus, the necessary change of attitude for the specific case of healthy food products production and commercialisation would imply, for food industries and retailers, to experience a new and shared typology of decision making and market approach. To this extent an effective production and commercialisation of low cost healthy food need food industries and retailers to adopt a very positive common challenging attitude towards the agrofood chain.

According the picture achieved, it is thus again emerge that the enhancement of healthy food habits interact with several ambits, so at least the social and economics political, and health spheres. Furthermore the effective implementation depends together from the singular agrofood chain actors' choices and actions (consumers, food industries and retailers) and from the external actors (policy makers, etc).

Notwithstanding the complexity of the issues arisen, it is possible to explore some possible starting cues and recommendations to improve healthy food consumption among ROP consumers according to the author's perception achieved from the study and based on the literature reviewed and of the empirical investigation presented.

The improvement of ROP consumers' attitude towards healthy food consumption, also if processed food, shall focus on decreased difficulties to access healthy food even in case the available household income does not increase. It seems that females at risk of poverty with children aged 6 -18 years old would be facilitated to foster healthy habits from an increased positive attitude and motivation of their children. Concerning single female, in particular if young, instead it might be needed to improve their competences and interest towards healthy food. In addition to young single females, the improvement and empowerment of attitude and motivation could focus on those parents with very young (0-3 years old) children or expecting to become parent.

Thus, in terms of awareness the key targets of some public campaigns could focus on children aged between 6 and 18 years old and young adults aged between 19 and 30 years old. Media (including mainly television and internet tools) are powerful tools to target these typologies of consumers. Media projects could grab ideas and exploit successful television formats as cooking show or farming or cooking games available on social networks aimed at improving healthy and tasty food cooking. In addition it would be useful to promote and support the participation to free cooking classes on healthy food preparation.

In order to increase the offer of healthy food it seems relevant to improve the interest of food retailers also towards the increase of healthy food products commercialised with private label. To this extent some cues on possible successful example might be searched in other European countries.

Furthermore the issues of financial incentives and disincentives seem to be an issue to be further deepened in terms of practical feasibility in order to impact on the reduction of the easy accessibility of unhealthy food (both for the take away and home consumption). In other countries this strategy seem to proceed towards the translation from theory into practice among other western countries, despite it has not been addressed within this study due to ongoing evaluation on its applicability.

Moving towards the typologies of specific low cost ingredient selection for healthy food production, at present it seems quite difficult to reduce the cost of raw materials, as this could happen only in presence of economies of scale and thus in presence of spread commercialisation and consumption of these typologies of food. Despite this relevant aspect, it could be possible to exploit the possibility of improving those recipes that are already grounded in terms of final meal conceptualisation and/or to develop recipes focusing on traditional ingredients mix in a healthy way. This outcome could be possibly matched with the preferences expressed by consumers and already reported (fresh or frozen RTC or RTE vegetable and/or cereals based product). The main effort would anyway relate to a proper communication. Consumers shall be reassured through a healthy claim able to reduce the resistance towards healthy food ("*healthy and tasty*"). To this extent it would become anyway necessary to get an agreement on the definition of healthy food. Due to the difficulties of agreeing on the definition of healthy ingredients, it is wondered if an agreement be founded on healthy characteristics of ready to cook or heat composed meals.

The adoption of a market oriented agrofood chain approach has been fruitful to the investigation of the production commercialisation and consumption of healthy food among population at risk of poverty. In particular this approach has been effective at first to explore both the characteristics of a new market segment of consumers and also to investigate the development of new and/or differentiated products lines. At second it has allowed extrapolating and matching in a parallel investigation the different perceptions occurring within the offer and demand sides.

The study however shows some methodological limitations partially due to the lack of previous studies applying a market oriented agrofood chain approach as meant within this study. In particular this has limited the author to compare and exploit other theoretical and methodological applications.

Further researches could focus on the development of the theoretical and methodological framework adopted within this investigation for exploring other typologies of novel foods. Furthermore other research could focus on the implementation of a comparative analysis of the results achieved with other countries' experiences. Following, studies able to further prioritise and restrict the ambit of the issues to investigate on the basis of the qualitative outcomes, could also attempt at exploiting a quantitative approach of the investigation and foster an improved effective parallel analysis of the agrofood chain actors.

## Bibliography

- Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational behavior and human decision process*, 50, 179–211.
- Annunziata, A., and Vecchio, R. (2011). Factors Affecting Italian Consumer Attitudes Toward Functional Foods, *14*(1), 20–32.
- Atkinson, A. B., and Marlier, E. (2010). *Income and living conditions in Europe* (2010th ed., pp. 1–135). Luxembourg, Belgium: Eurostat European Commission.
- Bertazzoli, A., Fiorini, A., Ghelfi, R., Rivaroli, S., Samoggia, A., and Mazzotti, V. (2009). Food chains and value system : the case of potato , fruit , and cheese Food chains and value system : the case of potato, fruit , and cheese, 1–16.
- Bhaskaran, S. (2006). Incremental Innovation and Business Performance: Small and Medium-Size Food Enterprises in a Concentrated Industry Environment. *Journal of Small Business Management*, 44(1), 64–80.
- Boesso, G., Davcik, N. S., and Favotto, F. (2009). “ Health-enhancing ” Products in the Italian Food Industry : Multinationals and SMEs Competing on Yogurt. *AgBioForum*, 12(2), 232–243.
- Bogue, J., Coleman, T., and Sorenson, D. (2005). Determinants of consumers’ dietary behaviour for health-enhancing foods. *British Food Journal*, 107(1), 4–16.
- Brunso, K., Fjord, T.A., and Grunert, K. G. (2002). Consumer’s food choice and quality perception. *The Aarhus School of Business, Working paper 77*, 1-70.
- Brunso, K., Scholderer, J., and Grunert, K. G. (2004). Testing relationships between values and food-related lifestyle: results from two European countries. *Appetite*, 43(2), 195–205.
- Bunte et al. (2011). The impact of private labels on the competitiveness of the European food supply chain. DG Enterprise and Industry European Union 2011 Luxembourg.
- Burch, D., and Lawrence, G. (2005). Supermarket own brands, supply chain and the transformation of the agri-food system. *International Journal of Sociology of Agriculture and Food*, 13(1), 18.
- Borg, I. and Groenen P.J.F. (2005). *Modern Multidimensional scaling. Theory and applications*. Springer Second edition. New York, USA.
- Busing, F. M. T. A., Groenen, P. J. F., and Heiser, W. J. (2005). Avoiding degeneracy in multidimensional unfolding by penalizing on the coefficient of variation. *Psychometrika*, 70(1), 71–98.
- Campiglio, L., and Rovati, G. (A cura di). (2009). La povertà alimentare in Italiaprima indagine quantitativa e qualitativa (pp. 1–43). Documento di sintesi. Fondazione per la Sussidiarietà, Milan, Italy.
- Campos, S., Doxey, J., and Hammond, D. (2011). Nutrition labels on pre-packaged foods: a systematic review. *Public health nutrition*, 14(8), 1496–506.
- Capacci, S., Mazzocchi, M., Shankar, B., Macias, J. B., Verbeke, W., Pérez-Cueto, F. J. a, Koziół-Kozakowska, A., et al. (2012). Policies to promote healthy eating in Europe: a structured review of policies and their effectiveness. *Nutrition reviews*, 70(3), 188–200.

- Caraher, M., and Coveney, J. (2004). Public health nutrition and food policy. *Public health nutrition*, 7(5), 591–8.
- Chopra, M., Galbraith, S., and Darnton-Hill, I. (2002). A global response to a global problem: the epidemic of overnutrition. *Bulletin of the World Health Organization*, 80(12), 952–8.
- Codron, J.-M., Grunert, K. G., Giraud-Heraud, E., Soler, L.-G., and Regmi, A. (2005). Retail Sector Responses to Changing Consumer Preferences: The European Experience. In USDA (Ed.), *New Directions in Global Food Markets* (2005th ed., Vol. 794, pp. 32–47). Agriculture Information Bulletin Number 794.
- Costa, A. I. A., and Jongen, W. M. F. (2006). New insights into consumer-led food product development. *Trends in Food Science and Technology*, 17(8), 457–465.
- Costa, A. I. A., and Jongen, W. M. F. (2010). Designing new meals for an ageing population. *Critical reviews in food science and nutrition*, 50(6), 489–502.
- Cummins, S, Mary, Q., and End, M. (2006). *Reducing inequalities in health and diet : findings from a study on the impact of a food retail development* (pp. 1–44).
- Cummins, Steven, and Macintyre, S. (2006). Food environments and obesity--neighbourhood or nation? *International journal of epidemiology*, 35(1), 100–4.
- Dammann, K. W., and Smith, C. (2009). Factors affecting low-income women's food choices and the perceived impact of dietary intake and socioeconomic status on their health and weight. *Journal of nutrition education and behavior*, 41(4), 242–53.
- Davis, J. H., and R. A. Goldberg. 1957. *A Concept of Agribusiness*. Boston: Division of Research, Graduate School of Business Administration, Harvard University
- DeSarbo, W.S., Young, M.R., and Rangaswamy, A. (1997). A parametric multidimensional unfolding procedure for incomplete nonmetric preference/choice set data in marketing research. *Journal of Marketing Research*, 34, 499–516.
- Dicicco-Bloom, B., and Crabtree, B. F. (2006). The qualitative research interview. *Medical education*, 40(4), 314–21.
- Dickson-Spillmann, M., Siegrist, M. (2011). Consumers' knowledge of healthy diets and its correlation with dietary behaviour. *Journal Of Human Nutrition and Dietetics*, 24, 54–60.
- Dongo, D. (2011). *L'etichetta. Origine, tabella nutrizionale ingredienti.. Tutte le novità del regolamento europeo*. Ilfattoalimentare.it, 2011 ed.. IlFattoAlimentare, Milan, Italy.
- Draper, A. K. (2007). The principles and application of qualitative research. *Proceedings of the Nutrition Society*, 63(04), 641–646.
- Drewnowski, a, and Popkin, B. M. (1997). The nutrition transition: new trends in the global diet. *Nutrition reviews*, 55(2), 31–43.
- Drewnowski, A., and Darmon, N. (2005). Symposium : Modifying the Food Environment : Energy Density , Food Costs , and Portion Size Food Choices and Diet Costs : an Economic Analysis 1 , 2. *Journal of Nutrition*, 900–904.

- Drewnowski, A., and Fulgoni, V. (2008). Nutrient profiling of foods: creating a nutrient-rich food index. *Nutrition reviews*, 66(1), 23–39.
- Drewnowski, A., and Specter, S. E. (2004). Poverty and obesity: the role of energy density and energy costs. *The American journal of clinical nutrition*, 79(1), 6–16.
- Eagly, A. H., and Chaiken, S. (2007). The Advantages of an Inclusive Definition of Attitude. *Social Cognition*, 25(5), 582–602.
- European Commission. (2012). Health for the EU in 33 success stories -A selection of successful projects funded by the EU Health Programmes (pp. 1–49). European Union, Luxembourg.
- European Commission - High level Forum. (2012). High Level Forum for a Better Functioning Food Supply Chain, Report 2012 (pp. 1–112). European Union, Belgium.
- European Commission (b). (2012). A European Consumer Agenda - Boosting confidence and growth. Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions. European Commission. Brussels, Belgium.
- European Commission (a). (2010). Health trends in the EU. Health (San Francisco) (pp. 1–102). European Union, Belgium.
- European Commission (b). (2010). “Retail market monitoring report :Towards more efficient and fairer retail services in the internal market for 2020” (pp. 1–12). European Union, Belgium.
- European Commission. (2007). White paper on a Strategy for Europe on Nutrition, Overweight and Obesity related health issues. Brussels, Belgium.
- European Commission (2000). White Paper on Food Safety, COM (1999) 719 final. Brussels, Belgium.
- European Food Safety Authority. (2009). Scientific Opinion of the Panel on Dietetic products, Nutrition and Allergies on a request from European Commission related to labelling reference intake values for n-3 and n-6 polyunsaturated fatty acids. *The EFSA Journal*, (1176), 1–11.
- Eurostat. (2012). *Eurostat regional yearbook 2012*. (E. Union, Ed.) (2012th ed., pp. 1–220). European Union, Eurostat statistical books, Belgium.
- Eurostat. (2011). *Food: from farm to fork statistics 2011*. (Pocketbooks, Ed.) (2011th ed., pp. 1–170). European Union, Belgium.
- Eurostat. (2008). *European Economic Statistics 2008*. (Eurostat statistical books, Ed.) (2008th ed., pp. 1–224). European Union, Belgium.
- Eurostat Press Office. (2012). Around 40% more women than men among the EU population aged 65 and over. *Eurostat newrelease*, March 2012. Belgium.
- FederDistribuzione. (2012). *Mappa del sistema distributivo italiano* (pp. 1–25). Retrieved from [http://www.federdistribuzione.it/studi\\_ricerche/files/Mappa\\_Distributiva.pdf](http://www.federdistribuzione.it/studi_ricerche/files/Mappa_Distributiva.pdf)
- Fischer, C., Gonzalez, M., Henchion, M., and Leat, P. (2007). Trust and economic relationships in selected European agrifood chains. *Food Economics - Acta Agriculturae Scandinavica, Section C*, 4(1), 40–48.

- Geeroms, N., Verbeke, W., and Van Kenhove, P. (2008). Consumers' health-related motive orientations and ready meal consumption behaviour. *Appetite*, 51(3), 704–12.
- Gereffi, G., Lee, J., and Christian, M. (2009). US-Based Food and Agricultural Value Chains and Their Relevance to Healthy Diets. *Journal of Hunger & Environmental Nutrition*, 4(3), 357–374.
- Ghelfi, R., Regazzi, D., Rivaroli, S. (2007). The directed and interconnected relationships into the agrifood network: an approach of “filiera” analysis. In: *Leve strategiche per lo sviluppo dei sistemi territoriali a vocazione agroalimentare, a Cura di Cesaretti G.P. Regazzi D.* (Franco Ang., pp. 1–302). Milan, Italy.
- Golan, E., Mancino, L., and Unnevehr, L. (2009). Food Policy. Check the List of Ingredients. *Amber Waves*, 7(2).
- Goodman, D. (2003). The quality “turn” and alternative food practices: reflections and agenda. *Journal of Rural Studies*, 19(1), 1–7.
- Goodman, David. (2009). Place and Space in Alternative Food Networks : Connecting Production and Consumption. *King's College London, Department of Geography*, 1–36.
- Gracia, a., and Albisu, L. M. (2001). Food consumption in the European Union: Main determinants and country differences. *Agribusiness*, 17(4), 469–488.
- Grunert, K. G., Jensen, B., Sonne, A., Brunsø, K., Byrne, D., Clausen, C., Friis, A., et al. (2008). User-oriented innovation in the food sector: relevant streams of research and an agenda for future work☆. *Trends in Food Science & Technology*, 19(11), 590–602.
- Grunert, K. G., Jeppesen, L. F., Jespersen, K. R., Sonne, A.-M., Hansen, K., Trondsen, T., and Young, J. a. (2005). Market orientation of value chains: A conceptual framework based on four case studies from the food industry. *European Journal of Marketing*, 39(5/6), 428–455.
- Grunert, K. G., and Wills, J. M. (2007). A review of European research on consumer response to nutrition information on food labels. *Journal of Public Health*, 15(5), 385–399.
- Gruppo24Ore. (2011). Rapporto sulla Gda in Italia e confronti internazionali (pp. 1–187).Scenari della Grande Distribuzione Gruppo24Ore.
- Hawkes, C. (2006). Uneven dietary development: linking the policies and processes of globalization with the nutrition transition, obesity and diet-related chronic diseases. *Globalization and health* (pp.1-18).
- Hawkes, C. (2007). Promoting healthy diets and tackling obesity and diet-related chronic diseases: what are the agricultural policy levers? *Food and nutrition bulletin*, 28 (2 Suppl), S312–22.
- Hawkes, Corinna (a). (2009). Identifying Innovative Interventions to Promote Healthy Eating Using Consumption-Oriented Food Supply Chain Analysis. *Journal of Hunger & Environmental Nutrition*, 4(3), 336–356.
- Hawkes, Corinna (b). (2009). Sales promotions and food consumption. *Nutrition Review*, 67(6), 333–342.
- Henson, S, and Reardon, T. (2005). Private agri-food standards: Implications for food policy and the agri-food system. *Food Policy*, 30, 241–253.
- Henson, Spencer. (2008). Public and Private Incentives to Adopt Enhanced Food Safety Controls.

- Hess, R., Visschers, V. H. M., and Siegrist, M. (2011). The role of health-related, motivational and sociodemographic aspects in predicting food label use: a comprehensive study. *Public health nutrition*, 15(3), 407–14.
- Holgado, B., De Irala-Estévez, J., Martínez-González, M. a, Gibney, M., Kearney, J., and Martínez, J. a. (2000). Barriers and benefits of a healthy diet in Spain: comparison with other European member states. *European Journal of Clinical Nutrition*, 54(6), 453–459.
- Hughes, D. (2009). Guest Editorial European Food Marketing: Understanding Consumer Wants – The Starting Point in Adding Value to Basic Food Products. *EuroChoices Special Issue: Special Section on Food Marketing in Europe, Volume 8*, , pages 06–13.
- Hult, G. T. M., Ketchen, D. J., and Slater, S. F. (2005). Market orientation and performance: an integration of disparate approaches. *Strategic Management Journal*, 26(12), 1173–1181.
- Inglis, V., Ball, K., and Crawford, D. (2005). Why do women of low socioeconomic status have poorer dietary behaviours than women of higher socioeconomic status? A qualitative exploration. *Appetite*, 45(3), 334–43.
- ISMEA. (2007). Gli acquisti alimentari in Italia: tendenze recenti e nuovi profili di consumo (pp. 1–64). Report Consumi. Istituto per i Servizi del Mercato Agricolo Alimentare.
- ISMEA. (2009). Panel Ismea Industria Alimentare Indagine di approfondimento : la congiuntura 2008-2009 e le strategie per superare la crisi (pp. 1–46). Istituto per i Servizi del Mercato Agricolo Alimentare.
- Istat. (2012). La povertà in italia. Statistiche Report (pp. 1–12). Istituto Nazionale di Statistica Rome, Italy.
- Istat. (2011). I consumi delle famiglie. Statistiche Report (pp. 1–13). Istituto Nazionale di Statistica, Rome, Italy.
- Jetter, K. M., and Cassady, D. L. (2006). The availability and cost of healthier food alternatives. *American journal of preventive medicine*, 30(1), 38–44.
- Kadiyali, V., Chintagunta, P., and Vilcassim, N. (2000). Manufacturer-Retailer Channel Interactions and Implications for Channel Power: An Empirical Investigation of Pricing in a Local Market. *Marketing Science*, 19(2), 127–148.
- Kaplinsky, R., and Morris, M. (2001). A handbook for value chain research. (IDRC, Ed.).
- Kearney, J. (2010). Food consumption trends and drivers Food consumption trends and drivers. *Philosophical Transactions of the Royal Society, B 2010 365*(Behaviour), 2793–2807.
- Kholi, A. K., and Jaworski, B. J. (1990). Market orientation: The Construct, Research Propositions, and Managerial Implications. *Journal of Marketing*, 54, 1–18.
- Kolk, A., Van Tulder, R., and Westdijk, B. (2007). Corrigendum to “Poverty Alleviation as Business Strategy? Evaluating Commitments of Frontrunner Multinational Corporations” [World Development 34 (2006) 789–801]. *World Development*, 35(3), 542–542.
- Konig, G. (n.d.). The Impact of investment and concentration among food suppliers and retailers in various OECD countries. *VIII OECD Global Forum on International Investment*. OECD Investment Division. Retrieved from <http://www.oecd.org/investment/globalforum/44231819.pdf>



- Lafferty, B. a., and Hult, G. T. M. (2001). A synthesis of contemporary market orientation perspectives. *European Journal of Marketing*, 35(1/2), 92–109.
- Lähteenmäki, L., Lampila, P., Grunert, K. G., Boztug, Y., Ueland, Ø., Åström, A., and Martinsdóttir, E. (2010). Impact of health-related claims on the perception of other product attributes. *Food Policy*, 35(3), 230–239.
- Lappalainen, R., and Gibney, M. (2000). Pan EU survey of consumer attitudes to food, nutrition and health: An overview. *Food Quality and Preference*, 9(6), 467-478.
- Lawrence, W., and Barker, M. (2009). Workshop on “Changing nutrition behaviour to improve maternal and fetal health ” A review of factors affecting the food choices of disadvantaged women Proceedings of the Nutrition Society. *Proceedings of the Nutrition Society*, 68, 189–194.
- Lillis, A. M. (1999). A framework for the analysis of interview data from multiple field research sites. *Accounting and Finance*, 39(February 1998), 79–105.
- Liu, M., Kasteridis, P., and Yen, S. T. (2012). Who are consuming food away from home and where? Results from the Consumer Expenditure Surveys. *European Review of Agricultural Economics*, 1–23.
- Lobstein, T., and Davies, S. (2009). Defining and labelling “healthy” and “unhealthy” food. *Public health nutrition*, 12(3), 331–40.
- Lukas, B. a., and Ferrell, O. C. (2000). The Effect of Market Orientation on Product Innovation. *Journal of the Academy of Marketing Science*, 28(2), 239–247.
- Mai, R., Hoffmann, S., Helmert, J. R., Velichkovsky, B. M., Zahn, S., Jaros, D., Schwarz, P. E. H., et al. (2011). Implicit food associations as obstacles to healthy nutrition : the need for further research. *The British Journal of Diabetes & Vascular Disease*, 11, 182–186.
- Marsden, T., Banks, J., and Bristow, G. (2000). Exploring their Role in Rural Development Food Supply Chain Approaches : *Rural Sociology*, 40(4).
- Martindale, B. W., and Swainson, M. (2008). Developing supply chain innovations - requirements for research and challenges for the food industry. *Aspects of Applied Biology*, 87(2007), 1–8.
- Massey, O. T. (2011). A proposed model for the analysis and interpretation of focus groups in evaluation research. *Evaluation and program planning*, 34(1), 21–8.
- Matopoulos, A., Vlachopoulou, M., Manthou, V., and Manos, B. (2007). A conceptual framework for supply chain collaboration: empirical evidence from the agri-food industry. *Supply Chain Management: An International Journal*, 12(3), 177–186.
- Menrad, K. (2004). Innovations in the food industry in Germany. *Research Policy*, 33(6-7), 845–878.
- Molteni, L. and Troilo G. (2007). *Ricerche di marketing*. McGraw-Hill Seconda edizione. Milan, Italy.
- Morgan, D. L. (1996). Focus Groups. *Annual Review of Sociology*, 22(1996), 129–152.
- Morgan, D.L., Kueger R.A. (1998). *The focus group kit*. Sage, London, New Delhi.
- Nelson, M., Erens, B., Bates, B., Church, S., and Boshier, T. (2007). *Low income diet and nutrition survey Summary of key findings*. Food Standards Agency on behalf of the Controller of Her Majesty’s StationeryOffice, Norwich.

- Nestle, M., Wing, R., Birch, L., DiSogra, L., Drewnowski, a, Middleton, S., Sigman-Grant, M., et al. (1998). Behavioral and social influences on food choice. *Nutrition reviews*, 56(5), 50–64.
- Nestle M., (2007). *Food politics: how the food industry influences nutrition and health*. University of California Press, Ltd., London, England.
- Nethe, a, Dorgelo, a, Kugelberg, S., Van Assche, J., Buijs, G., Yngve, a, De Henauw, S., et al. (2012). Existing policies, regulation, legislation and ongoing health promotion activities related to physical activity and nutrition in pre-primary education settings: an overview. *Obesity reviews : an official journal of the International Association for the Study of Obesity*, 13 Suppl 1(7), 118–28.
- Smith, G. (2009). Interaction of Public and Private Standards in the Food Chain. *OECD Food, Agriculture and Fisheries Working Papers n°15*. OECD Publishing, 1-36.
- Olsen, N. V., Menichelli, E., Sørheim, O., and Næs, T. (2012). Likelihood of buying healthy convenience food: An at-home testing procedure for ready-to-heat meals. *Food Quality and Preference*, 24(1), 171–178.
- Olsen, N. V., Sijtsma, S. J., and Hall, G. (2010). Predicting consumers ' intention to consume ready-to-eat meals . The role of moral attitude §. *Appetite*, 55(3), 534–539.
- Porter M.E., (1985). *Competitive advantage: creating and Sustaining Superior Performance*, The Free Press, New York, United States Of America.
- Patton, Q. M. (1990). Qualitative Interviewing. *Qualitative Evaluation and Research Methods* (Second edi., pp. 267–367). Sage Publications Inc., London, New Delhi.
- Pérez-Cueto, F. J. a, Verbeke, W., De Barcellos, M. D., Kehagia, O., Chrysoschoidis, G., Scholderer, J., and Grunert, K. G. (2010). Food-related lifestyles and their association to obesity in five European countries. *Appetite*, 54(1), 156–62.
- Pieniak, Z., Verbeke, W., Vanhonacker, F., Guerrero, L., and Hersleth, M. (2009). Association between traditional food consumption and motives for food choice in six European countries. *Appetite*, 53, 101–108.
- Ponte, S., and Gibbon, P. (2005). Quality standards, conventions and the governance of global value chains. *Economy and Society*, 34(1), 1–31.
- Rabiee, F. (2007). Focus-group interview and data analysis. *Proceedings of the Nutrition Society*, 63(04), 655–660.
- Ragaert, P., Verbeke, W., Devlieghere, F., and Debevere, J. (2004). Consumer perception and choice of minimally processed vegetables and packaged fruits. *Food Quality and Preference*, 15(3), 259–270.
- Rodgers, S. (2008). Technological innovation supporting different food production philosophies in the food service sectors. *International Journal of Contemporary Hospitality Management*, 20(1), 19–34.
- Sardo, E., Del Bravo, F., and Carbonari, F. (2012). *La competitività dell ' agroalimentare italiano Check Up 2012 ISMEA* (pp. 1–145).
- Shepherd, R. (1999). Social determinants of food choice. *The Proceedings of the Nutrition Society*, 58(4), 807–12.

- Shiu, E. C. C., Dawson, J. a., and Marshall, D. W. (2004). Segmenting the convenience and health trends in the British food market. *British Food Journal*, 106(2), 106–127.
- Story, M., Kaphingst, K. M., Robinson-O'Brien, R., and Glanz, K. (2008). Creating healthy food and eating environments: policy and environmental approaches. *Annual review of public health*, 29, 253–72.
- Stremersch, S. (2009). Health and Marketing: The Emergence of a New Field of Research Stefan Stremersch 1. *International Journal of Research in Marketing*, 1–19.
- Thomas, J. (2002). Nutrition intervention in ethnic minority groups. *Proceedings of the Nutrition Society*, 61(04), 559–567.
- Traill, W. B., Shankar, B., Verbeke, W., Mazzocchi, M., Capacci, S., Kuhn, S., Wills, J., et al. (2012). *Effectiveness of Policy Interventions to Promote Recommendations for Future Action : Evidence from the EATWELL Project* (pp. 1–62).
- Turrell, G., Hewitt, B., Patterson, C., Oldenburg, B., and Gould, T. (2002). Socioeconomic differences in food purchasing behaviour and suggested implications for diet-related health promotion. *Journal of human nutrition and dietetics : the official journal of the British Dietetic Association*, 15(5), 355–64.
- Viviano, E., Gigio, L. A., Ciapanna, E., Coin, D., Colonna, F., Lagna, F., and Santioni, R. (2012). La grande distribuzione organizzata e l'industria alimentare in Italia. *Questioni di Economia e Finanza*, 119, 1–154.
- Vlachos, I. P., and Bourlakis, M. (2006). Supply Chain Retailers and Manufacturers : Do They Trust Each Other ? *Supply Chain Forum*, 7, 70–80.
- Vorst, J. G. a. J., Beulens, a. J. M., Wit, W., and Beek, P. (1998). Supply Chain Management in Food Chains: Improving Performance by Reducing Uncertainty. *International Transactions in Operational Research*, 5(6), 487–499.
- World Health Organization (a). (2008). Closing the gap in a generation: health equity through action on the social determinants of health. Final Report of the Commission on Social Determinants of Health (pp. 1–256). Geneva, Switzerland.
- World Health Organization (b). (2008). WHO European Action Plan For Food And Nutrition Policy 2007-2012. *World Health* (pp. 1–35). Copenhagen, Denmark.

# Appendixes

## **Appendix 1**

### **Eurostat definition of equivalised disposable income**

### *Equivalised disposable income*

“It is the total income of a household, after tax and other deductions, that is available for spending or saving, divided by the number of household members converted into equalised adults; household members are equalised or made equivalent by weighting each according to their age, using the so-called modified OECD equivalence scale.

Calculation of the equivalised disposable income: the equivalised disposable income is calculated in three steps:

- all monetary incomes received from any source by each member of a household are added up; these include income from work, investment and social benefits, plus any other household income; taxes and social contributions that have been paid, are deducted from this sum;
- in order to reflect differences in a household's size and composition, the total (net) household income is divided by the number of 'equivalent adults', using a standard (equivalence) scale: the modified OECD scale; this scale gives a weight to all members of the household (and then adds these up to arrive at the equivalised household size):
  - 1.0 to the first adult;
  - 0.5 to the second and each subsequent person aged 14 and over;
  - 0.3 to each child aged under 14.
- Finally, the resulting figure is called the equivalised disposable income and is attributed equally to each member of the household.

For poverty indicators, the equivalised disposable income is calculated from the total disposable income of each household divided by the equivalised household size. The income reference period is a fixed 12-month period (such as the previous calendar or tax year) for all countries except UK for which the income reference period is the current year and Ireland (IE) for which the survey is continuous and income is collected for the last twelve months.”

*Eurostat source, last visit January 2013*

*retrieved from*

*[http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Glossary:Equivalised\\_disposable\\_income](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Equivalised_disposable_income)*

## **Appendix 2**

### **Income thresholds for participant recruitment and allocation into ROP or Affluent groups in Italy**

How to use the table: For example if the potential participant lives in a household with two adults and two children under 14 years old and their gross annual household income is 17.000 € that person can be recruited as a ROP participant, because the income falls between the range from 13.150 -19.700 €.

Household composition	Weight	Income range for ROP group		Income range for affluent group	
		Lower income threshold for ROP-recruitment (40 % of national equivalised household median income, euros/year)	Upper income threshold for ROP-recruitment (60 % of national equivalised household median income, euros/year)	Lower income threshold (national equivalised household median income, euros/year)	Upper income threshold (1,67 times of national equivalised household median income, euros/year)
1 adult	1	6 260	9 380	15 640	26 120
1 adult and 1 child	1.3	8 140	12 200	20 330	33 960
1 adult and 2 children	1.6	10 020	15 010	25 020	41 790
1 adult and 3 children	1.9	11 890	17 830	29 720	49 630
2 adults	1.5	9 390	14 070	23 460	39 180
2 adults and 1 child	1.8	11 270	16 890	28 150	47 020
2 adults and 2 children	2.1	13 150	19 700	32 840	54 850
2 adults and 3 children	2.4	15 020	22 520	37 540	62 690
2 adults and 4 children	2.7	16 900	25 330	42 230	70 520
3 adults	2	12 520	18 760	31 280	52 240
4 adults	2.5	15 650	23 460	39 100	65 300