



Development of a new Front of Package Nutrition Label

– a case in the European Union

Federico Bottari

Degree project/Independent project • 30 hp
Swedish University of Agricultural Sciences, SLU
Faculty of Natural Resources / Department of Molecular Sciences
Sustainable Food Systems
Molecular Sciences, 2021:15
Uppsala, 2021



Development of a new Front of Package Nutrition Label – a case in the European Union

Federico Bottari

Supervisor: Cecilia Mark-Herbert, Swedish University of Agricultural Sciences,
Department of Forest Economics
Examiner: Pernilla Tidåker, Swedish University of Agricultural Sciences,
Department of Energy and Technology

Credits: 30 hp
Level: A2E
Course title: Master thesis in Food Science
Course code: EX0875
Programme/education: Sustainable Food Systems
Course coordinating dept: Department of Molecular Sciences

Place of publication: Uppsala
Year of publication: 2021
Title of series: Molecular Sciences
Part number: 2021:15

Keywords: Farm to Fork Strategy, legislative process, lobbying, standard, stakeholder management

Swedish University of Agricultural Sciences
Faculty of Natural Resources
Department of Molecular Sciences

Publishing and archiving

Approved students' theses at SLU are published electronically. As a student, you have the copyright to your own work and need to approve the electronic publishing. If you check the box for **YES**, the full text (pdf file) and metadata will be visible and searchable online. If you check the box for **NO**, only the metadata and the abstract will be visible and searchable online. Nevertheless, when the document is uploaded it will still be archived as a digital file.

If you are more than one author you all need to agree on a decision. Read about SLU's publishing agreement here: <https://www.slu.se/en/subweb/library/publish-and-analyse/register-and-publish/agreement-for-publishing/>.

YES, I/we hereby give permission to publish the present thesis in accordance with the SLU agreement regarding the transfer of the right to publish a work.

NO, I/we do not give permission to publish the present work. The work will still be archived and its metadata and abstract will be visible and searchable.

Abstract

The current malnutrition epidemic calls for multiple solutions. The aim of the thesis is to identify the themes of the debate regarding the development of a single Front-of-package nutrition label in the European Union. In order to reach the aim, a case study approach was used by looking at the positions of different stakeholders in Sweden, Italy as well as by looking at the debate inside of the European Commission and European Council of Ministries. Data were collected through semi-structured interviews and analysis of documents. The results show that the stakeholders are trying to influence the process towards contrasting outcomes. Different stakeholders argue for very different ideal labelling schemes, while still agreeing on the need for harmonization. Major disagreement arise on whether the label should be voluntary, based on portion or 100 g and on the ideal label design. The type of view depends on the stakeholder role and on its previous experience with this type of labelling. The political debate inside of the European Union is still at an early stage and no consensus has yet been reached, the divergences between the representatives of the Member Countries partially deal with arguments similar to those exposed by the stakeholders. The patterns that emerge from the analysis of the different point of views can facilitate the cooperation between stakeholders and policy-makers.

Keywords: Farm to Fork Strategy, legislative process, lobbying, standard, stakeholder management

Summary

Despite their technological development, the current food systems have not been able to guarantee food security to all. The malnutrition issues vary considerably across the world, currently 17% of European children are obese or overweight and, under the current conditions, 37% of European adults are expected to be obese by 2030. This malnutrition epidemic affects disadvantaged groups disproportionately and is connected to many non-communicable diseases. Malnutrition may contribute for a lower quality of life for an individual and higher pressure on the societal health systems. Since there are many factors influencing a person's diet, the responsibility to address the problem is both individual and collective. In order to guide consumers to healthy life styles, many European countries have implemented front-of-package nutrition labels so to increase people's understanding of the nutritional quality of food items, and eventually do choices with awareness of health aspects. In this case the information is provided on the side of the food-item that the consumer actually sees while shopping, so to facilitate the use of the label. However, the front-of-package nutrition labels implemented in the European Union differ significantly from one another, representing a source of confusion for consumers and an obstacle to trade of food inside of the single market. In 2020 the European Commission has officialised the intention of creating a single front-of-package nutrition label to be used in all Member Countries. The announcement has sparked significant debate, with actors and organizations arguing very different solutions.

The aim of the thesis is to identify the themes of the debate regarding the development of a single front-of-package nutrition label in the European Union, what are the sources of disagreements and the different points of views. The study uses a case study approach where the debate is investigated, as it unravels, in Sweden and Italy. Data was gathered through the analysis of documents and semi-structured interviews with relevant stakeholder in both countries and with the European Commission. The data were analysed through a conceptual framework made of stakeholder, label, standard and multi-level perspective transition theories.

The results show that, while the selected organizations favor the perspective of harmonization, they have very different ideas on which features the common labeling scheme should have. Recurring themes are, for example, whether the label should be voluntary and whether it should provide an overall grade for the nutritional value of the food-item instead than presenting only its nutritional content. Different stakeholders work towards different solutions, while they are active on the national or European debate regarding these labels. The institutions that form the European Union, responsible for the legislative process, are engaged in different ways. While the European Commission is still collecting evidences regarding these labels needed to write the Proposal, the European Council of Ministries has not been found political agreement as the Ministries have strongly diverging visions. The political debate inside the Council deals, for the most part, with the themes expressed by the stakeholders. A shared understanding of scientific evidence may pave the way for political process for a shared nutrition label system. Given the significant divergences in what constitutes the ideal outcome of the process and the early phase, the debate is expected to go on for much more time and evolve as new scientific evidences emerge and political decision are made.

Keywords: Farm to Fork Strategy, legislative process, lobbying, standard, stakeholder management

Sammanfattning

Trots teknologisk utveckling har nuvarande livsmedelssystem inte förmått att uppnå livsmedelssäkerhet och folkhälsa för alla. Problemen i världens många livsmedelssystem varierar i grad och fokus. I stunden är 17 % av barn som bor i Europa överviktiga, och givet dagens förutsättningar i livsmedelssystem och levnadsvanor förutspås 37 % av vuxna i Europa vara feta 2030. Denna situation är att betrakta som en epidemi, som drabbar vissa grupper i samhället mer än andra, och den är kopplad till många andra icke smittsamma sjukdomar. För individen kan övervikt leda till en lägre livskvalité och för samhället innebär det ökade hälso- och sjukvårdskostnader. Eftersom det är många faktorer som påverkar en individs matvanor ligger ansvaret både på individer och på samhälle för att skapa förutsättningar för en hälsosam livsstil vad gäller livsmedelskonsumtion.

För att vägleda konsumenter i matrelaterade val har många länder i Europa en tradition som innebär att konsumenten får hälsorelaterad information om produkten på förpackningen. Det ger konsumenten möjlighet att göra konsumtionsval baserat på mer information. Traditionen inom EU att använda information, fakta och symboler, på livsmedelsprodukter skiljer sig dock mellan länder, och det leder till förvirring och politiska problem. Problemen har banat väg för att EU 2020 kommunicerade målet att skapa en harmoniserad form för information på livsmedelsprodukter som säljs i länder i EU. Detta löfte har skapat debatt och starka röster som ser väldigt olika lösningar på problemet.

Syftet med projektet är att identifiera tema i debatten i EU om ett harmoniserat format för information på livsmedelsprodukter. Studien är en fallstudie i vilken debatten från två länders perspektiv, Italien och Sverige, är av speciellt intresse. Tillgängliga sekundärdata från EU och de två valda länderna, och semistrukturerade intervjuer utgör datainsamlingsmetod. En innehållsanalys genomfördes med utgångspunkt i intressent-, varumärkes- och standard-utvecklingsbegrepp som hörnstenar för en förståelse för förändringsprocessen.

Resultaten från studien visar att representanter för de valda organisationerna i studien förordar en harmonisering av regler för konsumentinformation. Synen på sättet på vilket det skall göras skiljer sig däremot åt. Återkommande tema i intervjuerna är frivillighet, som innebär att det är upp till livsmedelsproducenten att bestämma om produkten skall ha en symbol som visar övergripande näringsinformation eller detaljerad näringsinnehållsinformation. Olika intressenter arbetar på flera fronter för att frågan skall få en lösning. Medan EU samlar in data för att kartlägga alternativa metoder och traditioner arbetar Ministerrådet för att skapa politiska förutsättningar för dialog och samsyn i frågan. Grunden för att skapa ett harmoniserat system ligger i en samsyn på vetenskapliga bevis. Den politiska debatten pågår och kommer att kräva tid innan politiska beslut kan fattas.

Nyckelord: intressentteori, jord till bord-strategi, lagutveckling, lobbying, standard

Sommario

Nonostante il suo sviluppo tecnologico, l'attuale sistema alimentare non è stato in grado di garantire la sicurezza alimentare per tutti. I tipi di malnutrizione presenti variano considerevolmente a livello mondiale; al momento il 17% dei bambini europei è obeso o sovrappeso e, alle presenti condizioni, il 37% degli adulti sarà obeso nel 2030. Questa epidemia di malnutrizione colpisce le categorie svantaggiate in maniera sproporzionata ed è connessa con molte malattie non trasmissibili. La malnutrizione contribuisce a una minore qualità della vita e a una maggior pressione sul sistema sanitario. Ci sono molti fattori che influenzano la dieta delle persone e quindi la responsabilità di risolvere il problema è sia individuale sia collettiva. Negli anni, molti paesi Europei hanno creato sistemi di etichettatura nutrizionale fronte-pacco, con lo scopo di aumentare la comprensione della qualità nutrizionale dei prodotti da parte dei consumatori, così che questi possano fare scelte più consapevoli. In questi sistemi, le informazioni sono presentate sul lato del prodotto che i consumatori vedono al momento dell'acquisto, così da facilitarne l'utilizzo. I sistemi di etichettatura fronte-pacco in vigore nell'Unione Europea sono molto diversi tra loro, rappresentando una fonte di confusione per i consumatori e un ostacolo al commercio nel Mercato Unico. Nel 2020, la Commissione Europea ha espresso l'intenzione di adottare una singola etichetta fronte-pacco da utilizzare in tutti i Paesi Membri. L'annuncio ha provocato un grande dibattito, dove gli interessati argomentano soluzioni molto diverse tra loro.

Lo scopo della tesi è identificare i temi del dibattito riguardante lo sviluppo di un'unica etichetta fronte-pacco all'interno dell'Unione Europea. Il *case-study* esplora il dibattito sull'etichetta in corso in Italia e Svezia. I dati sono stati raccolti tramite analisi di documenti e interviste semi-strutturate con stakeholder in entrambi i paesi e con la Commissione Europea. I dati sono quindi stati analizzati con l'aiuto delle teorie sugli stakeholder, sulle etichette, sugli standard e sulle transizioni.

I risultati mostrano che, nonostante le organizzazioni selezionate siano in favore dell'armonizzazione, ci sono idee molto diverse rispetto quali caratteristiche l'etichetta comune dovrebbe avere. Temi del dibattito sono, per esempio, la volontarietà dell'etichetta o se questa debba presentare una valutazione complessiva del valore nutrizionale dell'alimento o solo il suo contenuto nutrizionale. Sia il ruolo sia il paese di origine degli intervistati influenzano il loro punto di vista, similarità e differenze di opinione possono essere viste lungo queste linee. Le organizzazioni investigate sono attive sia nel dibattito Europeo sia in quelli nazionali. Le istituzioni europee, responsabili del processo legislativo, sono attive sul tema in modo diverso. La Commissione Europea sta ancora raccogliendo le evidenze scientifiche riguardanti questo tipo di etichette e che serviranno per scrivere la Proposta. Il Consiglio dell'Unione Europea non ha ancora trovato una posizione comune e i Ministri partecipanti hanno posizioni molto differenti. Il dibattito politico interno al Consiglio ha a che fare, per la maggior parte, con i temi presentati dalle organizzazioni intervistate. A causa delle rilevanti differenze in termini di etichetta ideale si può supporre che il dibattito andrà avanti ancora per molto tempo e si evolverà mentre emergono nuove evidenze scientifiche e sono prese decisioni politiche.

Parole chiave: lobbying, management degli stakeholder, processo legislativo, standard, strategia Farm to Fork

Table of contents

1	Introduction	12
1.1	The Food Systems	12
1.2	Malnutrition in the European Union	12
1.3	Views on solutions to dietary challenges	13
1.4	Problem	14
1.5	Aim and Research Questions	14
1.6	Outline	15
2	Theory	16
2.1	Socio-technical systems and sustainability transition	16
2.1.1	Transition in a socio-technical system	16
2.1.2	Politics and transition	18
2.2	Stakeholder theory	19
2.3	Standards, rules and legislation	20
2.1	Labels	23
2.2	A conceptual framework	24
3	Method	28
3.1	Research design	28
3.2	A literature review	28
3.3	Case study	29
3.4	Choice of the case and unit of analysis	29
3.5	Data collection	29
3.6	Data analysis	32
3.7	Quality assurance of the research process	32
4	Background for the empirical study	35
4.1	The European nutrition labels landscape	35
4.2	The Swedish experience	37
4.3	The Italian experience	38
5	Results	40
5.1	General information about data collection	40
5.2	How should the common label look like?	40
5.3	The standard behind the label	42
5.3.1	Rules and criteria behind the label	42
5.3.2	Advantages and disadvantages to standards	43
5.3.3	How stakeholders contribute to standard development	44
5.3.4	Why a new standard should be adopted?	45
5.4	Making a single label, a Multi Level Perspective on transition	46
5.4.1	A transition at different levels	46

5.4.2	The role of politics	47
5.5	The Standardizer	48
5.5.1	European Commission	49
5.5.2	Council of the European Union	50
6	Discussion	52
6.1	Stakeholders' views on Front of Package Nutrition Label	52
6.2	Standardizer and standard development.....	54
6.3	Limits and criticism	56
7	Conclusions	57
7.1	Themes of the debate.....	57
7.2	Implications.....	57
7.3	Suggestions for future research	58
	References	59

List of Tables

TABLE 1. ACADEMIC INTERPRETATIONS OF THE CONCEPT OF STANDARDS 21

TABLE 2. ACADEMIC ACCOUNTS ON ADVANTAGES AND DISADVANTAGES TO THE USE OF STANDARDS..... 23

TABLE 3. CORE CONCEPTS OF EACH THEORY AND THEIR USE FOR THE RESEARCH..... 27

TABLE 4. OUTLOOK OF KEY STAKEHOLDERS 31

TABLE 5. LIST OF THE INTERVIEWS AND THE INTERVIEWEES..... 31

TABLE 6. QUALITY ASSURANCE TESTS AND ACTIONS TAKEN IN THE THESIS (ADAPTED FROM RIEGE, 2003)..... 33

TABLE 7. FRONT-OF-PACK NUTRITION LABELS ON THE EU MARKETS..... 36

TABLE 8. HOW THE “IDEAL” LABELS SHOULD BE LIKE, THE OPINIONS OF DIFFERENT STAKEHOLDERS..... 40

TABLE 9. PROS AND CONS TO THE USE OF A SINGLE LABEL AND STANDARD IN THE EU 44

TABLE 10. POLITICAL CONVERGENCES & DIVERGENCES INSIDE OF THE AGRICULTURE AND FISHERIES COUNCIL..... 51

List of Figures

FIGURE 1. OUTLINE OF THE STUDY. 15

FIGURE 2. MULTI-LEVEL PERSPECTIVE ON TRANSITION. 17

FIGURE 3. THE STANDARD SPECTRUM (MODIFIED FROM ZADEK (1998:13))..... 22

FIGURE 4. A CONCEPTUAL FRAMEWORK FOR ANALYZING A SPECIAL TYPE OF INNOVATION: LABEL AND STANDARDS. 26

FIGURE 5. SIMPLIFIED OVERVIEW OF THE LEGISLATIVE PROCESS. 48

Abbreviations

FCRN	Food Climate Research Network	12
WHO	World Health Organization	13
EU	European Union	14
FOP	Front of Package	16
MLP	Multi-Level Perspective	24
ISO	International Standard Organization	24
MISE	Ministero dello Sviluppo Economico	38
BEUC	European Consumer Association	44
IIA	Inception Impact Assessment	46
EFSA	European Food Safety Authority	49

1 Introduction

The intent of this chapter is to provide an overview on some of the problems connected to the current food system. It gives a picture of the malnutrition epidemic globally and in the European Union and its causes and its consequences on the environment and society. Some of the possible solutions to malnutrition are presented before focusing on nutritional labeling and the role it could play. The final section defines the aim of the study and the research questions used to reach it.

1.1 The Food Systems

The current understanding of the concept of food systems encompasses the environmental, economic and social interaction connected to the production, commercialization, consumption, and waste management of food (Food Climate Research Network (**FCRN**), 2015). These systems are connected to a large number of sustainability challenges (Rockström *et al.*, 2009; Foley *et al.*, 2011; Willet *et al.*, 2019). Despite uncertainties depending on the accounting system, GHGs emissions from the food system are estimated to represent 20-30% of the total, with major emissions coming from livestock husbandry, fertilizer use and land-use change (FRCN, 2015: 10-13). The food sector is also the planet's largest consumer of water and a major driver of biodiversity loss (Willet *et al.*, 2019).

Regardless of their environmental impact, the current food systems are not able to guarantee global food security. Malnutrition is widespread: at the moment 11% of the global population is undernourished, 39% is obese or overweight and another 30% shows signs of micronutrients deficiencies (FCRN, 2015: 10; Krzysztoszek *et al.*, 2019: 1). As pointed out by FCRN (2015), global average diets are also shifting towards unhealthy and more environmentally impacting ones richer in sugars, saturated fats and animal ingredients. Although the general public usually associates malnutrition to stunting children in developing nations, malnutrition is a phenomenon that occurs frequently in European countries too (Kiss *et al.*, 2020).

1.2 Malnutrition in the European Union

Three main global challenges connected to malnutrition have been identified as: hunger and undernutrition; micronutrient deficiencies; overconsumption (FRCN, 2015). These challenges are spread, even if with different incidence, all over the world. Hunger and undernutrition are conditions caused by a caloric deficit, which leads to low body weight and damages to the physical and cognitive health. People have micronutrient deficiency when the intake of essential vitamins and minerals is not sufficient to guarantee proper growth and development. On the other hand, overconsumption comes from a prolonged overconsumption of calories and it is more frequent in high-income countries (*ibid.*)

The World Health Organization (**WHO**) (2021) defines overweight and obesity as “abnormal and excessive fat accumulation that present risk to health¹”. In Europe, the percentage of obese adults has been steadily increasing in the last decades and, under a business as usual scenario, around 37% of European adults will be obese in 2030 (Krzysztoszek *et al.*, 2019: 4).

¹ WHO measure the nutritional status of adults through the Body Mass Index (BMI). A person's BMI comes from dividing its weight in kilograms with the square of the person's height in meters. Those having a BMI between 25 and 29.9 are considered to be pre-obese, from 30.0 up people are considered to be obese.

Krzysztożek *et al.* (2019) show that even if there are regional variation the incidence of overweight and obesity is high all over the continent. At the same time, around 17% of European children are currently obese or overweight, with the Southern European countries being the most affected (Garrido-Miguel *et al.*, 2019). Kiss *et al.* (2020) also show that malnutrition (seen as obesity, overweight and nutrient deficiencies) affects socially disadvantaged groups disproportionately. Around 36 million people in the EU are unable to get a quality meal every second day (*ibid.*).

This obesity and overweight epidemic is a social problem as well as an economic one. Obese and overweight people have a higher risk of developing non-communicable diseases such as cardiovascular ones, diabetes, cancers, musculoskeletal disorders, etc. (WHO, 2021). These conditions result in higher pressure (and thus costs) on the health services (Branca *et al.*, 2007). McKinsley (2014: 14) estimates that obesity costs 2.8% of the global GDP and that around 20% of the total global health-care spending goes into treating the direct or indirect effects of food overconsumption. There are also indirect societal costs, such as those connected to the lower economic production of the affected people; a very conservative estimate says that obesity and overweight related issues lead to a loss of around 0.5% of the total national income in the European Union (EU) Member States (Müller-Riemenscheider *et al.*, 2008: 4). If measures are not taken, these effects are expected to get stronger when the average weight and life expectancy increase in the population (Branca *et al.*, 2007; Müller-Riemenscheider *et al.*, 2008). Although the study of the correlation between a person's weight and its environmental impacts is still at an early stage, the available studies show that obese people are associated with higher greenhouse emissions than those with a normal-state weight because of higher oxidative metabolism, food intake and energy used for transportation (Squalli, 2014; Squalli, 2017; Magkos *et al.*, 2020).

Health and food consumption are tightly interrelated but the precise influences are hard to measure, since the diet-related health outcomes are determined by several personal, social, economic, cultural and political factors (FCRN, 2015). Nonetheless, WHO (2021) shows that the key reason for obesity and overweight is that, over time, the caloric intake outnumbers the amount of calories burnt. This is usually caused by a combination of the consumption of more energy dense food with sedentary lifestyles. Due to their nature, overweight and obesity can be prevented, in most cases, through a combination of individual and social measures that help people adopt a caloric intake that is adequate to their lifestyle. The responsibility to tackle the problem lies in multiple hands, even if the final decision of what to put on the plate is personal, it is influenced by a number of factors –such as price and access to nutritional information- for which businesses, public authorities, governments and NGOs are accountable (Vallgård *et al.*, 2015).

1.3 Views on solutions to dietary challenges

Food and diets are areas of interest for many different stakeholders in the society, and as such there are conflicting understandings of what are the possible solutions to diet-related problems. These different views cover what needs to be done and who is responsible for doing it (Jones *et al.*, 2019). Temple (2013) identifies a number of strategies that governments can use to promote public health, such as: creation of dietary guidelines, bans on sales or advertising, use of food labels, introduction of taxes on certain nutrients. Governments should be the primary actors undertaking actions to promote public health, but the discussion with industrial stakeholders could be beneficial if properly managed and aiming to sustain evidence-based approaches (Moodie *et al.*, 2013). Public-private partnerships are based on the belief that association with the industry leads to better results than acting autonomously does

(Moodie *et al.*, 2013:6). However, research show mixed results whether public private partnerships can be part of a strategy to tackle food related health issues, since there might be possible conflicts of interest (Asp & Bryngelsson, 2007; Moodie *et al.*, 2013; Julia & Hercberg, 2016; Temple, 2016).

Labeling solutions have many issues, but they are viable when there is little political consensus about which strategy should be used (Golan *et al.*, 2001). Labeling can be voluntary or mandatory. The latter type is to be preferred when the market does not supply enough information to allow consumers to make choices that mirror their preferences, or when the individual consumption habits affect the social welfare in a different manner than they affect the one of the individual. Labeling thus represents a tool to heighten the economic efficiency and reduce negative externalities (*ibid.*).

Food labels can have very different characteristics, designs or type of information they want to convey. Front of Package labels (**FOP**) are those that are shown on the front-side of a package and, as they more easily spotted by the potential consumers, are more efficient in shifting their buying intentions (Kelly & Jewell 2018; Campos *et al.*, 2011). Nonetheless, Storcksdieck genannt Bonsmann *et al.* (2020) identify knowledge gaps regarding how FOP labeling actually impact purchasing behavior, the overall dietary habits and the interaction between nutritional and non-nutritional labels. The European Commission has stated the intention, as part of the Farm to Fork Strategy, to establish a FOP nutrition label to be used in the European Union (European Commission, 2020a).

1.4 Problem

The impending food overconsumption epidemic in the European Union calls for actions of different parts of our society (Vallgård *et al.*, 2015). So far these actions have been heterogeneous and do not seem to have led to more adequate diets, making the need for solutions even more urgent (Kiss *et al.*, 2020). Nutrition labels represent one of the possible solutions, but there are still significant knowledge gaps regarding them, which can potentially make nutrition labels less efficient in changing consumers and producers' behaviors (Storcksdieck Genannt Bonsmann *et al.*, 2020). The opposition of key stakeholders also poses significant challenges if not addressed correctly. If properly managed their criticisms could lead to the development of better solutions, if not they could significantly slow down or halt the process (Julia & Hercberg, 2016). The experience gained with the development of FOP nutrition label in the EU could help for the future development of similar standards and labels in other areas of the world.

1.5 Aim and Research Questions

The aim of this project is to identify the themes of the debate regarding the development of a single Front-of-Package Nutrition label in the European Union.

In order to reach the aim, the following research questions are in focus:

- *What are the opinions of different key stakeholders regarding a unified Front of Package nutrition label?*
- *How do these opinions on food labeling differ?*
- *How is the debate inside of the European Institutions?*

The project uses a case study approach and data were collected by screening documents and conducting interviews with actors capable of influencing, in different ways, the label

development process in the European Union. The methods followed and the delimitations to the research are discussed in the next chapters.

1.6 Outline

Figure 1 shows an overview of the content of this thesis. Chapter 1 is the introduction, which is followed by a chapter presenting the theories that will be used. The third chapter presents the method used for the development of the thesis, data collection and analysis. Chapter 4 and 5 focus on the case study by initially describing the European situation when it comes to FOP nutrition labels and, then, presenting the data gathered. The results are then compared and discussed with those of other studies in Chapter 6, Discussion. Finally, the seventh chapter presents the conclusions and the opportunities for future research.

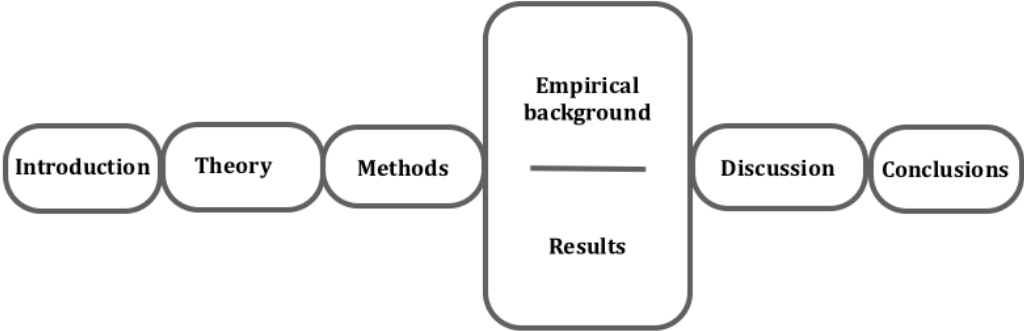


Figure 1. Outline of the study.

2 Theory

This chapter provides a presentation of the theories that are relevant for the research problem. The chapter starts by describing the concept of socio-technical system and of transition. Afterwards, it presents the meaning of the words stakeholder, standard and label. The conceptual framework of the study is also presented at the end of this chapter.

2.1 Socio-technical systems and sustainability transition

A socio-technical system is made up by a set of components, such as technology, regulations, user practices, markets, culture, infrastructure, *etc.* that lead to the creation, diffusion and utilization of a solution that fulfills societal needs (Geels, 2004: 2; Hofman *et al.*, 2004: 3). Socio-technical systems are intertwined with human actors, organizations and social groups and well with rules and institutions (Geels, 2004). Rules and institutions provide the framework inside of which the actors operate and the products or services are created and perceived. At the same time, the conditions of the socio-technical system can lead to the creation of new rules and institutions. It is also significant that rules do not exist by themselves, but they are maintained and reproduced through the practice of single or collective actors (Geels, 2004: 7).

2.1.1 Transition in a socio-technical system

Socio-technical systems are stable and able to resist to changes, as the different components are interlaced together. However, the existing sociotechnical regimes are leading to significant issues that are hard to address without systemic change (Hofman *et al.*, 2004; Geels, 2004). For example, the current food systems can be seen as socio-technical systems that deliver food, other products, services and positive and negative externalities. Transitions from one system to another are not straightforward, as they involve a great deal of uncertainties and many social groups with different interests. Those in charge of driving these transitions often struggle on managing them (*ibid.*).

Transitions can be analyzed using the Multi-level Perspective (**MLP**), which is visualized in Figure 2.

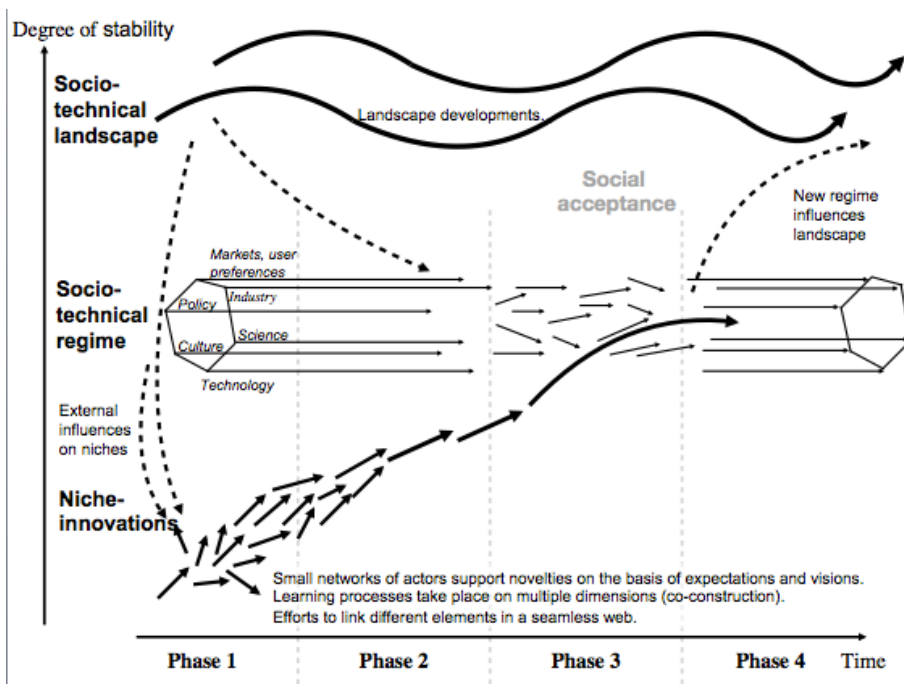


Figure 2. Multi-level Perspective on transition. The image shows the three levels and how they change over time. The vertical axis ranks them in order of stability, with the niche being on the bottom-left corner. The horizontal axis indicates the time and adds dynamicity to the picture. In the beginning, the small niche innovation is locked into an environment that supports it and that is influenced by the regime and landscape's dynamics. As the time passes, the niche innovation may gain momentum, develop and influence the regime, which then reaches a new equilibrium. Eventually, if enabled by the changes crossing the landscape, the regime can influence the landscape and turn it into a different one. The newly created landscape will then eventually lead to the formation of new niches. Adapted from Geels & Schot (2007: 3)

The MLP framework looks at the transition on three levels: niche, socio-technical regime and landscape (Geels, 2004). Niches can be defined as “enclosed” spaces inside of the system but outside of the main market dynamics. Here radical innovations might emerge, often to respond to very selective markets. Inside of a regime, niches represent the place where it is possible to step outside of the “business-as-usual” and experiment, which also leads to many uncertainties (*ibid.*). The middle level of the MLP is the regime. Regimes are segments of the wider system in which the rules and dynamics have stabilized and led to a lasting structure. Inside of a regime, the different parts complement each other. Socio-technical landscapes constitute the bigger level of analysis in the MLP framework and are harder to modify, as they are built by a wide variety of pieces on which the single actor has little power. The landscape level also includes geographical and cultural aspects (*ibid.*).

Even if a landscape and its regimes can be seen as rather stable and monolithic, Geels (2004:17-18) highlights their involvement with internal and external dynamics: they are part of the wider world and subject to politics, economics, as well to technological and cultural developments. While the landscape and its regimes are resilient to these changes, sometimes the responses might lead to tensions, mal-adjustments and voids that create instability. These voids can represent windows of opportunities for change and innovations. In order to fill a void a previously niche-innovation can be enlarged and become widely adopted in the general regime and, eventually, landscape. However, the incumbent actors often actively hamper the adoption of new solutions that may change the regime (Geels, 2004; Geels, 2014; Edmonson *et al.*, 2019).

Geels (2014) analyzes the role power and political dynamics have in maintaining a regime's *status quo*, especially against those forces that want to make a system more sustainable. He argues that policymakers and incumbent business actors often end up forming alliances that rely on their reciprocal interdependence: while the state offers the legal framework and protection the companies need to operate, companies provide the economic growth and development the state needs to play its role. Firms are able to impact on the policy making process through different ways. Geels (2014:7) points to the existence of personal relationships between big businesses persons and policymakers of different grade, which gives companies access to the policies and vice-versa. These close contacts can lead to exchange of ideas and understanding of reciprocal interests, which are capable to change policy makers' and business people's actions. Companies can implement precise "corporate political strategies" that aim to influence the policymaking process through actions such as: information, direct lobbying, *etc.* (Geels, 2014: 6-7; Köhler *et al.*, 2019:11). Finally, companies can create new technology and influence the expectations society holds about their role and the transition (Köhler *et al.*, 2019:11). Political and corporate actors can exert their power to stabilize the systems in different ways. **Instrumental** power indicates the actors directly using their resources and capabilities to reach their goals; **discursive strategies** tend to modify how things are discussed, not only what is discussed; **diagnostic** and **prognostic strategies** change the definitions of the problem and thus the goals that politics sets; **motivational** actions are used to change the issues at heart to the general public and consequently the urgency of certain measures. **Material strategies** occur when the actors use their capacities to strengthen the features of the already existing socio-technical regime. Finally, is **broader institutional power**, which derives from the leading ideological and governance structure (Geels, 2014: 8-14).

In order for innovation to expand from the niche to the entire system, there must be a favorable constellation of linkages between the actors at all the different levels of the socio-technical landscape and regimes (Hofman *et al.*, 2004). Hofman *et al.* (2004:6) also differentiate between two alternative ways through which transition can occur: substitution and broad transformation. In the substitution case, the regime is stable until the sudden breakthrough of a novelty that, by expanding to the wider system, lead to bigger changes and possibility to the expulsion of previously established solutions without changing the meaning and behavior connected. On the other hand, the transformation pathway occurs more slowly but leads to significant changes not only in how things are done by also in behaviors and in cultural values.

2.1.2 Politics and transition

Transitions are always a political process, since they stem from different views of what are desirable outcomes and the ways to reach them (Köhler *et al.*, 2019). Edmonson *et al.* (2019) highlight that appropriate policies are needed to influence the socio-technical transition towards sustainability, but that behind these policies are always political negotiations. Often different policies, so-called policy mixes, are needed to control the socio-technical transition over time and accelerate systemic changes (Markard & Rosenbloom, 2020). Politics interact with a socio-technical system at all of its level: it influences the general economic climate and the ways technologies are deployed on the landscape; it deals with incentivizing or undercutting the behaviors of certain actors in a regime and, at the niche level, politics is often responsible for enabling innovation. Politics also deals with the management of the effects of potential inefficiencies in the landscape and regime (Meadowcroft, 2011).

Over time, policies can sustain virtuous or vicious cycles of events that can influence the transition. Policy mixes for sustainable transitions have to tackle additional issues than other policy mixes; in particular they might need to destabilize the existing regime while building up on of policy mixes that are supposed to maintain the existing regime (Edmonson *et al.*, 2020). As the system is continuously evolving, the policy mix is impacting the socio-technical context, but the latter is also impacting the policy mix with new direct and indirect feedbacks that can lead to reconfiguration of the policy mix. These feedback mechanisms must be properly managed for the sustainability transition to endure, negative feedback mechanism can cost political support, contestations and finally lead to the weakening or removal of the policies. Feedback management should also take into account the phase of the policy “life-cycle”: in an early phase the policy mix should promote positive feedbacks from the incumbent actors, negative feedback should be saved as much as possible to a later phase of the policy development process in which the new socio-technical system is able to resist negative feedbacks (*ibid.*). Politics of transition should be looked at in different domains other than what the text of the policy says. In particular, researchers should be able to answer the question of which circumstances can make the uptake of said policy more likely. In order to do so, it is important to define the societal interests; which institutions regulate the political process and which are their power linkages; what hold the potential coalitions together; who are the potential “winners” and “losers”; finally it is important to consider how ideologies shape what consumers, voters and other actors believe it is important to do or not do (Meadowcroft, 2011; Köhler *et al.*, 2019:6).

2.2 Stakeholder theory

The core of stakeholder theory is that an organization should be managed considering the interest of all of its constituencies, not only the interest of its shareholders (Laplume *et al.*, 2008). The concept was originally developed in the nineties as an alternative to the shareholders-based theories of organization (Freeman, 1984 see: Freeman, 2010). Laplume *et al.* (2008) and Mainardes *et al.* (2011) show that there are many different definitions of stakeholder around; still, they always contain three key components: the organization, the other actors, the relationships between them. A general definition of stakeholders is the one provided by Beltz and Peattie (2013: 162): stakeholders can be defined as a set of different actors in the market whose behavior might be influenced by the one of a firm, organization or project.

Taking into considerations a broader set of interests, the organization can adapt to the changes of the business environment, increase its competitiveness (Freeman, 1994; Mainardes *et al.*, 2011) and achieve its financial bottom line (Phillips *et al.*, 2003). Furthermore, by taking care of its stakeholders, a firm can strengthen its market position and protect itself from negative public scrutiny and campaigning (Zadek, 1998). External stakeholders can provide the organization with valuable resources or contribution, but can also represents interests to be satisfied through the company’s activities (Mainardes *et al.*, 2011).

The goal of stakeholder management is to reach an organizational superior performance by identifying, analyzing and taking care of those actors that can influence or be influenced by the organization’s actions (Mainardes *et al.*, 2011). It is important to recognize the social, environmental and economic views of those stakeholders that may affect the organization. The recognition of stakeholder’s positions needs to be more than mere familiarity, since it can be used to predict and stir their future actions (Zadek, 1998). According to Phillips *et al.* (2003) the purpose of a stakeholder analysis is to understand the boundaries of a company’s

activities, which extend further than the limits imposed by the shareholders and include those actors that are somehow related to the achievement of the organization's financial bottom line.

According to Roberts (2002) stakeholder management can also be used to protect a firm's reputation, which is usually connected to higher returns. Protecting reputation means fulfilling the expectations of the different stakeholders, which includes knowing who they are and what they demand (*ibid.*). Over the years, a dialogue with the stakeholders has also been used in policy development (Bijlsma *et al.*, 2011; Voinov & Bousquet, 2010) and for the activities of non-profit organizations (Wellens & Jegers, 2014; Krashinsky, 1997).

Despite having become so commonly used, or maybe because of its frequent use, the stakeholder model is not neatly defined and there are still significant challenges. For examples, there is confusion in regards to the identification of the boundaries of the organization's environment, which stakeholders should be taken into account and which are their actual stakes (Fassin, 2009). Over the years, many different methods for stakeholder classification have been developed and applied. These methods usually try to answer the question of which stakeholders an organization should pay the greatest attention to (Mainardes *et al.*, 2012).

The stakeholder theory provides a vocabulary to deal with a system in which organizations and individuals are related to one another by different kind of relationships and obligations; however it does not provide an understanding of how the system is governed, which is the aim of other theories.

2.3 Standards, rules and legislation

Societies and other organizations exist because of some form of regularity inside them, which then leads to needs for coordination and cooperation. According to Brunsson and Jacobsson (2000) regularity arises when the individual part of a community follows rules, which can be seen as "statements" that tell people how to behave or not to behave in specific circumstances. Rules can take the form of norms, directives and standards.

Norms are internalized rules that individuals follow without thinking about them. They are usually the less debated and problematic rules, since they are seen as self-evident. Norms are voluntary and without a clear source, but are usually difficult to violate because part of the normal way of doing things (Brunsson & Jacobsson, 2000).

Directives are usually written and explicit statements issued by people or organizations we were given, or forced to give, the authority to create them. Directives are mandatory for the people or situations they target (*ibid.*).

There are multiple definitions of the term standard, each of which highlight slightly different aspects of the concept. The variety of definition also reflects the fact that standards are involved in regulating a wide assortment of topics (Brunsson *et al.*, 2012). Some of the different definitions are presented in Table 1.

Table 1. Academic interpretations of the concept of standards

Author(s)	Definition/meaning of standard
Zadek, 1998	<i>Standards are a regulated way of doing things, they ensure quality and occur in different ways</i>
Brunsson & Jacobsson, 2000	<i>Explicit voluntary rules with a clear source. The issuing actors, the standardizers, might not have a clear authority and thus appeal the potential adopters with some kind of benefit. There are no sanctions if they are not adopted</i>
Borraz, 2007	<i>Standards are obtained through a dialogue between the interest parties that leads to consensus, are based on scientific and technical data, are applied voluntarily</i>
ISO from Borraz, 2007; ISO from Brunsson <i>et al.</i> , 2012	<i>“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 achievement of the optimum degree of order in a given context” cit.</i>
Ortmann, 2010	<i>Rules that set up examples, models, levels or norms that suggest or guide behaviors and/or the outcomes of those behaviors</i>
Brunsson <i>et al.</i> , 2012: 4	<i>“Rule for common and voluntary use, decided by one or several people or organizations” cit.</i>
Beltz & Peattie, 2013: 207	<i>Set requirements that companies use to manage their products, services or processes. Following standards might grant the use of a label</i>

Most of the definitions share some common features about what standards represent in various contexts. Standards are explicitly formulated, communicated and their use is voluntary. It also means that a standard must be perceived as valuable in order to be enforced by an individual or organization. However, a standard can also be implemented because of the pressure of third parties (Brunsson *et al.*, 2012). Standards are also meant for the wide public, they are not developed by and for just a single user (*ibid.*).

Standards can be categorized according to different criteria. Brunsson and Jacobsson (2000) differentiate in standards about being something, standards about doing something, standards about having something. The first type is usually related to how things are classified, an example is Linnaeus’s way of dividing the living organisms. Most of the standards used nowadays are about doing something; an example can be represented by the standards for organic agriculture. Standards about having something require the subject actor to have something, which is not necessarily linked to what the actor actually does or what it is.

Borraz (2007) and Brunsson *et al.* (2012) also discriminate between *de facto* and *de jure* standards. *De facto* standards emerged because all the involved parties undergo a process that leads them to adopt the same solution, which is then turned into a model that all use; *de jure* standards are created through an intentional process during which the rules and the circumstances in which they have to be applied are agreed.

Zadek (1998) illustrates some of the many ways through which standards emerge and develop.

The paper argues that standards can be found in a succession that goes from leadership benchmarking, which occurs when a model is considered the best one and thus the competitors adopt it, to mandatory legislation, which imposes the model to follow. Each type of standard has its downsides and these standards are not superior but rather complementary to each other. An illustration of the standard spectrum of Zadek (1998: 13) is presented in Figure 3. It is worth noticing that, while a standard moves towards the right end of the spectrum, it affects more organization or individuals.

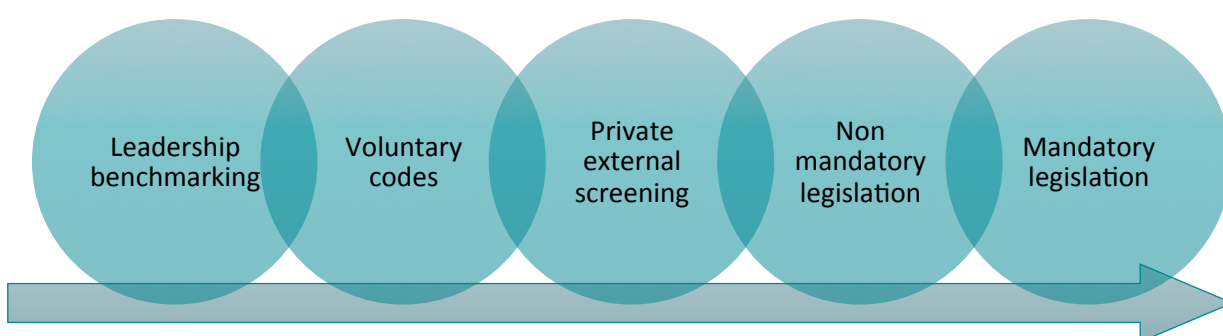


Figure 3. The Standard Spectrum (modified from Zadek (1998:13))

There are different reasons for standardizers to develop a standard: some do it for money, some other for the “greater-good”, others are developed as a way to reach goals. Standardizers provide the rules, but they do not have the authority or the ability to punish those not following these rules (Brunsson & Jacobson, 2000).

The legitimacy to exert power over the standardized phenomenon is given to the standardizer by those adopting the standard and by those adapting their purchasing habits based on the standard, manifested in the eco-label. When an organization or individual decides to use a standard, it gives the standardizer legitimacy to act and exert its power. Compared to mandatory rules, standards usually arise less opposition, since those who are unsatisfied with a standard can simply stop using it instead of asking for change. In practice, however, standards might not be as voluntary as they are on paper, since the stakeholder might expect an organization to follow certain standards. In addition, governance is also exerted through markets and hierarchies, not just through standards (*ibid.*).

There are also standards, such as the Forest Stewardship Council, that are developed through a continuous stakeholder involvement. These standards are usually used for issues where the usual state-based legislation is lacking or not effective, and the actors involved are many and globally dispersed. Multi-stakeholder standards are often used to deal with social or environmental topics (Balzarova & Castka, 2012). The involvement with stakeholders can lead to positive results, as it builds agreement between the parts and gives legitimacy to the standards (*ibid.*).

There are both pro and cons to the use of standards, some of which are listed in Table 2.

Table 2. Academic accounts on advantages and disadvantages to the use of standards

Advantages to the use of standards	Disadvantages to the use of standards
<ul style="list-style-type: none"> • Smoother transmission of information (Brunsson & Jacobson, 2000: 169: 171) • Enable coordination among goods, services, processes, people (Brunsson & Jacobson, 2000: 169: 171) • Simplify problems and enable quicker responses (Brunsson & Jacobson, 2000: 169: 171) 	<ul style="list-style-type: none"> • Decline of freedom and variety (Brunsson & Jacobson, 2000: 169: 171) • Reduction of information (Brunsson & Jacobson, 2000: 169: 171) • Lead to solutions that are not always the optimal ones (Swinnen, 2016) • Disadvantages for smaller or poorer individuals or organization, as non-tariff trade barriers (Swinnen, 2016) • As they rely on voluntary implementation they risk being practically inefficient (Brunsson <i>et al.</i>, 2012)

The pros and cons of each standard (Table 2) must be acknowledged and balanced while developing, managing or implementing it, as they influence whether the intended aims of the standardizer and or the adopting organizations are reached or not. There are two trends making standardization an increasingly used tool to reach coordination between different actors: individualization and globalization (Brunsson & Jacobson, 2000: 36-39). As actors become more individualistic, they prefer rules based on advices and personal choices instead of obligations; markets and standards solutions will be preferred (*ibid.*).

2.1 Labels

Labels are marks that provide information about the good they are connected to. They can be a promotional tool or state the compliance with certain schemes (Beltz & Peattie, 2013: 206-207). As specified by Nancarrow *et al.* (1998) and Banovic *et al.* (2019), labels can be used to differentiate and gain competitive advantage. The mere presence of a label is not enough to reach that goal. In fact, it has to address those product aspects consumers pay the greatest attention to, in a way that they can understand and utilize (Wandel, 1999). Labelling can be seen as tool to match products to consumers with certain demographics and lifestyles (Banovic *et al.*, 2019) and as a marketing tool to communicate with consumers (Beltz & Peattie, 2013: 206-207). As pointed out by Marcucci *et al.* (2021), in order to be understood and used by the consumers, a label must be backed by promotional campaigns that show what it is about and how it compares to other labels, claims or unlabeled products.

Labels and labelling can be classified depending if they are mandatory or voluntary, the quantity of information they provide, if the information is about aspect that consumers want to avoid or are looking for, if they focus on just one aspect of the product or multiple ones, on graphics and position, on the level and type of verification behind (Beltz & Peattie, 2013: 206-207). The classification made by the International Standard Organization (**ISO**) for environmental claims and labels can be also used to look at those claims and labels that want to convey other types of attributes, such as those connected to health. As from Allison and Carter (2000), ISO differentiates between three types of environmental statements. Type I

refers to those that are based on criteria set by third parties that check the compliance with the standard, are based on the life cycle impact and are multi-issues. For type I claims, the standardizer is usually a governmental organization or a private non-commercial body. Type II indicates those claims that are simply based on a statement of the producer or retailer and are thus a self-declaration. Finally, type III claim are based on quantified information based on the life cycle impacts and convey the statement or label in a way that eases the comparison between different products (Allison & Carter, 2000; D'Souza, 2004; Marcucci *et al.*, 2021).

A nutrition label is defined by Codex Alimentarius (1985) as a description that aims to inform consumer of the nutritional properties of a specific food. It consists of:

- Nutrient declaration, which standardized statement or listing of the nutrient content of the specific food.
- Voluntary supplementary nutrition information, which provides additional information that increases consumers' understanding of the nutrient declaration and the nutritional value of the food.

Nutrition labeling deals with the provision of nutritional information to the consumers at the purchasing stage, the goal is to enable them to choose more nutritionally adequate food while maintaining the freedom of choice. Labeling also pushes producers to develop products with a better nutritional profile (Grunert & Wills, 2007). Grunert and Wills (2007) conclude that consumers are generally interested in finding nutritional information on the food packages, but there are variations depending on the type of products and the situations in which they are purchased or consumed. Research has also highlighted a positive correlation between the use of nutritional labels and healthier diets (Campos *et al.*, 2011).

A meta-analysis made by Campos *et al.* (2011) indicates that middle-aged and younger adult are more likely to use nutritional labels compared to older and adolescents consumers. On average, women use these labels more than men. People with higher education or economic status are significantly more likely to use nutrition labels.

Nonetheless, nutritional labels might not be used or might be misunderstood by consumers. Misunderstanding is the main reason for not using labels and is much more frequent in certain demographics, such as elderly, adolescents, less educated, etc. (Grunert & Wills, 2007; Campos *et al.*, 2011). In general, Campos *et al.*, 2011 conclude that quantitative labels are more complicated to understand compared to those based on graphics and symbols.

2.2 A conceptual framework

This sub-chapter provides the reader with an understanding of how the chosen theories come together to support the collection of an analysis of the empirical data and thus reach the thesis' aim. The conceptual framework is illustrated in Figure 4 and Table 3 and described in the next paragraphs.

As FOP nutrition labels are able to change consumers' perception of goods and even consumer's purchasing intentions or habits (Kelly & Jewell 2018; Campos *et al.*, 2011), the label is of interest to a huge variety of stakeholders. Since each stakeholder has a different bottom line, they also have different expectation in a label. Depending on the way they are managed, the stakeholders are able to influence the outcomes of the label development project in many possible ways (Mainardes *et al.*, 2011; Zadek, 1998; Julia & Hercberg, 2016).

For the scope of the thesis, the label, the standard and the standardization process behind it are seen as an innovation that contributes to the transition from the current socio-technical regime to a new one, the transition is analysed through the Multi-level perspective framework (Geels, 2007) and shown in Figure 2.

The label is assumed as the visible and instrumental part of a standard, since it is the part that all the stakeholders see while also being the one the can potentially change consumer behaviors and, consequently, the one of the food industries (Beltz & Peattie, 2013). Standards are set through the process of standardization inside of boundaries defined by the laws. The process is driven by the standardizers, but the dialogue with the possible standards adopters and other stakeholders can also play a significant role, as they can give feedback that influence what each standards stands for (Brunsson & Jacobsson, 2000; Balzarova & Castka, 2012). The FOP nutrition labels – and the standards they represent - are moving towards the right of Zadek (1998)'s Standard Spectrum: at the moment, they are set by non-mandatory legislation but the EU's goal is to make them mandated by common legislation. At the same time, the FOP nutrition label is an innovation existing at the socio-technical regime level represented by a Member State. Different FOP nutrition levels have been implemented in different regimes, but now changes happening at the landscape level are causing a reconfiguration that can lead one of these labels to gain importance on the wider European landscape. The transition has also a strong political connotation, that has to be considered as it will influence both the content of the standard behind the FOP nutrition label than the role it will have in the future European landscape (Köhler *et al.*, 2019; Edmonson *et al.*, 2019).

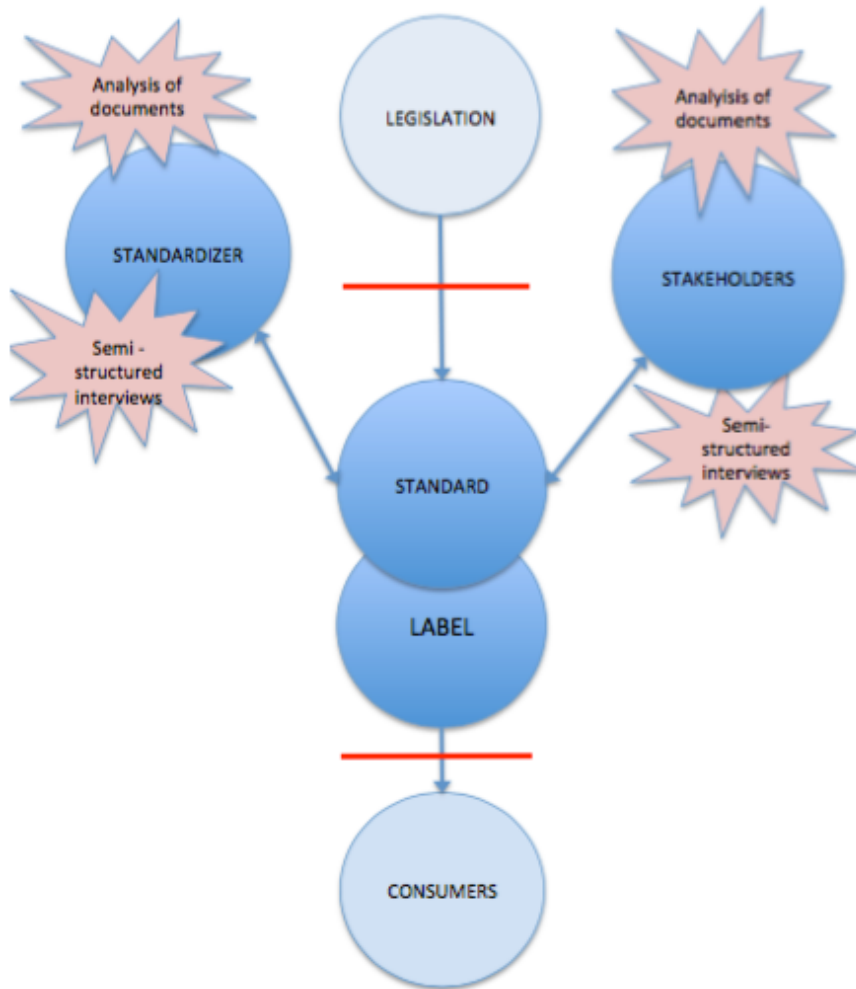


Figure 4. A conceptual framework for analyzing a special type of innovation: label and standards. The label and associated standards are complementary to each other and are created and managed by a standardizer that also take into account the perspectives of the stakeholders. Legislation and consumers, which are still significant for the label and standard implementation, are included in the conceptual framework but are not going to be considered for the scope of the thesis and are thus “cut-off” by red lined. The innovation represented by the label and standard is seen as moving inside of current socio-technical system.

In Figure 4 the red lines “cut-off” those aspects of the label that are not going to be look at. In fact, the study is not going to focus on the views single consumers hold about the FOP label nor the effects it has on consumer behaviors. The European and National legislative frameworks that enable and control the existence of FOP nutrition labels are also not included in the thesis.

The perspectives of the stakeholders and their potential impact on the current phase of standard and label development were investigated with documents and with interviews. The conceptual framework of Table 3 illustrates how the theoretical perspectives were used for data collection, the details of which are presented in the next chapter.

Table 3. Core concepts of each theory and their use for the research

Theory	Key component for the scope of the thesis	Use in data gathering
Multi-level perspective and Transition	Several units form a sociotechnical landscape: the sociotechnical regimes and innovation niches. A landscape tries to maintain its equilibrium with active resistance, but changes can occur. Transitions can be managed and are inherently political.	Identifications of the actors involved in each level; questions about how they are trying to block or push the transition to happen.
Stakeholder	Multiple actors are interested in a project and they can influence it in different ways	How the stakeholder is influenced by the label; how it interacts with other stakeholders; lessons from previous experiences
Label	A tool to inform consumers while potentially influencing their behaviours and, by reflection, those of producers	How are different labels expected to influence the stakeholder; what features should an “ideal label” have; lessons from previous experiences
Standard	A set or explicit rules that determine how something should be done. They are established by a standardizer body, often with the involvement of stakeholders	What the stakeholder is doing to influence the standardizer; what features should the standard and the standardization have; lessons from previous experiences

The research design used and the choices made to reach the aim of the thesis are accounted for in the next chapter.

3 Method

This chapter provides a description of the research design, the arguments behind the choices made during the development of the thesis and how the data were collected and analyzed. The chapter also presents the different ways through which quality was assured.

3.1 Research design

Research design can be seen as a plan, a scheme, that the researchers follow to collect, analyse and interpret the observations. It allows the researchers to control the relations between the variable they are studying and to assure that the evidences proposed address the research questions. Research design is about turning the research questions into an actual project (Yin, 1994; Robson & McCartan, 2016).

The thesis uses an inductive research process with flexible design. It means that data has been collected using mixed methods in a process that Robson and McCartan (2016) refers to as reiterative. Flexible designs can be analogous to qualitative ones (*ibid.*). Mack (2005: 2) describes qualitative research as the one that seeks to answer questions through a systematic use of a set of procedures to gather evidences and leads to findings that were not decided in advance and that can be applied outside of the research setting. The thesis follows an iterative method, since both the research questions and the data collection can be modified multiple times during the study. Qualitative research usually looks at the “human-side” of a phenomenon, providing an articulated description of how a certain groups of people experience it. This type of research is mostly used to explore phenomena, to describe its variations, relationships, *etc.* and in general identify factors that cannot be described with numbers (*ibid.*). Creswell (2014: 29) also suggests qualitative studies when not so much has been written about the topic or population in the spotlight and the paper has an explorative aim.

3.2 A literature review

New knowledge is built at the edges of the existing one and, in order to know where that boundaries are, a literature review is needed. Literature reviews should be valid, reliable and repeatable (Xiao & Watson, 2019). They can be seen as structured summaries that aim to identify the state-of-the-art knowledge in specific field and the knowledge gaps that need to be further investigated (Rowley & Slacks, 2004). Yin (2009: 9) specifies that a literature review should not aim to determine the answers about what it is known of a specific topic, but instead find and develop sharper questions. In this project the literature review served as ground for the research design as well as constituting a continuous “academic dialogue” for the on-going research project.

In order to develop this thesis, a vast array of scientific literature -covering food labelling, consumer behaviour, policy tools and standard development- was scanned and used all along the thesis process. The literature search was primarily done through online databases such as Google Scholar and SLU’s Primo, but materials from previous courses were also included.

Since the literature review constitutes the frame inside which the thesis is formed the quality of the material used has to be high, but evaluating sources it is not an easy task (Rowley & Slacks, 2004). Scientific articles, reviews and books were used to get an understanding that is grounded into a theoretical base and whose contents are subject to scientific scrutiny. By

looking at the references of these sources, it was possible to identify materials that were not initially found searching on the online databases. Backward and forward searching are techniques used to identify new relevant materials by searching for documents that cite or were cited by a relevant document. Articles from newspapers or other outlets were used to get a perspective on the contemporary dimension of the topic and of what the wider public might perceive as issues.

3.3 Case study

A case study is a method to seek empirical data that analyses a contemporary phenomenon by directly looking at the actors and events involved while in its real-life context. A case study reaches its full potential when the boundaries between the phenomenon and the context it occurs in are blurred and there are more variables of interest than data points (Yin, 2009: 13).

The case study definition fits the characteristics of the phenomenon the thesis focuses on. The development of a single European FOP nutrition label is a contemporary topic that is heavily influenced by a diverse set of actors and events happening within the member states. The case study is also to be preferred when the research questions are in the form of “*how* or *why*” and the researcher does not have control over the events it is looking at (*ibid.*). Nonetheless, Eisenhart (1989) points to some drawbacks to the use of a case study, such as the possibility to have results that are too rich in details and hard to transfer to other settings, as too grounded in a specific background. As for other types of research, it is pivotal to take into account and avoid biases the researcher may have (Yin, 2009).

3.4 Choice of the case and unit of analysis

The thesis has one unit of analysis, which is the debate around development of a FOP nutrition labeling scheme on the territory of the EU. This unit of analysis is seen as a revelatory one— using Yin (2009: 40)’s terminology- as it is linked to observing a phenomenon that was previously inaccessible to scientific investigation, in our case because the willingness to develop such a standard was not there. The unit of analysis is looked at in two different case studies, one being Italy and the other being Sweden, that enable to make a comparison.

These two member states were selected as they have different experience of regarding FOP nutrition labels. Sweden was the first European country to implement a FOP nutrition label in 1989, known as the The Keyhole (*Nyckelhålet*). The label is widely used and familiar to the population. On the other hand Italy had no official FOP nutritional label until the late months of 2020, the new NutrInform Battery is still largely unused and unknown to the population.

3.5 Data collection

A good case study utilizes data coming from a wide variety of sources. Having several data sources enables triangulation and can lead to final conclusions that are more persuasive and solid (Yin, 2009). Two sources of data were used for the scope of this thesis: documents and interviews.

Documents can assume the form of administrative documents, reports, studies, newspaper articles or other media devices, official announcements, *etc.* Documentation can be used to

confirm and reinforce evidence from other sources, can be reviewed multiple time, is not created because of the case study and can deal with multiple actors, events and time periods (Yin, 2009). Nonetheless, the researcher also has to keep in mind that the documents were created with a purpose and an audience that is not the one of the case study, and thus they should not be considered as complete, accurate and without bias. The access to documentation might also be incomplete because of the researcher ability to retrieve it or because its access is obstructed by the original sources (*ibid.*).

The documentation used is publicly available on the Internet and was sought among a variety of stakeholders' webpages. Most of the documents used are in English, but documents in Italian and Swedish were also included to get a more precise picture of the national level.

Interviews are used to gather different type of information about individual, organizations or other settings. Robson and McCartan (2016: 286) distinguish between interviews that aim to reveal facts and what people know, interviews that try to find out about specific behaviours and interviews that deal with people thoughts or beliefs. Interviews can be more or less structured and focused (Robson & McCartan, 2016; Yin, 2009). Strengths associated to the use of interviews are the possibility to focus only on the topic of the case study and the fact that they can give valuable insights about possible correlations. Since questions are often open-ended, they can lead to meaningful answers that are influenced by the cultural context (Mack, 2005). On the other hand, interviews are hard to standardize and thus not necessarily reliable, there might be important bias due to the way the questions are formulated, answered or because of the relationship that is established between the interviewer and the interviewee(s) (Robson & McCartan, 2016; Yin, 2009).

Semi-structured interviews were used. It means that the researcher prepares in advance a set of topics and questions that should be touched during the interview, but there is greater flexibility as further questions can come up during the interaction (Robson & McCartan, 2016: 290-291).

While conducting an interview, it is important to establish a connection with the interviewee. It means that the researchers have to show they are actively listening, that there is an understanding of what is being discussed and there is a willingness to carry on the conversation (Leech, 2002). The interviewer should also show to have a general understanding of the topics discussed, without showing to know more than the interviewee. A question order that moves from non-threatening questions to threatening ones has been shown to ease the conversation (*ibid.*).

Because of the limits imposed by the current COVID-19 pandemic, the interviews were conducted via the digital platforms such as Zoom and Teams. As from Archibald *et al.* (2019) and Lo Iacono *et al.* (2015), online interviews also have some other positive qualities, such as that they are convenient, efficient, flexible and give the opportunity to communicate with individuals that are in different parts of the world. At the same time, there are the downsides of potentially dropped calls, poor quality and the difficulties to read non-verbal cues (*ibid.*). Because of time constraints on the interviewee' side, one interview was conducted in a written format.

The target stakeholders are presented in Table 4, while Table 5 lists the characteristics of each interview with representative of the aforementioned organizations. A brief presentation of each of them is found in Appendix 1.

Table 4. Outlook of key stakeholders

Stakeholder group	Sweden	Italy
State Agency	Livsmedelsverket	Ministero della Salute
Association of consumers	Sveriges Konsumenter	Altroconsumo
Association of Food Industries	Livsmedelsföretagen	Federalimentare
Association of retailers	Svensk Dagligvaruhandel	FederDistribuzione
EU Commission	Member State	Member State
EU Council	Member State	Member State

Table 5. List of the interviewees, their organizations and the interviews' characteristics

Respondent's name	From	Type	Date	Summary sent on	Validated on
Amelin N.	Livsmedelsföretagen	Interview on Teams	15/03/21	17/03/21	22/03/21
Henriksson J.	Sveriges Konsumenter	Interview on Zoom	23/03/21	25/03/21	25/03/21
Öhrvik V.	Livsmedelsverket	Interview on Zoom	23/03/21	25/03/21	29/03/21
Bianchi E.	Altroconsumo	Interview on Zoom	22/03/21	25/03/21	20/04/21
Anonym	Federalimentare	Written interview	17/04/21	X	X
Buttarelli C.A.	FederDistribuzione	Phone call interview	31/03/21	1/04/21	1/04/21
Anonym	European Commission / Health and Food Safety / Office E1: Food Information and composition	Interview on Teams	19/04/21	20/04/21	X

Table 4 visualizes the identified stakeholder for each member country and their roles, the stakeholders with a similar role are on the same row. Table 5 shows the list of interviewees for each stakeholder, how and when the interview was conducted and when validation occurred. Validation was done by sending the respondent a summary of the topic discussed, which they were able to modify so to better present their position.

3.6 Data analysis

Yin (2009: 102) states that data analysis is the research stage that deals with examining, categorizing or connecting the evidences collected in order to reach the aim of the study. Analyzing data is at the core of a case study, but it is also the most demanding phase as often the researcher ends up with a huge quantity of materials that need to be critically examined while still collecting data (Eisenhardt, 1989).

The analysis was carried out by listening to the interviews, transcribing and finally using content analysis on the resulting texts. The other documents identified were also analyzed with this method.

Content analysis is a method to identify, analyze and report pattern of data with the goal of researching narrative sources (Vaismorandi *et al.*, 2013: 3). The method is about interpreting what the data in focus are about and to which theoretical or descriptive concept they are connected, which are called codes. Afterwards, the different codes are sorted into a smaller number of themes that are more closely related to the research questions. These patterns of themes and codes should already be sought already during data collection (Robson & McCartan 2016: 467-478).

Language is an issue to consider during qualitative data analysis, especially while using sources and data that are found in a language but are analyzed into another one. As pointed out by Santos *et al.* (2015), working in an international setting can require turning texts from one language to another while preserving the meaning and concepts originally intended. Translation can occur at different stages of the research process, but translations in the early steps of the process (for example, translating the interview transcript instead of the results) enables a more solid data analysis (*ibid.*). Assuming translation as a completely straightforward process might compromise the reliability of a translated dataset and the following conclusions (Al-Amer *et al.* 2014). While translating, it might be helpful to keep note of the decisions made, as well as keeping some features of speech that can reveal differences in the interviewee's background. In general, equivalence of meaning should be prioritized over literal translation (Santos *et al.*, 2015; Al-Amer *et al.*, 2014).

3.7 Quality assurance of the research process

Every research design should take into account how to achieve the highest level of reliability validity and trustworthiness possible (Riege, 2003; Robson & McCartan 2016). By constantly reflecting on the quality of the research design and of the choices and material used, a researcher can obtain more trust on the results and conclusions of a study, as well as in the data they come from (Riege, 2003). An illustration of the themes of quality assurance in case studies, as well of the techniques used in the thesis, is presented in Table 6.

Table 6. *Quality assurance tests and actions taken in the thesis (Adapted from Riege, 2003)*

Test	Meaning/aim	Examples of possible solutions	Used in the thesis
Credibility; Internal validity	Proving causal relationships, which is how certain circumstances lead to others; approval of research findings by interviewees or peers	Use of several sources of evidence; all possibilities are considered when inferring about something that cannot be directly observed	Use of multiple source of evidence such as scientific literature, interviews and other documents; dialogue with the thesis supervisor
Transferability; External validity	Generalizing the finding of the study outside of the boundaries of the project	Replicate the study design in multiple settings; having a clear aim and research boundaries; Comparison of the results with the already existing literature	Looking at the label development inside of different member states
Dependability; reliability	Showing that, if the same procedures were followed by other researchers, they would lead to the same results; using procedures and techniques in a persistent manner	Explain the relevant theories and concepts for each step of the project; Checking that the aim fits the research design of choice	

Confirmability; Construct Validity	About avoiding subjective influences on the study's design; the data are interpreted in a logical and objective way	Using multiple sources of evidence; Building a chain of evidence, so to be able to trace back from where the data and consequent elaboration come from; Use of data that could be used by others; review the field studies again while writing the final report	Constant use of literature sources to gain multiple perspectives; use of interview recordings, transcripts and validation by the interviewees
--	---	---	---

The strategies used to increase the quality of the study were various and occurred at different steps of the research development.

Ethical and political issues were considered while conducting the project, which led to choices being made. As suggested by Robson and McCartan (2016), the participants were asked for the consent to be interviewed and, already from the first exchange of email, they were communicated the aim of the thesis as well as that it would become public available. Before each interview, the participant was asked for the permission to record the conversation for the future analysis and, if they wanted to stay anonymous, their will was accomplished, as part of informed consent and adaptation to the GDPR legislation.

Research is, as many other human activities, a political act that is influenced by the researcher's own set of values and judgements as of the ones the participants (Robson & McCartan, 2016). As the development of a single European FOP nutrition label is a contemporary topic that has clear political consequences, there is the risk that the researcher or interviewees' own beliefs might influence the research design and significantly reduce the thesis' scientific validity. The presence of political bias was taken into account during the project as a factor that can reduce the thesis validity (Yin, 2009) and thus as something to take into account while assuring the quality of the research.

4 Background for the empirical study

The following chapter gives a brief introduction to how the European situation regarding FOP nutrition labels looks like and present, with further details, the experience of two EU Member Countries: Sweden and Italy.








4.1 The European nutrition labels landscape

The European legislation, through the regulation n° 1169/ 2011, mandates food products to display a nutritional declaration on the packaging, with the objective of ensuring the consumers' health and interests through the provision of information from which the individuals can make conscious choices. Article 9 lists a number of mandatory information to be given on the food package, such as the possible allergens, energy value and the nutrition declaration. The mandatory information must be effortlessly visible and legible on the package (European Parliament and Council, 2011/1169).

Within the same regulation, article 35 allows the use of additional forms of expression and presentation of the energy value and amount of nutrients on the package, as long as they can help consumers, are based on sound scientific knowledge, do not create obstacles to the free movement of goods, *etc.* The article also enables the Member States to develop new forms of presentation of the nutritional declaration, which the food industries can then endorse. The Member States should also monitor the types of additional forms of information present on their market and that they fulfill the criteria mentioned earlier. The introduction of this regulation has sustained the development of new labels on the food packages, as well as justifying the presence of labels that were already in place.

Over the years many EU countries have implemented voluntary FOP nutritional labels as part of national strategies to reduce diet related diseases. Sweden implemented the Keyhole logo in 1989, followed more recently by Denmark and Lithuania. Finland, Italy, Slovenia and Croatia have their own labels. Public authorities in France, Germany, Belgium, The Netherlands, Luxemburg and Spain recommend the Nutri-Score label. Some companies in Portugal, Switzerland, Austria and Slovenia are also using the Nutri-Score, even if it is not suggested by the national authorities. Private actors have developed the Healthy Logo label, which is used in Poland and Czech Republic (European Commission, 2020b). Noticeably, many of these labels do not fall under article 35 of regulation n° 1169/ 2011, since they do not communicate the nutritional content of a food but instead they give a simplified evaluation of it. These labels also take into account different criteria and are thus not completely equivalent to each other. Table 7 provides an overview of the FOP nutrition labels that have been enforced across the EU.

Table 7. Front-of-Pack nutrition labels on the EU markets

Label name	Label illustration (example)	Country and year of adoption
Keyhole		Sweden (1989); Denmark (2009); Lithuania (2013)
Nutri-Score		France (2017); Belgium (2019); Spain (2018); Germany (2020); Luxemburg (2020); the Netherlands (2019)
Heart Symbol – Better choice		Finland (2000)
NutrInform Battery		Italy (2020)
Healthy Living		Croatia (2015)
Protective Food - Little heart		Slovenia (1992)
Choices Logo		The Netherlands (2006- 2016); Poland (2008); Czech Republic (2011)

The European Commission aims to select and propose a single mandatory FOP label to use in the entire EU by 2022, as a part of the Farm to Fork strategy (European Commission, 2020a). The goal of the Strategy is to restructure the whole agri-food landscape of the European Union. The Farm to Fork strategy wants to foster the creation of a sustainable food system, which encompasses guaranteeing food security, public health and the access to safe, nutritious, adequate food for all (*ibid.*). The European Commission has yet to decide which label will be the proposed one to use in all member countries, but the Proposal to the Euro-Parliament and European Council is planned for the last quarter of 2022 (European Commission, 2020a). From a recent European survey (European Commission, 2020c) it

appears that around 85% of Europeans think there should be a logo that eases choosing healthier and socially and environmentally sustainable foods.

Different stakeholders have voiced contrasting opinions about the introduction of a new FOP nutrition label (Food Navigator, 2020; Food Navigator, 2021a,b,c,d,e; Nestlé, 2019; Sveriges konsumenter, 2020; Altroconsumo, 2020; El País, 2021). The reasons why certain stakeholders oppose a new FOP label are diverse. For example, they argue that a label working in one country might not work in another, that the dietary guidelines are different across the continent or that it could potentially undermine traditional diets (Livsmedelsverket, 2020; Federalimentare, 2020). Julia and Hercberg (2016) show how the opposition of the industries could potentially damage development of new nutrition labels.

At the moment, the Nutri-Score is the FOP labeling scheme implemented by most member states, and thus has greater chances to be used in the entire Union. Information about the Nutri-score label is found in Appendix 2. Nonetheless, some countries –as Italy- have proposed the implementation of other type of labels, such as the NutrInform battery (Egnell *et al.*, 2020; Gazzetta Ufficiale, 2020), that represent a complete different type of label than the Nutri-Score. The Commission as not forwarded a Proposal yet; as such the debate is still open.

4.2 The Swedish experience

The Keyhole (*Nyckelhålet*) is an evaluative nutrition label developed by the Swedish Food Agency, Livsmedelsverket, which can be found both on packaged and loose food products. It aims to help consumers make healthier dietary choices without revolutionizing their habits, but it also stimulates producers to make foods that comply with the label criteria (Livsmedelsverket, 2021a,b; Van der Bend & Lissner, 2019). The label has been used in Sweden for more than 30 years and has been implemented in other countries inside the European Union (Denmark and Lithuania) and outside of it (Norway, Iceland and Macedonia) (Livsmedelsverket, 2021).

A product has to satisfy certain criteria built from the Nordic dietary recommendations in order to be able to show the label. These criteria are set up by a cooperation of the public agencies of the Nordic countries using the label, but companies and other stakeholders are able to give comments on the proposal (Livsmedelsverket, 2021a; Livsmedelsverket, 2020). The criteria are listed in the rule LIVSFS 2005:9 and are different depending on the food groups: they span from requisites regarding the amount of fibers and whole-grains to the amount and quality of fats or sugars. Since the criteria for each food group are different, the keyhole label indicates the healthiest food choices within a certain group. Certain groups of goods, such as foods for babies younger than 36 months, cannot be marked with the label. At the same time, there are certain ingredients (such as sweeteners) that can never be used for aliments with the keyhole (LIVSFS 2005:9). A package of bread with the keyhole is considered healthier than a package of bread that does not has the label, but it is not necessarily healthier than, say, a sauce with or without the label. Amcoff *et al.* (2015) shows that a weekly menu based on products marked with the keyhole fits better into the Nordic diet recommendation compared to the same menu that does not use products with the label, especially when it comes to fibers, whole-grains and saturated fats. Noticeably, the label can also be used on loose products –then the label is on the sign- or on recipes that are found in the shops or on the web. Before it was ceased in 2017, the keyhole could have been used to

mark dishes on the menus of restaurants (Livsmedelsverket, 2021a). Recently, through a new legislation (LIVSFS 2005:9 with modifications in LIVSFS 2021:1) the use of the symbol was extended to new food categories such as ready-meals.

The use of the label is voluntary and does not involve any cost from the side of the producers, which are not even asked to report their use of it. Nonetheless, the municipal environmental and health-protection agencies are checking that the companies using the keyhole fulfill the criteria while conducting the regular controls (Livsmedelsverket, 2021a). Ipsos (2015) shows that the keyhole is appreciated by the actors in the food industry, which often use its criteria as a guiding star during the process of product development, even if they are not actually aiming at a product that satisfy the criteria. A problem can be that, as many criteria should be fulfilled –both in regards to the nutrient content than to taste, *etc.*- it gets harder to create new foods. At the same time, there are some perceived problems connected to the way the keyhole is developed and communicated over time, which can confuse people about what the label stands for, thus reducing the demand for marked products. Ipsos (2015: 22) suggests that, even that most people know the keyhole, few actually have a deep understanding of what it entails. An additional problem is that those with the worst food consumption habits are both the ones with a lower understanding of the concept behind the keyhole and the ones that are harder to reach with information (Livsmedelsverket, 2020: 13; Mørk *et al.*, 2017). The whole reasons for the industries to produce foods that satisfy the criteria for the label is to meet the demand, which comes from the consumers' perception of labeled products as having a higher value. As more concurring labels have entered the market shelves, differentiating and having a clear message have become increasingly important tasks. The actors in the food sector believe it is the Swedish Food Agency's duty to inform consumers about the keyhole, but they also argue that the Agency lacks the necessary resources for such a task (Ipsos, 2015). Even if changing purchasing habits are hard to influence, Mørk *et al.* (2017) shows that disadvantaged demographics can still be reached and their purchasing behaviors changed, but they require special campaigns to target them. Livsmedelsverket (2020: 9) says that the Nordic Food Agencies have started a campaign for the promotion of the Keyhole.

A recent publication of Livsmedelsverket (2021d) finds that 95% of the Swedish population recognizes the Keyhole label and that around half of them knows that the Food Agency is behind the label, trust the label and associate it with products that have a lower sugar content as well being richer in fiber and whole grains. There are also small differences when it comes to familiarity, knowledge and attitude towards the label across the different demographics, which point to the potential for the Keyhole to cut across social differences in food habits (*ibid.*).

4.3 The Italian experience

Italy lies well behind Sweden when it comes to experience with FOP nutrition labels, as a label of this type was just established in December 2020 while, in January 2021, the Ministry of Economic Development (Ministero dello Sviluppo Economico (**MISE**), 2021) has published a document describing how the label is to be actually implemented and used. The Italian FOP nutrition label, called the NutrInform Battery, is issued with the degree Decreto 19/11/2020 by a collaboration of the Ministries of Economic development, Health and the one of Agriculture, Food and Forestry. Several agriculture and food industries associations were

also involved in designing the text of the decree. The label represents the Italian proposal to be adopted in the entire Union as part of the Farm to Fork strategy (Gazzetta Ufficiale, 2020:46²).

Gazzetta Ufficiale (2020:47) states that the goal of the NutrInform Battery is to provide consumers with a clear but concise overview of the nutrient content of a food, which can help to frame the food inside of a balanced and varied diet which is able to prevent, in a scientifically sound and efficient manner, obesity and cardio-vascular diseases. The NutrInform Battery is not an evaluative label and thus does not give any overall value of the “healthiness” of a food product, but it is an additional tool to present the nutrient content of food and thus support the already mandatory ingredient list and nutrient declaration as by Regulation (EU) 1169/2011.

The NutrInform battery, as shown in Table 7, is made up of two rows and five columns: the upper row list the grams per portion of each nutrient; the bottom row contains a set of batteries, each contains a number that indicates how much the portion contributes to the daily average need for each nutrient, which is based on the recommended nutrient intake of EU regulation 1169/2011. Each of the five columns represents a different characteristic of the food, from left to right: energy, fats, saturated fats, sugars and salt (*ibid.*). The portion size is stated, in grams or milliliters, on the label itself and depends on the nutrition characteristics of the food as well as on the traditional food habits. Nonetheless, the portion size is not necessarily the one that the consumers actually eat in private. Packages containing more than one portion still have the label based on a single portion size, but the package will also specify the number of portions contained in the package (MISE, 2021). As MISE (2021) explains, in order to have a healthy diet a consumer should be careful to eat foods that, over a day, fill but not “overflow” the batteries for each nutrient.

The NutrInform Battery is voluntary and not associated to any payment; the producers that intend to use it should communicate it to the Health Ministry and expect future controls (*ibid.*). The label can be applied on all type of product but those with package area smaller than 25 cm² and those with Protected Designation of Origin (PDO), Protected Geographical Indication (PGI) and Traditional Specialties Guaranteed (STG) labels. The Ministries justify the exception stating that there is a risk that the use of the NutrInform Battery would impede the consumer to understand those labels, which certify the uniqueness and distinctiveness of the products bearing them (Gazzetta Ufficiale, 2020:47).

Information about the scientific background for the recently developed Italian label is scarce, especially when it comes to its effects on actual consumer and industry behaviors. The work of Mazzù *et al.* (2021) in seven European countries concludes that the NutrInform Battery is more effective than the Nutri-Score when it comes to make consumer understand the nutritional content of food. Similar results were obtained by Mazzù *et al.* (2020), which only focused on Italian respondents. On the other hand, the Nutri-Score appears to be the FOP label that better helps the Italian respondents to rank products according to their nutritional qualities (Fialon *et al.*, 2020), noticeably the experiment did not used the NutrInform Battery, but the very similar Reference Intake label.

² Gazzetta Ufficiale is publication of the Italian Republic that, on a daily base, presents and officialises the new legislative documents. It contains the Decree issuing the NutrInform Battery.

5 Results

This chapter presents the main findings from the interviews and the documents read, analyzed through the lens of the conceptual framework in chapter 2.5. The chapter starts with a description of the stakeholders views on the label, then it goes on with the opinions about the standards behind the label and it ends up discussing how the gathered evidences fit into the multi-level perspective on system transition. The information coming from the European Union is presented on their own, as they represent the views of a special type of stakeholder: the standardizer.

5.1 General information about data collection

As mentioned in the methodological chapter, data were collected through documents and interviews with the label's stakeholders. Each interview was different from the others, as the questions had to reflect some of the differences arising from the stakeholder's profile and experience. Nonetheless, all the interviews were built starting from some common "core-questions" about past and present experiences with the national label, the views on the need of a common European label, characteristics of the ideal label and type of involvement with the label development process. Examples of the questions are found in Appendix 3.

The methodological assumption that the selected organizations are stakeholders of the label is confirmed by the fact that all the interviewees showed a high degree of interest towards the possibility of a single mandatory FOP nutrition label, even if their opinions strongly differ over some of the features the unified label should have (pers. comm. Federalimentare, 2021; pers. comm. Amelin, 2021; pers. comm. Buttarelli, 2021; pers. comm. Henriksson, 2021, pers. comm. Bianchi, 2021).

5.2 How should the common label look like?

As express by many authors, labels are instruments to communicate with the potential consumers, show the subject's respect for specific schemes, differentiate and even gain an advantage over the competitors (Nancarrow *et al.*, 1998; Beltz & Peattie, 2013; Banovic *et al.*, 2019). The interviews show that different stakeholders have different expectations about how the common FOP nutrition labels should look like to consumers. The ideal features are presented in Table 8.

Table 8. How the "ideal" labels should be like, the opinions of different stakeholders

Some of the desired feature in the label	Stakeholder(s)
Voluntary	Livsmedelsföretagen; FederDistribuzione; Federalimentare
Mandatory	Altroconsumo; Sveriges Konsumenter
Simplified information	Altroconsumo; Sveriges Konsumenter; Livsmedelsföretagen
Non-simplified information	FederDistribuzione; Federalimentare
Based on portion size	Federalimentare
Non discriminating	Federalimentare; Livsmedelsföretagen; FederDistribuzione

The two Associations of Consumers agree that such a label should be simplified, based on colors that show the full spectrum of grades (from positive to negative) and mandatory. When it comes to the existing labels, both are supportive of the Nutri-score (pers. comm. Bianchi, 2021; pers. comm. Henriksson, 2021). Altroconsumo³ thinks that consumers would more easily use a label with those characteristics, as it would enable them to compare products without too many efforts; they also think that the label's efficiency to change patterns of consumption would come from the label's diffusion on the market (pers. comm. Bianchi, 2021).

The representatives of the food industries, however, have different opinions on the features of the "ideal" common label. The representatives of Federalimentare⁴ and FederDistribuzione⁵ question the attributes wished by the Consumers Associations, while being in favor of a label that is not simplified, not based on colors and that presents more information about the nutritional content. Their ideal label would provide consumers with more information about the single nutrients, which eventually could result in more conscious choices, without simplifying the overall nutritional value of food with "good" or "bad" grades. The label should also be voluntary (pers. comm. Federalimentare, 2021; pers. comm. Buttarelli, 2021). Livsmedelsföretagen⁶ agrees and stresses the importance of a voluntary label, stating that if the label works properly and is appreciated by the industries, than it is going to be adopted anyway. Livsmedelsföretagen, together with Livsmedelsverket, also notice that implementing a new label can require a company to invest significant amount of resources, which many small and medium enterprises might lack (pers. comm. Amelin, 2021; pers. comm. Öhrvik, 2021). The issue might be more pressing when the new label is mandatory (pers. comm. Öhrvik, 2021). Traditionally, the Livsmedelsföretagen has supported positive and non-stigmatizing solutions, such as the keyhole, but nowadays some member companies are supporting the Nutri-Score. Livsmedelsföretagen is thus in favour of an interpretative scheme (pers. comm. Amelin, 2021). Federalimentare also advocates for a label that does not stigmatize (pers. comm. Federalimentare, 2021).

In order for a label to have an impact, consumers have to be aware of what the label stands for. Awareness is often raised through the use of specific communication campaigns (Marcucci *et al.*, 2021). Some interviewees made clear the need for these campaigns. They argued that proper communication is needed to avoid misunderstanding about what the label stands for. The campaigns should also be correctly adapted to the national conditions (pers. comm. Bianchi, 2021; pers. comm. Henriksson, 2021). Livsmedelsverket⁷'s experience with the Keyhole has also proved the need for efficient marketing campaigns, both to generate awareness at the initial launch of the label than later on, to keep consumers receptive to it (pers. comm. Öhrvik, 2021). Livsmedelsföretagen points out that these labels also provide a framework that companies can use while communicating with their clients: consumers are likely to be more interested in nutrients that are covered by the keyhole, while keyhole bearing products might have an advantage in public food procurement situations (pers. comm. Amelin, 2021).

³ The biggest Italian Associations of Consumers

⁴ The Italian Federation of Food and Drink Industries

⁵ The Italian Association of Retailers and Distribution

⁶ The Swedish Federation of Food Industries

⁷ The Swedish Food Agency

5.3 The standard behind the label

The Swedish, Italian and possibly the future European FOP labels fit differently into the definitions of standard. Some definitions stress that standards should be voluntary (Brunsson & Jacobsson, 2000), while others have broader definitions that see them as the ideal way to do something, so to achieve the best degree of order possible in a given situation, regardless if their voluntary or mandatory (Ortmann, 2010; Zadek, 1998). The current European process can also be seen inside of the model developed by Zadek (1998): the nutrition standards are moving from being voluntary (and national) to being mandated by (international) legislation.

5.3.1 Rules and criteria behind the label

Standards are formed by explicit rules (Brunsson & Jacobsson, 2000), but different stakeholders appear to have significantly different views on what these rules should contain. Nonetheless, all stakeholders agree on the fact that the label should be based on scientific criteria.

Livsmedelsföretagen and Livsmedelsverket argue that the nutritional criteria behind the label should always have a clear link with the national dietary advices –which also include food traditions- (pers. comm. Amelin, 2021; pers. comm. Öhrvik, 2021). Altroconsumo, however, suggests that the differences between national dietary guidelines are not so significant and the nutritional issues are mostly the same all across the EU (pers. comm. Bianchi, 2021). Federlimentare and FederDistribuzione did not mention the national nutritional guidelines, but argue that any scheme should take into account dietary tradition, that in the Italian case are represented by the Mediterranean Diet (pers. comm. Federalimentare, 2021; pers. comm. Buttarelli, 2021).

The issue of which food categories should be covered by criteria, and thus possibly granted a label, is also source of disagreements. Although they strongly disagree on how the ideal label should be like, the Italian stakeholders agree that the label should be on all product categories. Federalimentare and FederDistribuzione argue that all products should be given the possibility to bear the label, as all foods can form part of a balanced diet (pers. comm. Federalimentare, 2021; pers. comm. Buttarelli, 2021). This position is also likely to come from the fact that these stakeholders want a label that is voluntary and that does not give “grades” to the products but instead presents nutrition information on the front side of a pack, in addition to those already displayed on the back (*ibid.*). Federalimentare also argues that, as the Mediterranean Diet shows, a balanced diet can contain all types of food if they are eaten in the appropriate quantities and frequencies and combined with physical activity (pers. comm. Federalimentare, 2021). Altroconsumo is also in favor of applying the label on all food categories, which specifies that those products that -in the case of a label with a graded indicator (as the Nutri-Score)- would be granted a red mark are not to be completely avoided but instead consumed with moderation (pers. comm. Bianchi, 2021).

On the Swedish side, however, some voices would be in favor of excluding certain food categories. Livsmedelsverket argues that the label should only be applied to the core-foods, those that the population consumes the most, and should avoid giving a positive image of foods that are not in line with the dietary recommendations [of the Nordic Countries] such as, for example, the soft drinks (pers. comm. Öhrvik, 2021). Sveriges Konsumenter has a less clear position, they think that most categories should be covered by criteria, but some food categories could maybe be excluded from having them. They are skeptical about expanding

criteria to all foods as some consumers with totally wrong diets could think they are following healthy diets just because they are eating the “green-segment” (pers. comm. Henriksson, 2021).

The parties that oppose an interpretative label, such as FederDistribuzione and Federalimentare, say that the label should provide “un-filtered” information about the nutritional content of the food the label is attached to (pers. comm. Buttarelli, 2021; pers. comm. Federalimentare, 2021). As a consequence, there are no nutritional profiles behind the display of the label, which instead present the amount of certain nutrients inside of a product without giving an overall judgment (*ibid.*). However, the actors that favor an interpretative label (as the Keyhole and Nutri-score are) also raise the question of which criteria should be satisfied in order to reach a certain “grade”. All these stakeholders agree that this negotiation is going to generate heated discussion. The Swedish actors highlight that the criteria are also strongly influenced by the national food habits and that establishing common criteria for the Keyhole has been challenging even in the Nordics, where the food habits are more similar than across the other European countries (pers. comm. Öhrvik, 2021; pers. comm. Henriksson, 2021; pers. comm. Amelin, 2021). One interviewee used the example of products such as the sweet bread, which is commonly eaten in Sweden but not in other countries. “Low in sugar” sweet bread would probably still be too sweet for Norwegian and Danes, making it harder to establish common criteria (pers. comm. Amelin, 2021). Livsmedelsverket also specifies that the criteria should take into account the main nutritional issues in the target areas (pers. comm. Öhrvik, 2021).

Creating common criteria is all about balancing the needs/expectations of consumers with the needs/expectations of producers (pers. comm. Amelin, 2021); the label and the criteria behind should guide consumers towards healthier choices but also incentivize the industry to reformulate (pers. comm. Öhrvik, 2021). We can expect that the more stakeholders at the negotiation table, the harder it gets to find the equilibrium. The equilibrium will also have to be reestablished every time new scientific evidences present the need for changes in the set criteria.

Two Italian stakeholders also raised the issue of whether the label should be based on 100 grams/millilitres or on portion size. Federalimentare stresses that the label should present information based on the content of nutrient based on a portion of that food, as that better represents the nutrient intake actually associated to that food (pers. comm. Federalimentare, 2021). Altroconsumo, however, argues that there are still no existing standardized-portions, and thus in the present conditions referring the label to a portion could mislead consumers (pers. comm. Bianchi, 2021).

5.3.2 Advantages and disadvantages to standards

Table 2 presented a number of pros and cons to the use of standards, many of which are also express by the words of the interviewees. From the evidence collected during the interviews, and illustrated in Table 9, it is clear that many of the pros and cons associated to the use of standards are also found in our case study.

Table 9. Pros and cons to the use of a single label and standard in the EU

Advantages to the use of a new label/standard	Disadvantages to the use of label/standard
<ul style="list-style-type: none"> Eases transmission of nutritional information (pers. comm. Bianchi, 2021; pers. comm. Henriksson, 2021; pers. comm. Amelin, 2021) 	<ul style="list-style-type: none"> Reduction of information [in the case of interpretative labels] (pers. comm. Buttarelli, 2021; pers. comm. Federalimantare, 2021)
<ul style="list-style-type: none"> Enables coordination (pers. comm. Amelin, 2021; pers. comm. Buttarelli, 2021; pers. co) 	<ul style="list-style-type: none"> Disadvantages for smaller or poorer organizations as a non-tariff trade barrier (pers. comm. Öhrvik, 2021; pers. comm. Amelin, 2021)
<ul style="list-style-type: none"> Creates a level-playing-field for the food operators (pers. comm. Federalimantare, 2021) 	<ul style="list-style-type: none"> Voluntary implementation might make the solution inefficient (pers. comm. Bianchi, 2021; pers. comm. Henriksson, 2021)

While designing the standard, it may be important to take these points into account, so to address criticisms while considering some of the pitfalls the standard might produces.

5.3.3 How stakeholders contribute to standard development

As Borraz (2007) and Brunsson and Jacobsson (2000) point out, standards are created by a standardizer but other actors often take part in their developing process, so that the standard can focus on real issues while also gaining legitimacy. In democratic institutions -like the European Union, Italy and Sweden- the involvement of stakeholders during the development process has even more importance. All the interviewed stakeholders stated to be part of the label and standard development process, but they might be participating in different ways whether they are on the national or European level.

As mentioned in subchapter 4.2, the Swedish Keyhole logo is owned by Livsmedelsverket and managed together with the Food Agencies of Norway and Denmark. The spokesperson for Livsmedelsverket stated that they are still working to promote people's knowledge of the label and for the refinement of the criteria behind the Keyhole, even if they are also following the development of the EU label (pers. comm. Öhrvik, 2021). Sveriges Konsumenter⁸ and Livsmedelsföretagen are engaged in the continuous development of the Keyhole on a national scale, but they also do –or plan to- different types of pressure on politicians at the EU level (pers. comm. Henriksson, 2021; pers. comm. Amelin, 2021). Livsmedelsföretagen continuously works to present the Swedish food industry's point of view to the Swedish delegations in the European Council and European Parliament, but it has also been communicating with the European Commission (pers. comm. Amelin, 2021). In fact, in July 2020, the Swedish, Finnish, Danish and Norwegian Associations of Food Industries sent a joint letter⁹ to the Commission expliciting their point of view on the FOP nutrition label proposal, which also reflects Livsmedelsföretagen's endure to coordinate with other actors so

⁸ The Swedish Association of Consumers

⁹ Letter from Livsmedelsföretagen, Food and Drink Norway, Finnish Food and Drink Industries' Federation, Danish Fødevarer to Stella Kyriakides, Commissioner for Health and Food Safety, European Commission; sent on the 15th of July 2020

to possibly have a greater impact. Sveriges Konsumenter is having a similar approach, even if they will try to make more pressure on the Swedish lawmakers, in Sweden and in the EU, once an official proposal will actually be on the table in late 2022. At the moment, they are mostly advocating to the European Consumer Association (**BEUC**)(pers. comm. Henriksson, 2021) but, together with their colleagues in Denmark and Norway, they have sent a joint letter¹⁰ to the respective Food Agencies. In the letter, they ask for a more active role in the European debate around the common label, which they hope could enrich the Nutri-score proposal with the experience gained by the Nordic countries in over 30 years of Keyhole use.

When it comes to the Italian scene, the situation is slightly different from the Swedish one. The NutrInform Battery's current development occurs at a table where representative of different ministries and stakeholders sit, but where the Associations of Consumers have been invited only from the beginning of 2019, when the design of the label was already decided and the experiments around it ongoing (pers. comm. Bianchi, 2021). Altroconsumo states that this late invitation has given them little power over the negotiations, even if they are still participating to the meetings (*ibid.*). Other Italian stakeholders have a different experience over the development of the national FOP label. FederDistribuzione has been working with the table and is satisfied with the results, even if they still see space for possible improvements of the NutrInform Battery (pers. comm. Buttarelli, 2021). Federalimentare is also supportive of the Italian proposal, as it satisfies all the requisites they believe a FOP nutrition label should have (pers. comm. Federalimentare, 2021).

In relation to the Italian stakeholder representation in EU, FederDistribuzione is working inside of EuroCommerce (Common European Association of Retailers), which, however, has still not found a common position because of contrasting visions between its members. Currently, FederDistribuzione is working to create alliances with their European colleagues, (pers. comm. Buttarelli, 2021). Federalimentare advocates on the EU level by participating to all meeting they are invited to as representative of the Italian Food and Drinks industries. They are also keeping in contact with counterpart organizations in other Member States (pers. comm. Federalimentare, 2021). Their efforts come from the belief that “*a structured dialogue with the Institutions and other stakeholders is fundamental to identify objectives and propose adequate solutions, that protect consumers' interests while protecting a fair competition between the companies working in the single market*” (*ibid.*).

Altroconsumo is also very active on the European level and, as Sveriges Konsumenter, is in complete agreement with BEUC's position on the matter, which is in favor of the Nutri-score (pers. comm. Bianchi, 2021).

5.3.4 Why a new standard should be adopted?

Many stakeholders also express the need to use standards as a consequence of globalization, one of the drivers towards standardization originally identified by Brunsson and Jacobson (2000: 36-39). The Consumer Associations argued that a common label is increasingly needed as people are increasingly crossing borders, might it even be for short periods of time (pers. comm. Henriksson, 2021; pers. comm. Bianchi, 2021) while the representative of the business actors stressed that international harmonization is something they usually strive for,

¹⁰ Letter from Sveriges Konsumenter, Forbrugerrådet Tænk, Forbrugerådet to Livsmedelsverket i Sverige, Fødevarestyrelsen i Danmark, Helsedirektoratet og Mattilsynet i Norge, copy to BEUC; sent on the 7th of September 2020

as it opens the possibility to compete on more markets without changing to many products characteristics (pers. comm. Amelin, 2021; pers. comm. Buttarelli, 2021). The interviewees also mentioned that their member companies often have diverging opinion in regards to a European FOP label depending on their international attitude: the companies that only trade on national markets are less in favor of a single label than those that carry on international commerce. For this last type of companies, a single label would mean to spend less resource in adapting to the single markets (*ibid.*). Federalimentare does not report such differences between its members; at it states that their companies are all in favor of a voluntary, informative label that is not based on grades or colors (pers. comm. Federalimentare, 2021). However, they are still in favor of a harmonized label, as it would create a level playing field between the industries of the European single market (*ibid.*).

5.4 Making a single label, a Multi-level Perspective on transition

As explained in the conceptual framework, for the scope of this thesis the different FOP nutrition labels (and the standards behind them) are seen as innovations inside of an established socio-technical system. These type of systems are stable, but still in a dynamic state that enable them to react to the instabilities happening in the real world, which are sometimes caused by the systems themselves (Hofman *et al.*, 2004; Geels, 2004). In order to react to these changes, transitions can occur (*ibid.*). A transition can be analyzed using the MLP framework, which look at the transition and the system(s) on three different levels: niche, socio-technical regime and socio-technical landscape (Geels, 2004). For the scope of the thesis, the whole EU is seen as the wider socio-technical landscape, which contains 27 socio-technical regimes represented by the single Member Countries. In fact, each Member Country, like Sweden and Italy, is a stabile system in which the different parts complement each other and enable the Country to exist.

5.4.1 A transition at different levels

Because of tensions and voids in the wider systems, space of opportunities can be created and niches of innovation constituted. If the circumstances that led to the creation of a niche persist, the niche can enlarge and try to change the regime or landscape, a change that is opposed by the incumbent actors in the regime (Geels, 2004; Geels, 2014; Edmonson *et al.*, 2019). Inside of each Country, innovation niches can occur and eventually evolve to impact and finally be part of the single-country's regime. If the conditions are favorable, the innovation can expand to more countries and eventually to the whole EU landscape.

The dialogue with the Swedish actors depicts a situation in which the Keyhole has grown, over 30 years, to a stable and overall appreciated role in the Swedish Food regime as well as in the one of other Nordic Countries (pers. comm. Öhrvik, 2021; pers. comm. Henriksson, 2021; pers. comm. Amelin, 2021). Even if some actors demand for improvements to the label, these are usually on the level of the categories to be included or excluded or on the criteria behind, and there is no significant criticism to the concept of the label per-se (*ibid.*). Livsmedelsföretagen gave an insightful perspective on how the Food Industry deals with the Keyhole. The interviewee said that the companies use the label as a benchmark while reformulating their products, even if they do not aim to a final product bearing the label, they still use the Keyhole's criteria as a guide while reformulating existing products or creating new ones (pers. comm. Amelin, 2021). This also proves the important role the Keyhole system plays in the system.

The innovation represented by the Italian NutrInform Battery, on the other hand, seems to still be on a niche level. This may be caused by its recent implementation, the fact that it is still being developed and thus not on the market, as well as to significant differences in the opinion different stakeholders have about this label. While certain stakeholders are fully supportive of the label, others do not think it could actually help normal consumers to make healthier choices (pers. comm. Buttarelli, 2021; pers. comm. Bianchi, 2021; pers. comm. Federalimentare, 2021).

The European Farm-to-Fork Strategy pushes for a transition towards a more sustainable agri-food system and the adoption of a single mandatory FOP nutrition label is one of several the proposed policies to make the transition occur (European Commission, 2020). At the moment, the legislative process is still at a very early stage, as the Inception Impact Assessment¹¹ (IIA) (European Commission, 2020, 7905364) for the policy shows. Eventually, of the many possible labels, only one will undergo the entire transition from being a niche or regime innovation to one that impact the whole landscape. Federalimentare, Livsmedelsföretagen and Altroconsumo have taken part to the open consultations organized by the European Commission to collect feedbacks on the IIA (European Commission, 2021 g,h,i). The feedbacks to the document present position on the lines of those presented in the interviews.

5.4.2 The role of politics

As Köhler et al. (2019) indicate, politics play a pivotal role in the transition process: politics decide which is the desired future and the ways to reach it. Both the Associations of Consumers pointed out how the political discourse in the respective countries is negative towards the perspective of a single label, and in particular towards the Nutri-Score (pers. comm. Bianchi, 2021; pers. comm. Henriksson, 2021). Being the only significant Italian actor in favor of the Nutri-score, Altroconsumo often receives messages from normal consumers asking: “*why are you supporting the French label, which is a conspiracy against our food?*” (pers. comm. Bianchi, 2021). On the other hand, Sveriges Konsumenter reports that, while the political discourse is overall negative towards the Nutri-Score and in favor of maintaining the Keyhole, consumers seem to be less aware about the ongoing debate (pers. comm. Henriksson, 2021). Still, Henriksson argued that the political willingness to find a common European solution would be pivotal to have a properly working label (*ibid.*).

FederDistribuzione recognizes the role of ideology in the transition too (pers. comm. Buttarelli, 2021), while Livsmedelsföretagen’s representative mentioned that the current European Commission has been pushing for more impactful policies compared to the previous ones, even in areas that were traditionally regulated on a national level, such as Health and Nutrition (pers. comm. Amelin, 2021). At every election, the ideologies represented can change and block or push forward the transition.

Finally, politics is intertwined at all levels with the other components of a landscape (Meadowcroft, 2011). When looking at the politics of transition, a researcher has to think

¹¹ An Inception Impact Assessment is a document produced at the very beginning of the legislative process, which aims to inform citizens and stakeholder on the Commission’s legislative plans, so to allow them to provide feedbacks that can help that deepen the Commission’s understanding of the problem and the possible solutions and impacts. The document provides a context to the proposed policy; briefly illustrating the problems it aims to solve, the policies objectives and options, and an assessment of the impact the policy would have on economy, society, environment, fundamental right and on administrative burden. The document also presents some of the scientific evidence behind the policy. Once the IIA is published, open consultation are held and, afterwards, a Impact Assessment is published (European Commission, 2021)

about the way politics interact with all the units of a regime, which are the desired outcomes for each actors and which circumstances are more likely to make the transition happen or not (Meadowcroft, 2011; Köhler *et al.*, 2019). As shown in this chapter, various stakeholders have different expectations from a FOP nutrition label, which thus influence their positions and what an expectable label looks or does not look like. As a consequence, they try to steer the process in different directions.

Markard and Rosenbloom (2020) show that there are usually multiple policies stirring socio-technical transitions, these set of policies are called policy mix. The stakeholders agree that in order to have healthier eating behaviors, other actions that that the implementation of a single FOP nutrition labels should be undertaken. Examples could be communication campaign on the guidelines of healthy diets; less advertising and higher prices for unhealthy products; investments in Research and Innovation (pers. comm. Henriksson, 2021; pers. comm. Bianchi, 2021; pers. comm. Öhrvik, 2021). However, a respondent highlighted that any proposed solution has to contribute in creating an equilibrium in the value chains: an equilibrium that absorbs costs without reducing margins while preserving the rights to produce in different ways (pers. comm. Buttarelli, 2021).

5.5 The Standardizer

In our case study, the organization behind the development of a single FOP nutrition label is the European Union. The EU is formed by different Institutions, which have different roles at different stages of the legislative process. In order for a law to go through the entire procedure and become official, several Institutions (European Commission, Council of the European Union and European Parliament) have to agree on its text while also having the possibility to shape it content (European Union, 2016).

Currently, the EU is still in an early stage of the FOP nutrition labels harmonization project: the European Commission wants to send a proposal for a harmonized mandatory FOP nutrition label to the European Parliament and Council by the last quarter of 2022 (European Commission, 2020a). Figure 5 gives a simplified overview of how the legislative process for the development of the harmonized FOP nutrition label looks like.

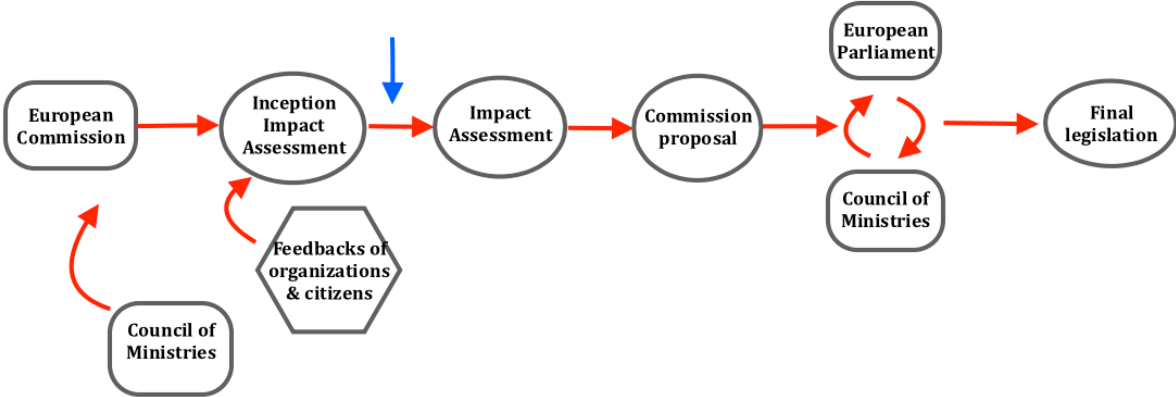


Figure 5. Simplified overview of the legislative process. The blue harrow indicates where things are now.

Once the Commission has prepared the Proposal, it is going be discussed by politician in the EU, modified and eventually implemented across the Member Countries. Virtually all the features of the future harmonized label are still up to discussion and change. In this phase of the legislative process, the Institutions playing a bigger role are the European Commission

and the Council of Ministries. The following paragraphs present their current stance regarding the harmonization of FOP nutrition labels.

5.5.1 European Commission

The interview with the Office for Food Information and Composition of the Health and Food Safety Department of the European Commission illustrates the current state of the works around the proposal for the harmonized labeling scheme. At the moment, the Commission is working to gather the existing scientific evidence about how FOP nutrition labels work, so to support the decision making process that will lead to the Proposal. The evidence will be contained in a specific Impact Assessment, which is also going to be associated with an extensive round of consultations with stakeholders, panels of experts, citizens, *etc.* (pers. comm. Expert, European Commission, 2021).

As the interviewees pointed out, any proposed labeling scheme will have to be scientifically sound and supported by evidences. In 2020, the Commission's Centre for Policies Report has published a work presenting state-of-the-art knowledge about FOP nutrition labeling, but as new evidences have been produced recently, a new updated report is being produced (*ibid.*). Furthermore, the European Food Security Authority (EFSA) is going to help identify which are the nutrients of public health relevance in the EU, which food groups play important roles in the different cultures of the Union and the criteria to be covered or not covered by the future labeling scheme (EFSA, 2021).

These scientific reports are going to help expand on the issues connected with FOP nutrition labeling schemes, which were also mentioned in the interviews with the other stakeholders, in the IIA and in the feedbacks to it. However, even if these reports will be included in the Impact Assessment, they will not determine what will be included in the Proposal, as they only provide reliable information to the Commissioners, which are the ones responsible for making the decisions. Still, the aforementioned scientific evidences will probably help to bridge between the different parts in the political debate and find common ground (pers. comm. Expert, European Commission, 2021).

As the interviewees pointed out, harmonizing on the base of the existing schemes is a challenging task: even if all stakeholders seem to be in favor of it, different countries have different experiences, interests and objectives (*ibid.*). As a consequence of these differences, a harmonized FOP nutrition label has been politicized from the very beginning of the law making process, where all the features are still to be defined. Although the Proposal is not written yet, both on a European and National level statements are already being made about what it should or should not contain and what should be the exempted products. However, even in this early phase of the process [development of Impact Assessment and Proposal] the Commission has to think about the political views, as the politicians in the European Parliament and Council will eventually discuss any proposal (*ibid.*).

The stakeholders in Italy and Sweden have presented contrasting views whether the label should be voluntary or mandatory, as stated in the Farm to Fork Strategy. The interviewees from the Commission stated that the Commissioners have put forward a mandatory label, as it seems the best response to citizens' request for such a label. If a mandatory harmonized label is to be established, the current rules will also have to be changed. The Initiative is, in fact, called "Proposal for a revision of Regulation (EU) No 1169/2011 on the provision of food information to consumers". However, even this label's feature is still up to discussion (*ibid.*).

5.5.2 Council of the European Union

The Agriculture and Fisheries Council has been discussing a draft of the Council Conclusions on FOP nutrition labeling during some of its meetings. Even if the meeting occurs on a monthly base, the last discussion about the harmonized FOP nutrition label was in mid-December 2020 (European Council, 2021). One of the goals of that meeting was to adopt a Conclusion on FOP nutrition labeling, which could bring together the views of the different Member States. However, no consensus was reached (*ibid.*).

The Council's Conclusions were not adopted because of the sole opposition of the Italian, Greek and Czech National Delegations¹². It was not possible to attain official documents to support the disagreement between, but some of the possible issues can be supposed by comparing the content of the proposed Conclusions with the one of a non-paper document¹³ sent in September 2020 by a number of Delegations to the Council, which aimed to contribute to the discussion around the FOP nutrition label.

Noticeably, some of the issues raised by the Delegations in September were not addressed in the proposed Conclusions text and thus might have created the political misalignments that blocked the Conclusions from passing. However, some of the points were addressed and might have led Cyprus, Hungary, Latvia and Romania to become supporter of the Conclusions, while still not convincing the Italian, Czech and Greek Delegations. Table 10 provides the reader with a brief comparison between the issues address by the two documents and highlights common grounds and differences.

¹² Presidency Conclusions on Front-of-pack nutrition labeling, nutrient profiles and origin labeling. Sent from the Presidency to the Delegations on the 15 December 2020

¹³ Front of Pack Nutrition Labeling – *Information from the Italian and Czech Delegations, on behalf of the Cyprus, Czech, Greek, Hungarian, Italian, Latvian and Romanian Delegation*. Sent from General Secretariat of the Council to the Delegations on the 17 September 2020.

Table 10. Political convergences & divergences inside of the Agriculture and Fisheries Council

Issues	Signatories of the Presidency Conclusions on FOP nutrition labeling – December 2020	Signatories of the non-paper on FOP nutrition labeling - September 2020
Harmonization	Yes	Yes
Complementary to national nutrition guidelines and respectful of national cultures	Yes	Yes
Easy to understand without in-depth nutrition knowledge, visible and unambiguous	Yes	No
Transparent for the consumers and easy to monitor	Yes	No
Exclusion of certain food categories (such as PDO, PGI, TGI and single-ingredient products)	Yes	Yes
Non evaluative label, no use of colors but provision of factual information	No	Yes
Reference to actual intake instead of 100 grams or milliliters	No	Yes

As Table 10 shows, while all Member Countries unite on certain characteristics the labelling scheme should have, there are still huge differences of views over other issues, such as evaluative or non-evaluative labels and reference on a portion instead than on 100 grams or millilitres. Noticeably, some of the fractures inside of the Council reflect the differences in opinion regarding the harmonized label that arose during the interviews with the stakeholders.

The gathered evidences reveal a situation in which there are still significant contrasts in the views held by the standardizing actors and the stakeholders. These differences point to issues on which an agreement is far from being reached and where more scientific evidence is needed to support any position and any resulting decision.

6 Discussion

This chapter discusses the results in relation to the research questions and, when relevant, compare them with those of other studies. The latter part of the chapter points out the limits of the present study.

6.1 Stakeholders' views on Front of Package Nutrition Label

The positions of the stakeholders differ from one another, as they often have contrasting requests from a harmonized labeling scheme; however, some patterns can still be detected on the lines of country of origin and stakeholder's role.

The Swedish stakeholders tend to be more in favor of an evaluative label than their Italian counterparts. All the representatives of the food businesses agree that the labeling scheme should not discriminate any product. While the representative of Consumers pressure for a mandatory label, all the other stakeholders advocate for a voluntary scheme. All stakeholders agree that the labeling scheme should take into account regional differences when it comes to health issues and diets, even if they disagree on the magnitude of similarity and differences inside of the UE.

The Swedish stakeholders agree that the Keyhole can be considered a successful example of FOP nutrition label and that there are risks connected to the use of a new labeling scheme uprooting it, even as they might see the benefit of a harmonized label.

On the Italian side, the Consumers Association's view align with the one of their Swedish colleagues; while the Representatives of businesses strongly oppose the development of an interpretative label that gives a grade on the overall quality of the food. Instead, they support a non-evaluative label.

Finally, all stakeholders advocate their views both on a National and International level and are often dialoguing between them through national tables or European Associations of Categories. Balzarova and Castka (2012) notice that the stakeholders that are more active, for example producing a bigger amount of comment to the standard's draft, are also going to be more influential. The research showed also that the comments were accepted more often when falling in their areas of expertise (*ibid*). At the current phase of development of the harmonized labeling scheme it still unknown which points of views -collected through the IIA, IA or in other circumstances- will be integrated in the Proposal to be discussed. However, the current activity of the stakeholders reveals their willingness to be heard and influential.

Balzarova and Castka (2012) identified steps that stakeholders follow in order to influence and contribute to the standard debate, this steps are: elimination of controversial points that might lead to undesired consequences; link of the standard to other documents and guidelines; consensus building by underling the areas for further dialogue or exclusions; reinforcement of important issues; improvement of the content of the new standard. At the moment (first semester 2021), the contributions from the stakeholders to European FOP nutrition labeling development is still in at the elimination and linking phases of the process, even if comments about themes that will be further discussed are already being made.

The current scientific knowledge (as from Storcksdieck genannt Bonsmann *et al.*, 2020) suggests certain types of label to be more likely to be understood and influence consumers, however the labeling schemes proposed by certain stakeholders are different from those. The NutrInform Battery label, backed by most of the Italian stakeholders and politicians, does not have the features the state-of-the art presented by Storcksdieck genannt Bonsmann *et al.* (2020) suggest as those a label that effectively changes consumer behavior should have. However, more research is needed and recent works by (Mazzù *et al.*, 2020; Mazzù *et al.*, 2021) show that the NutrInform Battery is able to improve consumers' understanding of product composition, even if it lags behind the Nutri-Score when it comes to its ability to help consumers rank products in order of nutritional value (Fialon *et al.*, 2020).

Some interviewees use arguments or actions that are similar to those used by certain stakeholders during the development of the French FOP nutrition label and presented in an article by Chantal and Hercberg (2016). The actions of the French food industries came from the proposal, by the French Minister of Health, to develop a FOP nutrition label that classifies foods into five different nutritional categories, based on their nutritional profiles. The proposal has then led to the creation and implementation of the Nutri-Score label (*ibid.*). The French representative of food businesses argued that such a label was potentially discriminatory and based only on a simplistic and functional approach to food, while arguing that the label should take into account the whole setting in which food consumption actually takes place. As the Italian Representatives of businesses, the French also worked together to develop their own label, which was not backed by science in all its features and was criticized for being complicated for consumers to understand (*ibid.*). Eventually, these actions slowed down but did not stop the development of a FOP nutrition label in France. The actions undertaken by the French food businesses were eventually uncovered by the press and have led to a negative public opinion towards them (*ibid.*). Temple (2016) also reports the lobbying actions that the agri-food industries have carried out in the United States and that have led to step-backs in the creation of policies aiming to improve public health through policies impacting diets.

The aforementioned resistance of certain industrial stakeholders to public-private solutions addressing public health has led many authors such as Moodie *et al.* (2013) and Temple (2019) to conclude that those industries producing unhealthy food should not play a role in the development of related legislation. Moodie *et al.* (2013) concludes that government, while discussing with stakeholders, should always be grounded in scientific evidence. However, the experience of the Keyhole (that the Swedish stakeholders judge successful, even if disagreement have arisen over single issues) proves that stakeholders with very different agendas can collaborate on initiatives promoting public health. The Keyhole collaborative model could be used as a template for how to manage the debate between different stakeholders and the standardizer. However, the different cultural background of the stakeholders, of the consumers and other regional differences might undermine the suitability of the model in different countries or in the EU. These cultural differences are still significant in the EU (Institute for Future Studies, 2020). In any case, with proper management, it may be possible to obtain a quicker and smoother development of a harmonized European FOP nutrition label, which ideally would create a new equilibrium for all the parts of the food system and a healthier society.

The present research confirms that voluntary solutions could arise less resistance during their establishment, as argued by Temple (2019). Voluntary schemes are more likely to be adopted and, even if their effect would be minor than if with a mandatory implementation, they could

still bring to positive results by highlighting the healthiest products to consumers and incentivizing reformulation efforts (Temple, 2019).

6.2 Standardizer and standard development

On the standardizer side, seen as the European Union, the points that the Delegations have been discussing during the Council meetings seem to reflect the ones the Italian and Swedish stakeholders presented. However, the divide between factions is still large and around issues such as type of labeling (evaluative or not) and quantity of reference (portion or 100 grams/milliliters). The delegations also agree on the possible exclusion of certain food categories from the FOP labeling scheme. However, the need to exclude these categories was not expressed by any of the interviewees: the Italian argued that all products might be part of a balanced diet, and thus could bear a FOP nutrition label; while the Swedish ones have reserves to attach the FOP nutrition label to certain food categories. The Delegations, as the stakeholders, agree on the need for harmonization while producing a labeling scheme that is based on science and complementary to other policies aiming to improve people's health.

The European Council is still at an early stage of the Proposal's development, but the competent offices are developing the scientific materials the Commissioners will use to make their decisions. In addition, the opinions of different stakeholders have been collected as feedbacks to the Inception Impact Assessment and will be further investigated into the Impact Assessment. This is in line with Balzarova and Castka (2012)'s finding that the standardizers tend to reach a consensus between the stakeholders by including the opinion of the stakeholders. At the same time, the efforts done by the European Union to collect evidence and opinions from the stakeholders resonate with Black (2008)'s analysis of the dynamics of legitimacy building in polycentric regulatory regimes. Legitimacy comes from the credibility and acceptability of an actor to those whose actions it intends to rule over. However, in polycentric regulatory regimes as the EU there are additional issues connected to the coordination inside of the regulatory regime, fragmentation of legislation, challenges regarding who should be represented and listened to and problems arising from different perception of what an "optimal" outcome is. These issues create a more complex setting for legitimacy building (Black, 2008: 4-5). It is also significant to notice that, actions that might make an organization more legitimate for an actor might make it less legitimate for another (*ibid.*), in particular when the stakeholders have contrasting interests, as in our case study.

The evidences collected for the purpose this study about the role of a standard reflect in many ways those found in other studies. The pros and cons to the use of a single FOP nutrition standard in the EU, as stated by the stakeholders, reflect those listed by (Brunsson & Jacobson, 2000: 169: 171; Brunsson *et al.*, 2012; Swinnen, 2016), with different stakeholders pointing to different elements.

In line with the literature (Brunsson & Jacobson, 2000), the stakeholders pointed to globalization as the main reason for a harmonized FOP nutrition label; goods are sold to other countries in the single market and consumers travel, so a less fragmented solution which still preserves the national differences would be appreciated by many. In fact, globalization emerges from the interactions of actors that are geographically distant, or from actors whose actions spans international borders. Since there is not a global formal organization and legislative body, standards can represent a way to coordinate these actors. For example, the European Union often has little authority since its members are nation-states that want to preserve –with different degrees- their independence. Standards are thus used as an alternative mean of governance, since the member countries perceive them as voluntary. By using

voluntary standards, the EU has been able to have a great control and to assure coordination inside its borders (Brunsson & Jacobson, 2000; Borraz, 2007) even if an uneven application or interpretation of the legislation has also led to problems (Terlicka & Jukes, 2014). Supposedly, a mandatory labeling scheme would create more divergences than a voluntary one would do.

Nonetheless, there are also obstacles to the homogenization of standards across international borders, such as the high costs of changing regulatory systems that are already in place and the fact that international standards might be adaptable to the specific needs of certain countries, *etc.* (Handford *et al.*, 2015; Botzem & Dobush, 2012). These obstacles were also reflected in the words of the stakeholders, that for examples are worried about losing a well-established such as the Keyhole or argue the fact that it is hard to get over national dietary differences.

Finally, when it comes to a transition point of view, the different labeling schemes are found to be on different levels of the MLP framework. The different parts that constitute the system(s) are all working to regulate the transition, through different types of actions, but they are pushing for different types of outcomes: some strive for solutions that might save the *status-quo*, while others work for more radical changes. The process, as many stakeholders said, is inherently political. The same idea was put forward by Meadowcroft (2007); sustainability transitions are always political and the required changes can only occur on the wider level represented by the State, which drives the legislative debate while providing it with legitimacy and possibility of enforcement. In our case study, both the European Union and the Member States can provide the political power to enact systemic change. In this light, it is significant that the debate inside of the European Council is partially reflecting the position held by the different stakeholders, as well the Commissions' effort to include stakeholders' views in the Impact Assessment document.

As advocated by many stakeholders, the European Union and the scientific community (Hawkes *et al.*, 2013; Vallgård *et al.*, 2015; Temple, 2016), any policy mix that wants to address the malnutrition epidemic and make people adopt healthier diet will have to comprise a set of very different but complementary policies addressing all factors influencing food consumption. Any food-labelling scheme, regardless of its design, will, at best, only be capable of influencing a little part of the environment in which diet decisions are made. As a consequence, politicians and other decision-makers aiming for healthier societies should implement a set of integrated solutions addressing different aspects of the food system. Nutrition labels are not the most efficient instruments to stir consumers' behaviours while shopping (Scrinis & Parker, 2016). While there are benefits in providing more information, Temple (2019) presents the risk that too much information on the product can actually confuse the potential consumer. There are also large knowledge gaps in the effects FOP nutrition labels have on the actual sales and reformulation efforts of the food companies (Storcksdieck genannt Bonsmann *et al.*, 2020), which could potentially reveal downsides of this type of labeling. Golan *et al.* (2001) highlights that labeling solutions can be more easily implemented when there are many political divergences, thus developing a harmonized FOP nutrition label in the EU aiming to help consumers make healthier food choices could be a relatively smooth process when compared to the ones of other possible solutions. A labeling solution, together with other policies, could finally help consumers make healthier eating choices and contribute to alleviate the burden of overnutrition.

6.3 Limits and criticism

The thesis is associated with a number of delimitations that limit the extent to which the outcomes of the study can be generalized.

Sweden and Italy are significantly different countries when it comes to culture (Institute for Future Studies, 2020) and experience with FOP nutrition labels. While Sweden's governance structure reflects more experience with this type of labeling, as it goes back in time for around 30 years, the Italian governance structures has less experience on these labels. At the same time, the Swedish interpretative label has been developed over the years and is now found in other European Countries as well, which collaborate in its development. The Italian Nutri-Inform Battery, on the other hand, is a national experience that is still not found on the market and that does not evaluate the products but instead presents the amount of certain nutrients contained in the food. Arguably, almost all the other Member Countries have experiences with FOP nutrition labeling comprised in the "experience-span" between Italy and Sweden. Furthermore, the interviews and documents only give information about a short period of time of the development of the harmonized labeling scheme, a process that is expected to go on for years. The selected stakeholders, even if relevant on a National scale, do not represent all the point of views and thus other important positions might have been overlooked.

7 Conclusions

The last chapter of this study shows how the research has reached the aim and answered the research questions. The chapter presents the implication of the present paper and also proposes research topics that can be investigated through further works.

The aim of this work was to identify the themes of the debate around the development of a single FOP nutrition label in the EU. The intent is to put in the spotlight the issues pointed by the stakeholders and eventual common grounds that could facilitate the debate inside of the EU.

7.1 Themes of the debate

While the stakeholders agree on the benefit of label harmonization on a European level, they have very different opinion in regards to the features the new labelling scheme should have. The disagreements emerge on the lines of the role of the stakeholder and of its country of origin and reflect the different national experiences when it comes to FOP nutrition labels. The stakeholders are participating in various ways to the development of their national labels, while trying to influence the European process. Their point of views and experiences are reported to the policy-makers directly or through the mediation of European associations of category.

The European Union is the organization responsible for the development of a harmonized labelling scheme. At the moment, the process is still at an initial state. The European Commission has explicated, in the Farm to Fork Strategy, the intention of proposing such a label in the last quarter of 2022. The Commission has published an Inception Impact Assessment, which citizens and stakeholders in the EU where invited to comment, and is currently working to collect all the relevant scientific evidences that the Commissioners will eventually use in the Proposal. The European Council of Ministries has also already been discussing the topic, but the Ministries have not yet been able to reach a consensus on which features the labelling scheme should have. For the most part, the political debate in the European Council reflects the one presented by the stakeholder interviewed.

The themes currently debated by the stakeholders or inside of the European Institutions are:

- Goal of the label: to inform consumers or to guide them?
- Type of enforcement: voluntary or mandatory?
- Type of design: evaluative label or not, scale of grades or positive character?
- Food categories: type of divisions, exclusions, nutritional profiles and criteria
- Degree of regionalization: link with dietary guidelines, food traditions, and regional health issues
- Quantity the label refers to: on 100 grams or millilitres or portion-based?

7.2 Implications

As the present work shows, finding mutual ground in the legislative process is not an easy task, especially when the expected stakeholders have different agendas and experience. A systematic collection and comparison of the different point of views is expected to benefit both the stakeholders and the politicians. While politicians would get a clearer vision of the

consequences of any decision they may take; the stakeholders could find possible allies and compare their views to those of others, eventually producing comments that are more likely to be accepted and influence legislation making. While the details of the different points of views are entrenched in their national contexts, the general elements of the debate emerged from this study could be of relevance for stakeholders in other Member States or non EU-countries that want to implement this type of labeling scheme. Still, the cultural dimension of this political process should not be underestimated and it points to the need of multi-cultural ability to comprehend the different perspectives and find shared grounds and meanings. The knowledge gained with this study also has application in the fields of standard or policy development and stakeholder management, both when it comes to FOP nutrition labels than to other types.

7.3 Suggestions for future research

As also shown by the literature reviewed, there are still significant knowledge gaps regarding all aspects of FOP nutrition labeling. These voids need to be filled in order to better understand FOP nutrition labels' consequences on food industries and consumers, as well as on how they can contribute to the transition towards a healthier society. Future works could, for example, look at the opinions of stakeholders in Member States other than Swedish and Italy or could also follow the development of the label for longer time, so to better understand how the different opinions change over time and are, eventually, adopted in the final text. In addition, it could be relevant to study how the label issues are communicated from the stakeholders to normal consumers and businesses, both through social-media or other tools.

Finally, it could be significant to look retrospectively at the standardization process of another label, in order to see how it was managed and evolved over time.

References

- Al-Amer, R., Ramjan, L., Glew, P., Darwish, M., & Salamonson, Y. (2016). Language translation challenges with Arabic speakers participating in qualitative research studies. *International journal of nursing studies*, 54, 150-157.
- Allison C., Carter A. (2000). Study on different types of Environmental Labelling (ISO Type II and III Labels): Proposal for an Environmental Labelling Strategy.
- Archibald, M.M., Ambagtsheer, R.C., Casey, M.G., Lawless, M. (2019) Using Zoom Videoconferencing for Qualitative Data Collection: Perceptions and Experiences of Researchers and Participants. *International Journal of Qualitative Methods* 18, 1609406919874596. <https://doi.org/10.1177/1609406919874596>
- Ares, G., Varela, F., Machin, L., Antúnez, L., Giménez, A., Curutchet, M.R., Aschemann-Witzel, J. (2018). Comparative performance of three interpretative front-of-pack nutrition labelling schemes: Insights for policy making. *Food Quality and Preference* 68, 215–225. <https://doi.org/10.1016/j.foodqual.2018.03.007>
- Asp, N.G., Bryngelsson, S. (2007) Health claims in the labelling and marketing of food products: *Scandinavian Journal of Food and Nutrition* 51, 107–126. <https://doi.org/10.1080/17482970701652203>
- Balzarova, M.A., Castka, P. (2012). Stakeholders' Influence and Contribution to Social Standards Development: The Case of Multiple Stakeholder Approach to ISO 26000 Development. *Journal of Business Ethics* 111, 265–279. <https://doi.org/10.1007/s10551-012-1206-9>
- Banovic, M., Reinders, M.J., Claret, A., Guerrero, L., Krystallis, A., (2019). A cross-cultural perspective on impact of health and nutrition claims, country-of-origin and eco-label on consumer choice of new aquaculture products. *Food Research International* 123, 36–47. <https://doi.org/10.1016/j.foodres.2019.04.031>
- Belz, F.M., Peattie K. (2012). Sustainability marketing: a global perspective, 2nd ed. ed. Wiley, Chichester.
- Biernacki, P., Waldorf, D. (1981). Snowball Sampling: Problems and Techniques of Chain Referral Sampling. *Sociological Methods & Research* 10, 141–163. <https://doi.org/10.1177/004912418101000205>
- Bijlsma R., Bots P.W.G., Wolters H., Hoekstra A.; (2011) An Empirical Analysis of Stakeholders' Influence on Policy Development *Ecology and Society* Vol. 16 No. 1
- Black, J. (2008). Constructing and contesting legitimacy and accountability in polycentric regulatory regimes. *Regulation & Governance* 2, 137–164. <https://doi.org/10.1111/j.1748-5991.2008.00034.x>
- Borraz, O. (2007). Governing Standards: The Rise of Standardization Processes in France and in the EU. *Governance* 20, 57–84. <https://doi.org/10.1111/j.1468-0491.2007.00344.x>
- Boström, M., Hallström, K.T. (2013). Global multi-stakeholder standard setters: how fragile are they? *Journal of Global Ethics* 9, 93–110. <https://doi.org/10.1080/17449626.2013.773180>
- Botzem, S., Dobusch, L. (2012). Standardization Cycles: A Process Perspective on the Formation and Diffusion of Transnational Standards. *Organization Studies* 33, 737–762. <https://doi.org/10.1177/0170840612443626>

- Brereton, P., Kitchenham, B., Budgen, D., Li, Z.H. (2008). Using a Protocol Template for Case Study Planning. *Presented at the 12th International Conference on Evaluation and Assessment in Software Engineering (EASE)*. <https://doi.org/10.14236/ewic/EASE2008.5>
- Brunsson and Jacobsson (2002) *A World of Standards*. ISBN 9780199256952 Oxford University press
- Brunsson, N., Rasche, A., Seidl, D. (2012) The Dynamics of Standardization: Three Perspectives on Standards in Organization Studies. *Organization Studies* 33, 613–632. <https://doi.org/10.1177/0170840612450120>
- Busch, L. (2011). Food standards: the cacophony of governance. *Journal of Experimental Botany* 62, 3247–3250. <https://doi.org/10.1093/jxb/erq439>
- Campos, S., Doxey, J., Hammond, D. (2011). Nutrition labels on pre-packaged foods: a systematic review. *Public Health Nutr.* 14, 1496–1506. <https://doi.org/10.1017/S1368980010003290>
- Christoplos, I., Pain, A. (2015) *New challenges to food security: from climate change to fragile states*. Routledge, Taylor & Francis Group, Abingdon, Oxon
- Codex Alimentarius (2017) *Guidelines on Nutrition labelling*. Rome: Codex Alimentarius
- Coldiretti (2021) *Ue: stop Patuanelli a nutriscore salva Dieta Mediterranea* <https://www.coldiretti.it/salute-e-sicurezza-alimentare/ue-stop-patuanelli-a-nutriscore-salva-dieta-mediterranea> [2.26.21]
- Council of European Union (2020) Outcome of the Council Meeting, Klöckner, J. - Federal Minister for Food and Agriculture of Germany
- Creswell, J.W. (2018). *Research design: qualitative, quantitative, and mixed methods approaches*, Fifth edition. Los Angeles: Sage
- D’Souza, C. (2004). Ecolabel programmes: a stakeholder (consumer) perspective. *Corporate Communications: An International Journal* 9, 179–188. <https://doi.org/10.1108/13563280410551105>
- Davies, M.A.P., Wright, L.T. (1994). The Importance of Labelling Examined in Food Marketing. *European Journal of Marketing* 28, 57–67. <https://doi.org/10.1108/03090569410055283>
- De Temmerman, J., Heeremans, E., Slabbinck, H., Vermeir, I., 2021. The impact of the Nutri-Score nutrition label on perceived healthiness and purchase intentions. *Appetite* 157, 104995. <https://doi.org/10.1016/j.appet.2020.104995>
- Donovan, R.J., Anwar McHenry, J., Vines, A.J. (2015). Unity of effort requires unity of object: why industry should not be involved in formulating public health policy: Developing effective public health policy requires unity of object. *J. Public Affairs* 15, 397–403. <https://doi.org/10.1002/pa.1553>
- Dréano-Trécant, L., Egnell, M., Hercberg, S., Galan, P., Soudon, J., Fialon, M., Touvier, M., Kesse-Guyot, E., Julia, C. (2020). Performance of the Front-of-Pack Nutrition Label Nutri-Score to Discriminate the Nutritional Quality of Foods Products: A Comparative Study across 8 European Countries. *Nutrients* 12, 1303. <https://doi.org/10.3390/nu12051303>
- Dubois, A., Gadde, L.-E. (2002). Systematic combining: an abductive approach to case research. *Journal of Business Research* 55, 553–560. [https://doi.org/10.1016/S0148-2963\(00\)00195-8](https://doi.org/10.1016/S0148-2963(00)00195-8)
- Eberlein B., Grande E. (2005) Beyond delegation: transnational regulatory regimes and the eu regulatory state. *Journal of European Public Policy* 12, 89–112. <https://doi.org/10.1080/1350176042000311925>

- EFA news (2021) *Etichette, i retroscena della vittoria italiana/2 - La Francia, col suo Nutri-score, è la grande sconfitta* <https://www.efanews.eu/item/7745-etichette-i-retroscena-della-vittoria-italiana-2.html> [3.23.21]
- EFSA (2010) Scientific Opinion on establishing Food-Based Dietary Guidelines. *EFSA Journal* 8, 1460. <https://doi.org/10.2903/j.efsa.2010.1460>
- EFSA (2021) *EFSA's scientific advice to inform harmonized front-of-package labeling and restriction of claims on food*. <https://www.efsa.europa.eu/en/news/efsas-scientific-advice-inform-harmonised-front-pack-labelling-and-restriction>
- Egnell, M. (2020). Objective understanding of the Nutri-score front-of-pack label by European consumers and its effect on food choices: an online experimental study
- Egnell, M., Ducrot, P., Touvier, M., Allès, B., Hercberg, S., Kesse-Guyot, E., Julia, C. (2018). Objective understanding of Nutri-Score Front-Of-Package nutrition label according to individual characteristics of subjects: Comparisons with other format labels. *PLoS ONE* 13, e0202095. <https://doi.org/10.1371/journal.pone.0202095>
- Egnell, M., Galan, P., Farpour-Lambert, N.J., Talati, Z., Pettigrew, S., Hercberg, S., Julia, C., (2020). Compared to other front-of-pack nutrition labels, the Nutri-Score emerged as the most efficient to inform Swiss consumers on the nutritional quality of food products. *PLoS ONE* 15, e0228179. <https://doi.org/10.1371/journal.pone.0228179>
- Egnell, M., Talati, Z., Galan, P., Andreeva, V.A., Vandevijvere, S., Gombaud, M., Dréano-Trécant, L., Hercberg, S., Pettigrew, S., Julia, C., (2020). Objective understanding of the Nutri-score front-of-pack label by European consumers and its effect on food choices: an online experimental study. *International Journal of Behavioral Nutrition and Physical Activity* 17, 146. <https://doi.org/10.1186/s12966-020-01053-z>
- Eisenhardt, K.M., 1989. Building Theories from Case Study Research. *The Academy of Management Review* 14, 532–550. <https://doi.org/10.5465/amr.1989.4308385>
- El País (2021). *Consumo sigue adelante con el polémico Nutri-Score, que da la misma nota al aceite de oliva y al de colza* <https://elpais.com/sociedad/2021-03-03/consumo-sigue-adelante-con-nutri-score-pese-a-la-creciente-polemica.html> [3.4.21]
- El-Abbadi, N.H., Taylor, S.F., Micha, R., Blumberg, J.B. (2020) Nutrient Profiling Systems, Front of Pack Labeling, and Consumer Behavior. *Curr Atheroscler Rep* 22, 36. <https://doi.org/10.1007/s11883-020-00857-5>
- Eur-Lex (2021). *Glossary of summaries - EUR-Lex* https://eur-lex.europa.eu/summary/glossary/eu_council.html [4.20.21].
- European Commission (2020, 7905364) Inception Impact Assessment “Proposal for a revision of Regulation (EU) No 1169/2011 on the provision of Food Information to Consumers
- European Commission (2020a) Summary Of the Farm to Fork Strategy
- European Commission (2020b). *Nutrition labeling*. https://ec.europa.eu/food/safety/labelling_nutrition/labelling_legislation/nutrition-labelling_en [4.19.21]
- European Commission (2020c) *Eurobarometer: making our Food fit for the future –citizens' expectations*. <https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/getSurveyDetail/instruments/SPECIAL/surveyKy/2241> [2.7.21]

- European Commission (2021e) *Adopting EU law* https://ec.europa.eu/info/law/law-making-process/adopting-eu-law_en [3.26.21]
- European Commission (2021f) *Food labelling - revision of rules on information provided to consumers - Have your say.* <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12749-Revision-of-food-information-to-consumers-> [3.11.21]
- European Commission (2021g) *Have your say. Feedback from: Altroconsumo* <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12749-Revision-of-food-information-to-consumers-/F1567544> [4.16.21]
- European Commission (2021h) *Have your say. Feedback from: FEDERALIMENTARE (Italian Food and Drink Industry Federation)* <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12749-Revision-of-food-information-to-consumers-/F1471245> [4.16.21]
- European Commission (2021i) *Have your say. Feedback from: Livsmedelsföretagen - the Swedish Food Federation (Li Service)* <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12749-Revision-of-food-information-to-consumers-/F1570118> [4.16.21]
- European Commission (2021m) *How the Commission is organized.* https://ec.europa.eu/info/about-european-commission/organisational-structure/how-commission-organised_en [4.2.21].
- European Commission (2021n) *Planning and proposing law* https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law_en [3.26.21]
- European Council (2020) *Agriculture and Fisheries Council, 15-16 December 2020* <https://www.consilium.europa.eu/en/meetings/agrifish/2020/12/15-16/> [2.9.21]
- European Food Safety Authority (EFSA) (2021). *EFSA's scientific advice to inform harmonised front-of-pack labelling and restriction of claims on foods.* <https://www.efsa.europa.eu/en/news/efsas-scientific-advice-inform-harmonised-front-pack-labelling-and-restriction> [4.19.21]
- European Parliament (2020) *Demographic outlook for the European Union 2020* Directorate General for Parliamentary Research Services, Publications Office, Luxembourg.
- European Union (2016a). *How EU decisions are made* https://europa.eu/european-union/law/decision-making/procedures_en [4.21.21].
- European Union (2016b). *Council of the European Union* https://europa.eu/european-union/about-eu/institutions-bodies/council-eu_en [4.20.21].
- Fassin Y. (2008) *The Stakeholder Model Refined.* *Journal of Business Ethics*
- Federalimare (2021) *Comunicato Stampa: Etichettatura, il MISE pubblica il manual per l'uso della NutrInform Battery* http://www.federalimentare.it/new2016/ms_comunicati_det.asp?ID=1040 (accessed 2.9.21).
- Federalimentare (2021) *Dichiarazioni Ricciardi su Nutriscore, Federalimentare: posizione grave se fosse vera e isolata. Speriamo si tratti di un errore.* http://www.federalimentare.it/new2016/ms_comunicati_det.asp?ID=1046 [3.17.21]
- Federalimentare (2021) *Nutriscore, Federalimentare: bene Pattuanelli, continuità con politiche in difesa del Made in Italy. Ora attendiamo incontro per delineare strategia comune.* http://www.federalimentare.it/new2016/ms_comunicati_det.asp?ID=1043 [2.26.21]
- FEDERALIMENTARE (2021). *Aree Operative* <http://www.federalimentare.it/new2016/ChiSiamo/CompanyProfile.asp> [4.1.21]

- FederDistribuzione (2021). *Chi siamo*. <https://www.federdistribuzione.it/chi-siamo/> [4.2.21]
- Fialon, M., Egnell, M., Talati, Z., Galan, P., Dréano-Trécant, L., Touvier, M., Pettigrew, S., Hercberg, S., Julia, C. (2020). Effectiveness of Different Front-of-Pack Nutrition Labels among Italian Consumers: Results from an Online Randomized Controlled Trial. *Nutrients* 12, 2307. <https://doi.org/10.3390/nu12082307>
- Fidel (1984) *The Case Study Method*. Seattle: University of Washington
- Foley, J. A., Ramankutty, N., Brauman, K. A., Cassidy, E. S., Gerber, J. S., Johnston, M., ... & Zaks, D. P. (2011). Solutions for a cultivated planet. *Nature*, 478(7369), 337-342.
- Food Navigator (2020) *Nutrition labelling: Who is for and against a harmonised EU-wide approach?* <https://www.foodnavigator.com/Article/2020/12/07/Nutrition-labelling-Who-is-for-and-against-a-harmonised-EU-wide-approach> [3.4.21]
- Food Navigator (2021a) *Does Nutri-Score discriminate against traditional foods?* <https://www.foodnavigator.com/Article/2020/12/11/Does-Nutri-Score-discriminate-against-traditional-foods> [3.4.21]
- Food Navigator (2021b) *Italy digs in on Nutri-Score: 'Consumers currently have enough information about the nutritional value of food'* <https://www.foodnavigator.com/Article/2020/09/22/Italy-digs-in-on-Nutri-Score-Consumers-currently-have-enough-information-about-the-nutritional-value-of-food> [3.4.21]
- Food Navigator (2021c) *Scientists rally behind Nutri-Score in response to scepticism in Spain: 'These attacks are based on personal opinion, not science'* <https://www.foodnavigator.com/Article/2021/01/29/Scientists-rally-behind-Nutri-Score-in-response-to-scepticism-in-Spain-These-attacks-are-based-on-personal-opinion-not-science> [3.4.21]
- Food Navigator (2021d). 7 European countries team up to propel Nutri-Score rollout. <https://www.foodnavigator.com/Article/2021/02/12/7-European-countries-team-up-to-propel-Nutri-Score-rollout> [2.15.21]
- FoodNavigator (2021e) *Should reformulated junk food ever receive Nutri-Score 'A'? The case against an across-the-board algorithm* <https://www.foodnavigator.com/Article/2020/12/14/Should-reformulated-junk-food-ever-receive-Nutri-Score-A-The-case-against-an-across-the-board-algorithm> [3.4.21]
- Freeman, R.E. (2010). *Strategic management: a stakeholder approach*. University Press, Cambridge.
- Friedman, A.L., Miles, S. (2002) Developing Stakeholder Theory. *Journal of Management Studies* 39, 1–21. <https://doi.org/10.1111/1467-6486.00280>
- Fryer, K.J., Antony, J., Douglas, A. (2007). Critical success factors of continuous improvement in the public sector: A literature review and some key findings. *The TQM Magazine* 19, 497–517. <https://doi.org/10.1108/09544780710817900>
- Galán, P. (2020). Nutri-Score and ultra-processing: two different, complementary, non-contradictory dimensions. *Nutricion Hospitalaria*. <https://doi.org/10.20960/nh.03483>
- Galizzi, M.M. (2012). Label, Nudge or Tax? A Review of Health Policies for Risky Behaviours. *Journal of Public Health Research* 1, 14–21. <https://doi.org/10.4081/jphr.2012.e5>
- Garrido-Miguel, Oliveira, Cavero-Redondo, Álvarez-Bueno, Pozuelo-Carrascosa, Soriano-Cano, Martínez-Vizcaíno (2019). Prevalence of Overweight and Obesity among European Preschool

- Children: A Systematic Review and Meta-Regression by Food Group Consumption. *Nutrients* 11, 1698. <https://doi.org/10.3390/nu11071698>
- Gazzetta Ufficiale (2020) *Forma di presentazione e condizioni di utilizzo del logo nutrizionale facoltativo complementare alla dichiarazione nutrizionale in applicazione dell'articolo 35 del regolamento (UE) 1169/2011*.
<https://www.gazzettaufficiale.it/eli/id/2020/12/07/20A06617/sg> [3.12.21]
- Geels F.W. (2004) From sectoral systems of innovation to socio-technical systems: Insights about dynamics and change from sociology and institutional theory. *Research Policy* Vo. 33 Is. 6-7
- Geels F.W. (2014) Regime Resistance against Low-Carbon Transitions: Introducing Politics and Power into the Multi-Level Perspective. *Theory, Culture & Society* 31(5), 21-40
- Geels, F.W. (2010). Ontologies, socio-technical transitions (to sustainability), and the multi-level perspective. *Research Policy, Special Section on Innovation and Sustainability Transitions* 39, 495–510. <https://doi.org/10.1016/j.respol.2010.01.022>
- Geels, F.W. (2018). Low-carbon transition via system reconfiguration? A socio-technical whole system analysis of passenger mobility in Great Britain (1990–2016). *Energy Research & Social Science* 46, 86–102. <https://doi.org/10.1016/j.erss.2018.07.008>
- Geels, F.W., Berkhout, F., van Vuuren, D.P. (2016). Bridging analytical approaches for low-carbon transitions. *Nature Climate Change* 6, 576–583. <https://doi.org/10.1038/nclimate2980>
- Geels, F.W., Schot, J. (2007). Typology of sociotechnical transition pathways. *Research Policy* 36, 399–417. <https://doi.org/10.1016/j.respol.2007.01.003>
- Goh, S.K., Balaji, M.S. (2016). Linking green skepticism to green purchase behavior. *Journal of Cleaner Production* 131, 629–638. <https://doi.org/10.1016/j.jclepro.2016.04.122>
- Golan, E., Kuchler, F., Mitchell, L., Greene, C., Jessup, A. (2001). Economics of Food Labeling. *Journal of Consumer Policy* 24, 117–184. <https://doi.org/10.1023/A:1012272504846>
- Goodman, S., Vanderlee, L., Acton, R., Mahamad, S., Hammond, D. (2018). The Impact of Front-of-Package Label Design on Consumer Understanding of Nutrient Amounts. *Nutrients* 10, 1624. <https://doi.org/10.3390/nu10111624>
- Gracia, A., de-Magistris, T., 2016. Consumer preferences for food labeling: What ranks first? *Food Control* 61, 39–46. <https://doi.org/10.1016/j.foodcont.2015.09.023>
- Grunert, K.G., Wills, J.M., 2007. A review of European research on consumer response to nutrition information on food labels. *J Public Health* 15, 385–399. <https://doi.org/10.1007/s10389-007-0101-9>
- Guthrie, J., Mancino, L., Lin, C.-T.J. (2015) Nudging Consumers toward Better Food Choices: Policy Approaches to Changing Food Consumption Behaviors. *Psychology & Marketing* 32, 501–511. <https://doi.org/10.1002/mar.20795>
- Hagmann, D., Siegrist, M., 2020. Nutri-Score, multiple traffic light and incomplete nutrition labelling on food packages: Effects on consumers' accuracy in identifying healthier snack options. *Food Quality and Preference* 83, 103894. <https://doi.org/10.1016/j.foodqual.2020.103894>
- Handford, C.E., Elliott, C.T., Campbell, K. (2015). A review of the global pesticide legislation and the scale of challenge in reaching the global harmonization of food safety standards. *Integrated Environmental Assessment and Management* 11, 525–536. <https://doi.org/10.1002/ieam.1635>

- Harrington, L.K. (1996). Ethics and public policy analysis: Stakeholders' interests and regulatory policy. *Journal of Business Ethics* 15, 373–382. <https://doi.org/10.1007/BF00380358>
- Harrison, J.S., Wicks, A.C. (2013) Stakeholder Theory, Value, and Firm Performance. *Business Ethics* Q. 23, 97–124. <https://doi.org/10.5840/beq20132314>
- Hawkes, C. (2010) Government and voluntary policies on nutrition labelling: a global overview, *Woodhead Publishing Series in Food Science, Technology and Nutrition*. <https://doi.org/10.1533/9781845697594.37>
- Hawkes, C., Jewell, J., Allen, K. (2013) A food policy package for healthy diets and the prevention of obesity and diet-related non-communicable diseases: the NOURISHING framework. *Obesity Reviews* 14, 159–168. <https://doi.org/10.1111/obr.12098>
- Hawkes, C., WHO (2004). Nutrition labels and health claims the global regulatory environment. Geneva: World Health Organisation.
- Helsedirektoratet (2020) *Nordic Nutrition Recommendations 2022* <https://www.helsedirektoratet.no/english/nordic-nutrition-recommendations-2022> [3.23.21]
- Higginson, C.S., Kirk, T.R., Rayner, M.J., Draper, S., 2002a. How do consumers use nutrition label information? *Nutrition & Food Science* 32, 145–152. <https://doi.org/10.1108/00346650210436253>
- Higginson, C.S., Rayner, M.J., Draper, S., Kirk, T.R., 2002b. The nutrition label – which information is looked at? *Nutrition & Food Science* 32, 92–99. <https://doi.org/10.1108/00346650210423392>
- Hofman, P.S., Elzen, B.E., Geels, F.W. (2004) Sociotechnical scenarios as a new policy tool to explore system innovations: Co-evolution of technology and society in The Netherland's electricity domain. *Innovation* 6, 344–360. <https://doi.org/10.5172/impp.2004.6.2.344>
- Ikonen, I., Sotgiu, F., Aydinli, A., Verlegh, P.W.J. (2020). Consumer effects of front-of-package nutrition labeling: an interdisciplinary meta-analysis. *Journal of the Academy of Marketing Science* 48, 360–383. <https://doi.org/10.1007/s11747-019-00663-9>
- Institute for Future Studies (2021) *World Values Survey* <https://www.iffs.se/en/world-values-survey/> [5.5.21]
- Italianfood (2020) *Seven EU countries say no to Nutriscore* <https://news.italianfood.net/2020/09/22/seven-eu-countries-say-no-to-nutriscore/> [2.10.21].
- Jones, A., Neal, B., Reeve, B., Mhurchu, C.N., Thow, A.M. (2019) Front-of-pack nutrition labelling to promote healthier diets: current practice and opportunities to strengthen regulation worldwide. *BMJ Global Health* 4, e001882. <https://doi.org/10.1136/bmjgh-2019-001882>
- Jones, T.M., Wicks, A.C., Freeman, R.E. (2017). Stakeholder Theory: The State of the Art, in: *The Blackwell Guide to Business Ethics*. John Wiley & Sons, Ltd, pp. 17–37. <https://doi.org/10.1002/9781405164771.ch1>
- Julia, C., Etilé, F., Hercberg, S. (2018). Front-of-pack Nutri-Score labelling in France: an evidence-based policy. *The Lancet Public Health* 3, e164. [https://doi.org/10.1016/S2468-2667\(18\)30009-4](https://doi.org/10.1016/S2468-2667(18)30009-4)
- Julia, C., Hercberg, S. (2016). Research and lobbying conflicting on the issue of a front-of-pack nutrition labelling in France. *Archives of Public Health* 74, 51. <https://doi.org/10.1186/s13690-016-0162-8>

- Julia, C., Hercberg, S. (2017). Nutri-Score: Evidence of the effectiveness of the French front-of-pack nutrition label. *Ernährungs Umschau* 158–165. <https://doi.org/10.4455/eu.2017.048>
- Kanter, R., Vanderlee, L., Vandevijvere, S. (2018). Front-of-package nutrition labelling policy: global progress and future directions. *Public Health Nutr.* 21, 1399–1408. <https://doi.org/10.1017/S1368980018000010>
- Kelly, B., Jewell, J. (2019). Front-of-pack nutrition labelling in the European region: identifying what works for governments and consumers. *Public Health Nutr.* 22, 1125–1128. <https://doi.org/10.1017/S1368980018003737>
- Kelly, B., Jewell, J., Health Evidence Network, World Health Organization (2018) What is the evidence on the policy specifications, development processes and effectiveness of existing front-of-pack food labelling policies in the WHO European Region?
- Kerwer, D. (2005) Rules that Many Use: Standards and Global Regulation. *Governance* 18, 611–632. <https://doi.org/10.1111/j.1468-0491.2005.00294.x>
- Köhler, J., Geels, F.W., Kern, F., Markard, J., Onsongo, E., Wiczorek, A., Alkemade, F., Avelino, F., Bergek, A., Boons, F., Fünfschilling, L., Hess, D., Holtz, G., Hyysalo, S., Jenkins, K., Kivimaa, P., Martiskainen, M., McMeekin, A., Mühlemeier, M.S., Nykvist, B., Pel, B., Raven, R., Rohrer, H., Sandén, B., Schot, J., Sovacool, B., Turnheim, B., Welch, D., Wells, P. (2019). An agenda for sustainability transitions research: State of the art and future directions. *Environmental Innovation and Societal Transitions* 31, 1–32. <https://doi.org/10.1016/j.eist.2019.01.004>
- Krashinsky, M. (1997). Stakeholder theories of the non-profit sector: One cut at the economic literature. *Voluntas* 8, 149–161. <https://doi.org/10.1007/BF02354192>
- Krzysztozek, J., Laudańska-Krzemińska, I., Bronikowski, M. (2019). Assessment of epidemiological obesity among adults in EU countries. *Ann Agric Environ Med.* 26, 341–349. <https://doi.org/10.26444/aaem/97226>
- Laplume, A.O., Sonpar, K., Litz, R.A. (2008). Stakeholder Theory: Reviewing a Theory That Moves Us. *Journal of Management* 34, 1152–1189. <https://doi.org/10.1177/0149206308324322>
- Leech B. L. (2002) Asking Questions: Techniques for Semistructured Interviews https://www.jstor.org/stable/1554805?seq=1#metadata_info_tab_contents [3.1.21].
- Lehner, M., Mont, O., Heiskanen, E. (2016). Nudging – A promising tool for sustainable consumption behaviour? *Journal of Cleaner Production, Special Volume: Transitions to Sustainable Consumption and Production in Cities* 134, 166–177. <https://doi.org/10.1016/j.jclepro.2015.11.086>
- Livsmedelsverket (2015) *Byta till Nyckelhålet – så påverkar det näringsintaget*. Uppsala: Livsmedelsverket
- LIVSFS 2005:9. *Livsmedelsverkets föreskrifter om användning av symbolen Nyckelhålet* Uppsala: Livsmedelsverket
- LIVSFS 2021:1. *Föreskrifter om ändring I Livsmedelsverkets föreskrifter (LIVSFS 2005:9) om användning av viss symbol*. Uppsala: Livsmedelsverket
- Livsmedelsföretagen (2021) *EU lanserar nytt verktyg för märkning av livsmedel*. *Livsmedelsföretagen*. <https://www.livsmedelsforetagen.se/eu-lanserar-nytt-verktyg-for-markning-av-livsmedel-flis/> [2.19.21]

- Livsmedelsföretagen (2021) *Om Livsmedelsföretagen*. <https://www.livsmedelsforetagen.se/om-livsmedelsforetagen/> [4.1.21]
- Livsmedelsnyheter (2021) *Nya regler ska öka mängden Nyckelhålsmärkt i butikshyllan* <https://www.livsmedelsnyheter.se/nya-regler-ska-oka-mangden-nyckelhalsmarkt-i-butikshyllan/> [3.4.21]
- Livsmedelsverket (2021a) *Att märka med Nyckelhålet* <https://www.livsmedelsverket.se/produktion-handel--kontroll/information-markning-och-pastaenden/nyckelhalet---foretagsinformation> [3.5.21]
- Livsmedelsverket (2021b) *Nyckelhålet* <https://www.livsmedelsverket.se/livsmedel-och-innehall/text-pa-forpackning-markning/nyckelhalet> [3.5.21]
- Livsmedelsverket (2021c) *Livsmedelsverkets arbete i EU*. <https://www.livsmedelsverket.se/om-oss/lagstiftning1/livsmedelsverkets-arbete-i-eu> [3.23.21]
- Livsmedelsverket (2021d). *Vad tycker konsumenterna om nyckelhålet* <https://www.livsmedelsverket.se/bestall-ladda-ner-material/sok-publikationer/artiklar/2021/1-2021-nr-06-vad-tycker-konsumenterna-om-nyckelhalet> [4.15.21b]
- Livsmedelsverket (2021e). *About us*. <https://www.livsmedelsverket.se/en/about-us> [4.1.21]
- Lo Iacono, V., Symonds, P., Brown, D.H.K. (2016). Skype as a Tool for Qualitative Research Interviews. *Sociological Research Online* 21, 103–117. <https://doi.org/10.5153/sro.3952>
- Mack (2005) *A Data Collector's field guide, module 1*
- Magkos, F., Tetens, I., Bügel, S.G., Felby, C., Schacht, S.R., Hill, J.O., Ravussin, E., Astrup, A., (2020) The Environmental Foodprint of Obesity. *Obesity* 28, 73–79. <https://doi.org/10.1002/oby.22657>
- Mainardes W.E., Alves, H., Raposo, M. (2011). Stakeholder theory: issues to resolve. *Management Decision* 49, 226–252. <https://doi.org/10.1108/00251741111109133>
- Majone, G. (1994). The rise of the regulatory state in Europe. *West European Politics* 17, 77–101. <https://doi.org/10.1080/01402389408425031>
- Majone, G. (1999). The regulatory state and its legitimacy problems. *West European Politics* 22, 1–24. <https://doi.org/10.1080/01402389908425284>
- Marcucci L., Iraldo F., Daddi T. (2021) Investigating the management challenges of the EU Ecolabel through multi-stakeholder surveys *The International Journal of Life Cycle Assessment*
- Markard, J., Rosenbloom, D. (2020). Political conflict and climate policy: the European emissions trading system as a Trojan Horse for the low-carbon transition? *Climate Policy* 20, 1092–1111. <https://doi.org/10.1080/14693062.2020.1763901>
- Mazzù, M.F., Romani, S., Baccelloni, A., Gambicorti, A. (2021). A cross-country experimental study on consumers' subjective understanding and liking on front-of-pack nutrition labels. *International Journal of Food Sciences and Nutrition* 0, 1–15. <https://doi.org/10.1080/09637486.2021.1873918>
- Mazzù, M.F., Romani, S., Gambicorti, A. (2020). Effects on consumers' subjective understanding of a new front-of-pack nutritional label: a study on Italian consumers. *International Journal of Food Sciences and Nutrition* 1–10. <https://doi.org/10.1080/09637486.2020.1796932>
- McKinsey & Company (2014) *Overcoming Obesity: an initial economic analysis*. Available at: [https://www.mckinsey.com/~media/mckinsey/business%20functions/economic%20studies%](https://www.mckinsey.com/~media/mckinsey/business%20functions/economic%20studies%20)

20temp/our%20insights/how%20the%20world%20could%20better%20fight%20obesity/mgi_overcoming_obesity_full_report.ashx

- Meadowcroft, J. (2011) Engaging with the politics of sustainability transitions. *Environmental Innovation and Societal Transitions* 1, 70–75. <https://doi.org/10.1016/j.eist.2011.02.003>
- Mello, R.A. (2002). Collocation analysis: a method for conceptualizing and understanding narrative data. *Qualitative Research* 2, 231–243. <https://doi.org/10.1177/146879410200200206>
- Mialon, M., Julia, C., Hercberg, S. (2015). The policy dystopia model adapted to the food industry: the example of the Nutri-Score saga in France *World Nutrition*.
- Miklavec, K., Pravst, I., Raats, M.M., Pohar, J. (2016). Front of package symbols as a tool to promote healthier food choices in Slovenia: Accompanying explanatory claim can considerably influence the consumer's preferences. *Food Research International* 90, 235–243. <https://doi.org/10.1016/j.foodres.2016.10.052>
- Miles, S. (2012) Stakeholder: Essentially Contested or Just Confused? *Journal of Business Ethics* 108, 285–298. <https://doi.org/10.1007/s10551-011-1090-8>
- Miller, L.M.S., Cassady, D.L. (2015) The effects of nutrition knowledge on food label use. A review of the literature. *Appetite* 92, 207–216. <https://doi.org/10.1016/j.appet.2015.05.029>
- MIPAAF (2020) *NutrInform Battery: Firmato il decreto che introduce il logo del modello di etichettatura volontaria italiana*. Bellanova: “Poniamo al centro il consumatore e i principi della dieta Mediterranea”. <https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/16147> [3.12.21]
- Mise (2021) *Avviso 19 gennaio 2021 - NutrInform Battery*. *Publicato il Manuale d'uso* <https://www.mise.gov.it/index.php/it/normativa/notifiche-e-avvisi/2041921-avviso-19-gennaio-2021-nutrinform-battery-pubblicato-il-manuale-d-uso> [3.13.21]
- Mitchell R.K., Agle B.R., Wood D.J. (1997) Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of who and What Really Counts. *Academy of Management Review*
- Moodie, R., Stuckler, D., Monteiro, C., Sheron, N., Neal, B., Thamarangsi, T., Lincoln, P., Casswell, S. (2013) Profits and pandemics: prevention of harmful effects of tobacco, alcohol, and ultra-processed food and drink industries. *The Lancet* 381, 670–679. [https://doi.org/10.1016/S0140-6736\(12\)62089-3](https://doi.org/10.1016/S0140-6736(12)62089-3)
- Mørk, T., Grunert, K.G., Fenger, M., Juhl, H.J., Tsalis, G., (2017) An analysis of the effects of a campaign supporting use of a health symbol on food sales and shopping behaviour of consumers. *BMC Public Health* 17, 239. <https://doi.org/10.1186/s12889-017-4149-3>
- Morris J.B., Tassone V., de Groot R., Camilleri M., Moncada S., (2011) A Framework for Participatory Impact Assessment . *Ecology and Society* Vol. 16 No. 1
- Müller-Riemenschneider, F., Reinhold, T., Berghöfer, A., Willich, S.N. (2008) Health-economic burden of obesity in Europe. *European Journal Epidemiology* 23, 499–509. <https://doi.org/10.1007/s10654-008-9239-1>
- Nancarrow, C., Tiu Wright, L., Brace, I. (1998) Gaining competitive advantage from packaging and labelling in marketing communications. *British Food Journal* 100, 110–118. <https://doi.org/10.1108/00070709810204101>

- Nutritionsfakta (2021) *Klart med de första systematiska litteraturöversikterna för NNR2022*. <https://nutritionsfakta.se/2021/03/19/klart-med-de-forsta-systematiska-litteraturoversikterna-for-nnr2022/> [3.23.21]
- Ortmann, G. (2010) On drifting rules and standards. *Scandinavian Journal of Management* 26, 204–214. <https://doi.org/10.1016/j.scaman.2010.02.004>
- Regulation (EU) No 1169/2011 of the European Parliament and of the Council of the 25 October 2011 on the provision of food regulation to consumers <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32011R1169&qid=1620897049817>
- Riege A. (2003). Validity and reliability tests in case study research: a literature review with “hands-on” applications for each research. *Qualitative market research*
- Roberts, S. (2003) Supply Chain Specific? Understanding the Patchy Success of Ethical Sourcing Initiatives. *Journal of Business Ethics* 44, 159–170. <https://doi.org/10.1023/A:1023395631811>
- Robson, C., McCartan K. (2016) *Real world research: a resource for users of social research methods in applied settings*, Fourth Edition. Wiley, Hoboken.
- Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin III, F. S., Lambin, E., ... & Foley, J. (2009). Planetary boundaries: exploring the safe operating space for humanity. *Ecology and society*, 14(2).
- Rowley and Slack (2004) Conducting a literature review. *The American Journal of Maternal/child nursing*.
- Santos, H.P.O., Black, A.M., Sandelowski, M. (2015) Timing of Translation in Cross-Language Qualitative Research. *Qualitative Health Research* 25, 134–144. <https://doi.org/10.1177/1049732314549603>
- Scrinis, G., Parker, C. (2016). Front-of-Pack Food Labeling and the Politics of Nutritional Nudges. *Law & Policy* 38, 234–249. <https://doi.org/10.1111/lapo.12058>
- Shangguan, S., Afshin, A., Shulkin, M., Ma, W., Marsden, D., Smith, J., Saheb-Kashaf, M., Shi, P., Micha, R., Imamura, F., Mozaffarian, D. (2019) A Meta-Analysis of Food Labeling Effects on Consumer Diet Behaviors and Industry Practices. *American Journal of Preventive Medicine* 56, 300–314. <https://doi.org/10.1016/j.amepre.2018.09.024>
- Sörqvist, P., Haga, A., Langeborg, L., Holmgren, M., Wallinder, M., Nöstl, A., Seager, P.B., Marsh, J.E. (2015). The green halo: Mechanisms and limits of the eco-label effect. *Food Quality and Preference* 43, 1–9. <https://doi.org/10.1016/j.foodqual.2015.02.001>
- Squalli, J. (2017) The environmental impact of obesity: longitudinal evidence from the United States. *Public Health* 149, 89–98. <https://doi.org/10.1016/j.puhe.2017.04.016>
- Squalli, J., (2014.) Is obesity associated with global warming? *Public Health* 128, 1087–1093. <https://doi.org/10.1016/j.puhe.2014.09.008>
- Srour, B., Fezeu, L.K., Kesse-Guyot, E., Allès, B., Méjean, C., Andrianasolo, R.M., Chazelas, E., Deschasaux, M., Hercberg, S., Galan, P., Monteiro, C.A., Julia, C., Touvier, M. (2019). Ultra-processed food intake and risk of cardiovascular disease: prospective cohort study (NutriNet-Santé). *BMJ* 365, 11451. <https://doi.org/10.1136/bmj.11451>
- Steffek, J. (2003). The Legitimation of International Governance: A Discourse Approach. *European Journal of International Relations* 9, 249–275. <https://doi.org/10.1177/1354066103009002004>

- Storcksdieck genannt Bonsmann, S., Marandola, G., Ciriolo, E., Bavel, R. van, Wollgast, J., European Commission, Joint Research Centre (2020) Front-of-pack nutrition labelling schemes: a comprehensive review. Luxembourg: Publication Office of the European Union
- Storcksdieck genannt Bonsmann, S., Celemín, L., Larrañaga, A., Egger, S., Gyi, W., Hodgkins, C., Raats, M. (2010). Penetration of nutrition information on food labels across the EU-27 plus Turkey. *European journal of clinical nutrition* 64, 1379–85. <https://doi.org/10.1038/ejcn.2010.179>
- Sunstein, C.R., Thaler, R.H. (2008) *Nudge: improving decisions about health, wealth, and happiness* Yale university press: New Haven.
- Sveriges Konsumenter (2021). *Swedish Consumers' Association* <https://www.sverigeskonsumenter.se/in-english/> [4.1.21]
- Swinburn, B. (2020) The Obesity and Climate Change Nexus. *Obesity* 28, 8–8. <https://doi.org/10.1002/oby.22708>
- Swinnen, J. (2016) Economics and politics of food standards, trade, and development#. *Agricultural Economics* 47, 7–19. <https://doi.org/10.1111/agec.12316>
- Szabo de Edelenyi, F., Egnell, M., Galan, P., Druesne-Pecollo, N., Hercberg, S., Julia, C. (2019). Ability of the Nutri-Score front-of-pack nutrition label to discriminate the nutritional quality of foods in the German food market and consistency with nutritional recommendations. *Arch Public Health* 77, 28. <https://doi.org/10.1186/s13690-019-0357-x>
- Temple, N.J. (2016) Strategic nutrition: a vision for the twenty-first century. *Public Health Nutrition* 19, 164–175. <https://doi.org/10.1017/S1368980014003292>
- Temple, N.J. (2020). Front-of-package food labels: A narrative review. *Appetite* 144, 104485. <https://doi.org/10.1016/j.appet.2019.104485>
- Terlicka, K.M., Jukes, D.J. (2014). From Harmonisation to Better, Smart and Fit Food Law: Reviewing the Legislators Attempts to Abolish Barriers to Food Trade in the EU. *European Food and Feed Law Review* 9, 302–313.
- The Conversation (2019) Julia, C., Egnell, M., Galan, P., Hercberg, S., n.d. Étiquetage nutritionnel : « La guerre du parmesan et du prosciutto ». <http://theconversation.com/etiquetage-nutritionnel-la-guerre-du-parmesan-et-du-prosciutto-116905> [3.23.21]
- Vaismoradi, M., Turunen, H., Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study: Qualitative descriptive study. *Nursing Health Science* 15, 398–405. <https://doi.org/10.1111/nhs.12048>
- Vallgård, S., Nielsen, M.E.J., Hartlev, M., Sandøe, P. (2015). Backward- and forward-looking responsibility for obesity: policies from WHO, the EU and England. *European Journal of Public Health* 25, 845–848. <https://doi.org/10.1093/eurpub/ckv076>
- van der Bend, D., Lissner, L. (2019). Differences and Similarities between Front-of-Pack Nutrition Labels in Europe: A Comparison of Functional and Visual Aspects. *Nutrients* 11, 626. <https://doi.org/10.3390/nu11030626>
- Vermote, M., Bonnewyn, S., Matthys, C., Vandevijvere, S. (2020). Nutritional Content, Labelling and Marketing of Breakfast Cereals on the Belgian Market and Their Reformulation in Anticipation of the Implementation of the Nutri-Score Front-Of-Pack Labelling System 14.

- Voinov, A., Bousquet, F. (2010). Modelling with stakeholders. *Environmental Modelling & Software, Thematic Issue - Modelling with Stakeholders* 25, 1268–1281. <https://doi.org/10.1016/j.envsoft.2010.03.007>
- Wagner Mainardes, E., Alves, H., Raposo, M. (2012). A model for stakeholder classification and stakeholder relationships. *Management Decision* 50, 1861–1879. <https://doi.org/10.1108/00251741211279648>
- Walters, A., Long, M. (2012). The Effect of Food Label Cues on Perceptions of Quality and Purchase Intentions among High-Involvement Consumers with Varying Levels of Nutrition Knowledge. *Journal of Nutrition Education and Behavior* 44, 350–354. <https://doi.org/10.1016/j.jneb.2011.08.008>
- Wandel, M. (1997). Food labelling from a consumer perspective. *British Food Journal* 99, 212–219. <https://doi.org/10.1108/00070709710181559>
- Wang, Q., Oostindjer, M., Amdam, G.V., Egelanddal, B. (2016). Snacks With Nutrition Labels: Tastiness Perception, Healthiness Perception, and Willingness to Pay by Norwegian Adolescents. *Journal of Nutrition Education and Behavior* 48, 104-111.e1. <https://doi.org/10.1016/j.jneb.2015.09.003>
- Webster, J., Watson, R.T. (2002) Analyzing the Past to Prepare for the Future: Writing a Literature Review. *MIS quarterly*
- Wellens, L., Jegers, M. (2014). Effective governance in nonprofit organizations: A literature based multiple stakeholder approach. *European Management Journal* 32, 223–243. <https://doi.org/10.1016/j.emj.2013.01.007>
- WHO (2021) *Body mass index - BMI* <https://www.euro.who.int/en/health-topics/disease-prevention/nutrition/a-healthy-lifestyle/body-mass-index-bmi> (accessed 3.1.21).
- Xiao, Y., Watson, M. (2019). Guidance on Conducting a Systematic Literature Review. *Journal of Planning Education and Research* 39, 93–112. <https://doi.org/10.1177/0739456X17723971>
- Yin, R.K., (2009) Case study research: design and methods, 4th ed. Los Angeles: Sage Publications
- Zadek, S. (1998) Balancing Performance, Ethics, and Accountability. *Journal of Business Ethics* 17, 1421–1442. <https://doi.org/10.1023/A:1006095614267>

Acknowledgements

My deepest gratitude goes to the people who made this work possible, namely my supervisor Cecilia Mark-Herbert and the interviewees, who donated their time and energies to satisfy my curiosity.

A huge thank you goes to my family and friends, who always make me smile. Grazie, tack, thank you.

Appendix 1. The stakeholders and Institutions

Following are short descriptions of the organizations whose actions and opinion were considered in the thesis.

European Commission is the institution of the European Union that represents the common interests of all Member States, proposes new laws, takes care of the EU budget and ensures that the common legislation is followed all over the Union. 27 Commissioners, one for each Member State, form the Commission and hold power for 5 years. The Commission is also divided into a number of Directorates-General (DG), which are responsible for the different policy areas. The DGs are in charge of developing, implementing and managing policies and laws. The Health and Food Safety DG is responsible for the front-of-package nutrition label issue (European Commission, 2021m,n).

Council of the European Union often called “Council” or “Council of Ministers” is one of the decision-making Institutions in the EU. It is composed by one Minister from each Member Country and the issues discussed at the meeting dictate the Ministers that will participate to it. Each Country takes the Presidency of the Council for 6 months. At the moment, the presidency is Portuguese, while last semester it was held by Germany. Discussing the FOP nutrition label is responsibility of the Agriculture and Fisheries Council. Because of its composition, the debate inside of the Council is directly influenced by the political climate of each Member Country. In addition, the Ministers joining the Council only represent the interest of their own countries. (Eur-Lex, 2021; European Council, 2016b).

Livsmedelsverket is the Swedish Food Agency. It deals with developing healthier dietary habits, the relationship between food and environment, food safety and fair practices when it comes to trade of food. They act through regulations, recommendations and different types of communication. Together with the Food Agencies of the other Member States, Livsmedelsverket, is involved with the development of the European food legislation. They are the owner of the Keyhole brand (Livsmedelsverket, 2021).

Livsmedelsföretagen is the Swedish Federation of the Food Industries. It has around 800 member companies with different size, type of production, *etc.* The organization has a wide set of tasks such as negotiation of contracts with trade unions, knowledge sharing, advocacy on relevant policies on a national and international level, *etc.* The overall aim is to protect the sector reputation while ensuring profitability and fair competition practices. It is part of FoodDrinkEurope (Livsmedelsföretagen, 2021).

Sveriges Konsumenter is the Swedish Consumers’ Association. It represents the interest of Swedish consumers on a regional, national and international level. In particular, it deals with the protection of consumers’ interests, increase their visibility and power as consumers, ensure consumer rights are respected, *etc.* It is part of BEUC (Sveriges Konsumenter, 2021).

Federalimentare is the Italian Federation of the Food and Beverages industries. Federalimentare is made by 13 National Associations of industries representing all productive sectors dealing with food. As such, Federalimentare speaks for around 7000 companies all over the country. It works for the representation, protection and promotion of these industries on a regional, national and international scale. It is part of FoodDrinkEurope (Federalimentare, 2021).

FederDistribuzione is the Italian trade organization that represents the interests of large and modern retail industries, both in the food and non-food sector. It helps to develop an environment that favors retailers to grow and improve their business. It advocates on a national and international level (FederDistribuzione, 2021).

Altroconsumo is the biggest Italian Association of Consumers. It protects the rights and interests of consumers both on a local and international scale. Their actions are inspired by ideal of independency and critical sense while respecting scientific evidences. They are part of BEUC (Altroconsumo, 2021).

Appendix 2. The Nutri-Score label

The Nutri-Score is a FOP nutrition label that has been developed in France by the Ministry of Health. It was first implemented in France in 2017, but it has later been introduced in many other European countries. It is an interpretative label, so it provides an overall grading for the nutritional quality of the food it is attached to. The graphics contains five letters (from A to E) that indicate the nutritional quality from best to worst. Each letter of the Nutri-score also has a color: from dark green for A to dark-orange for E. The letter and color corresponding to the specific food are highlighted (Storcksdieck genannt Bonsmann *et al.*, 2020: 29-30).

The grade is calculated through algorithms that consider the amounts of energy, sugars, sodium, saturated fats, fruit and vegetables, proteins, nuts, legumes and proteins in 100 grams of it. Some of these nutrients give positive points, while other give negative ones. From the sum of all the points is possible to obtain a number that corresponds to the color the food gets (Szabo de Edeleny *et al.*, 2019). Different food categories have different algorithms, but they all aim to better align consumption behaviors to those recommended by the French dietary guidelines (Storcksdieck genannt Bonsmann *et al.*, 2020: 29-30).

The Nutri-Score seems able to differentiate between those products whose consumption should be increased and those whose consumption should be decreased (Szabo de Edeleny *et al.*, 2019), the label informs consumers about the healthiness of their choices while it helps to rank products in order of perceived healthiness (De Temmerman *et al.*, 2021; Egnell *et al.*, 2020; Egnell *et al.*, 2019). Egnell *et al.* (2018) find an increased understanding of the healthiness of a food bearing the Nutri-Score label by the general population and all the demographics in it, however some sub-populations such as women, educated, and those with children are more able to differentiate than others.

The actual effect of the label on purchasing patterns is mostly unknown, even if there seems to be a positive correlation with the choice of healthier products (Ares *et al.*, 2018; Egnell *et al.*, 2019; De Temmerman *et al.*, 2021).

Appendix 3. Interview questions

Following is a list of question asked during the interviews. The list is not exhaustive nor presents the exact questions asked to the interviewees, as they were adapted to the role and experience of the interviewee's organization.

- What is your view on the national FOP nutrition label experience?
- The Farm to Fork Strategy aims to develop a single mandatory FOP nutrition label for all the member states. What is your take on that?
- What do you think about having a mandatory label instead of a voluntary one?
- Do the opinions towards the proposal change between you members? How so?
- What is your organization doing to influence the policy-making process?
- How do you think the “ideal” label should be like?
- Do you think the new label should be on all food categories?
- What other policy instrument could be needed?
- How could a new FOP nutrition label impact the food system?
- Which factors do you think could foster or hinder the development of a common FOP nutrition label?

Other questions were also asked to get more details or be sure to have correctly understood the answer to previous questions.

Appendix 4 Popular Science Summary

Even if food is now produced, sold and consumed in a technological and modern way, there are still many problems connected to food. For example, some people can have too little food while others have too much of it or unhealthy diets. At the moment, almost 1 out of 5 children in Europe is obese and more than one third of Europeans will be obese in 2030. Disadvantaged people are more commonly having unhealthy diets, which are linked to many diseases. Food problems make people live worse and need doctors more. The diet of a person depends on many things, so the responsibility to solve the problem lies in many hands. Over the years, many European countries have created nutrition labels to help people understand better the characteristics of the food they want to buy and, eventually, do more aware choices. Some of these labels are called front-of-package because they are displayed on the side of the food-item that people actually see while shopping, so that they do not have to look for it and can use it more easily. However, different European countries are using very different labels, making it harder for people to understand food while they go abroad and for business to trade food across countries. In the 2020, the European Commission has decided to create a single front-of-package nutrition label to be used in all the countries that are part of the Union. The decision has led to a huge debate, with the voices standing for very different solutions.

This thesis wants to identify what the debate about the new label is, what are the sources of disagreements and the different points of views. The study was conducted as the debate is still going on, focusing on two countries: Sweden and Italy. The opinions were gathered by reading documents and doing interviews with the European Commission and important organizations operating the two countries. Different theories were used to better understand the point of views.

The results show that all the interviewees like the idea of a single label in all the European countries, but they have different views on how the common label should be like. For example, some argue that the label should be voluntary while others think it should be on all food products; some say it should just list the nutrients while others say the label should say if a product is healthy or not. The opinions differ along the lines of country of origin or role of the interviewee. All the organizations are also trying to influence how the future label will be like by arguing both on a national and European level. The European institutions that are going to create the label are working in different ways. The European Commission is collecting scientific evidences about how these labels work, which will then be used to decide what the Proposal of law should be about. On the other hand, the European Council of Ministries is already discussing how the label should be (or not be) like, but the Ministries are still far from an agreement as they have very different opinions. The themes they discuss, though, are similar to those of the other organizations. As the differences in how the ideal label should be like are still so big, and new scientific knowledge is being built, the debate is expected to continue for a long time. At the same time, the debate will change as political decisions are taken.