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**ETHICAL LABELLING AS AN ATTEMPT TO PROMOTE ETHICAL
CONSUMERISM IN THE FOOD INDUSTRY**

A systematic literature review of how ethical labels influence consumer perceptions and
purchase intentions

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Abstract

This research explores the effect of ethical labelling practices on consumer perceptions and purchase intentions in the food industry by means of a systematic literature review. The research presented is two-fold: firstly, the current research status on the topic is investigated and secondly, a qualitative analysis of 68 selected articles is performed. This showed that consumers are willing to use ethical labels to guide them in their purchase decision process, however, frequently they lack understanding of the meanings behind labels. Education and awareness prove to be the drivers to increase the use of ethical labels in the consumer decision-making process.

Keywords

Food industry

Ethical Labelling

Ethical consumerism

Consumer Perceptions

Systematic Literature Review

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1. Introduction

Over the course of the past decades, the topic of ethical consumerism has gained relevance due to multiple social and environmental developments, including climate change as a major driver. With the rising population, first surpassing the eight billion mark in November 2022 (United Nations 2023) the urgency is higher than ever to focus on the production and consumption of ethical products, supporting our planet, as well as the wellbeing of people and animals. Through ethical consumption, society is moving one step closer to sustainability, defined by the UN Brundtland Commission (1987) as “meeting the needs of the present without compromising the ability of future generations to meet their own needs”.

A shift towards ethical consumerism is clearly being demanded by younger generations (Hancock 2017), who increasingly pay attention towards their consumption patterns and how the products they consume were sourced and produced. Ethical consumers hold themselves accountable towards society and the environment when consuming products and purchasing them in the first place (Freestone and McGoldrick 2008). Thereby, accreditation of products through labelling plays an important role as it informs consumers about the origin and production standards of their purchases and can guide consumers in making an informed decision (European Commission 2008). However, confusion often arises when navigating through the complex landscape of different labelling standards which might in turn limit the use and credibility of labels (Dendler 2014; Grunert et al. 2014). This is proven by the observation that 53% of claims and labels observed in the EU prove to be “vague, misleading or unfounded” (European Parliament 2023).

The food industry proves to be an interesting sector to research on this topic, as there is a wide range of labelling standards. Not only do the labels of food and beverages convey nutritional information or information pertaining to the ingredients of the product, but also to other standards that the product may hold, such as the conditions under which the products were produced, or whether the product has an organic origin (Dimara and Skuras 2005).

Research on the topic has been proliferating, however, there has been no synthesizing research paper on the effect of ethical labelling on consumer perceptions and purchase intentions in the food industry. Despite existing systematic literature reviews (SLR) on different types of food labelling and their effect on consumer perception and purchase intentions, there is currently no SLR on ethical labelling from a holistic point of view, but rather exclusively on very specific types of labelling practices, such as “carbon footprint labelling” (Rondoni and Grasso 2021). Hence, this research will be looking at the “umbrella term” of ethical labelling, considering multiple types of labelling practices which can be regarded ethical. Shedding light on the existing research, including multiple different types of food labelling practices which can be considered ethical, will support the food industry’s players and policy makers. Especially when considering the United Nation’s Sustainable Development Goals (SDGs) (UN 2015) - with a focus on SDG two (*Zero Hunger*), three (*Good Health and Wellbeing*) and twelve (*Responsible Consumption and Production*) - labelling practices highlighting ethical accreditations in the food industry are becoming increasingly important. Moreover, the proposal for the European Green Claims Directive (European Parliament 2023), which was put forward in March 2023 paves the pathway to hindering any greenwashing that might occur through claims and labels used by companies. Hence, it will become highly important for companies and policy makers to understand how labels affect consumer perceptions and if so, whether they affect purchase intentions.

By means of a SLR, this paper aims to synthesize current research regarding ethical labelling practices in the food industry and how these can potentially influence consumer perceptions and purchase intentions. Thereby, the findings from published and peer-reviewed research articles will be synthesized, enabling a clear view of the research status on the topic and comprehensive understanding of how ethical labelling practices influence consumer perceptions and purchase decisions. The thesis is structured as follows: first, the terminological

and conceptual foundations will be reviewed, looking specifically on existing literature in the field of ethical consumerism and the food industry specifically. Afterwards, the methodology will be explained in detail before going on to the analysis and discussion of the findings, followed lastly by a conclusion as well as limitations and further research needed.

2. Terminological and Conceptual Foundations

The following paragraphs will introduce the core conceptual foundations relevant for understanding the present study. Philosophical concepts, such as ethics, are complex and require deeper explanations. For the purpose of the present research, however, only minimal definitions are required to ensure that the terminology, terms, and concepts used are clear.

2.1 (Food) Ethics

Ethics is the study of morality and defined by the Oxford Dictionary as the morals that persons or entities apply to their behaviour (Hornby 2005). Therefore, ethics could be seen as an investigation into the behaviour of human beings and why decisions are made in a certain way. Applied Ethics can then be understood as putting into application our understanding of what is ethically right and what is ethically wrong to certain activities (Holmes 2018). Hence, Food Ethics is part of the field of Applied Ethics, as one makes use of one's understanding of what is right and what is wrong, good or bad, in the context of making a decision relating to food. An example could be: *“Should I buy this tasty looking cheap chocolate, or should I buy the slightly more expensive one that claims to be produced under fair working standards?”*. As most people nowadays are not self-sufficient in the production of the food they consume, they are reliant on the food industry to provide them with the products they need and desire. Thereby, consumers become part of a chain of potentially abusive and exploitative practices, which are not rare in the food industry (Rizzuti 2020). Ranging from exploitation of workers all the way up the supply chain to crimes directly affecting the end consumer, such as the “horsemeat scandal” in 2013, where beef was replaced by horsemeat - the list of criminal activities in the food industry is long.

The numerous existing examples of abusive practices in the food industry give rise to ethical dilemmas, which are defined as a situation where the available choices do not allow for an ethical outcome (Crowder and Turvey 2013). Hence, consumers frequently need to make (difficult) choices with potentially negative outcomes. However, food ethics does not only concern the consumer perspective, but also the perspective of the producer, as various decisions need to be made in an increasingly competitive environment, which can also place the producers in various ethical dilemmas (Early 2002). The trade-off could be, for instance, between increasing sales and profit, or behaving ethically towards consumers, by providing healthy food and disclosing all relevant information (Van Der Merwe and Kenter 2010).

2.2 Ethical consumerism

The concept of ethical consumerism has been studied for a long time with research looking into different areas, including, for instance, underlying motives for ethical consumption (Freestone and McGoldrick 2008), willingness to pay for products claiming to be ethical (Pelsmacker et al. 2005), and whether consumers even care about ethical consumption (Carrigan and Attalla 2001). A major focus of research was placed on the “attitude-behaviour gap”. The term was coined in various papers, including a paper by Carrington et al. (2010), explaining how consumers hold certain values and beliefs but do not, however, act upon these when making a purchase decision.

In a study by Eckhardt et al. (2010), the researchers investigated why ethical values are frequently disregarded when making purchase decisions by means of in-depth interviews. Thereby, they found three types of rationales explaining inconsistencies between underlying attitudes and actual behaviour: firstly, economic rationalism, meaning that costs were the most important consideration when making purchase decision. Secondly, institutional dependency, which implies that consumers felt that higher institutions were to be held responsible for only offering ethical consumer choices, rather than the individual having to make an ethical choice. Thirdly, developmental realism was given as an explanation for the attitude behaviour gap,

which means that consumers felt it was impossible to align economic growth with ethical behaviour and hence, it was unavoidable to make some ethical trade-offs during certain stages of economic development.

However, when the attitude-behaviour gap is not present, and consumers actually show ethical consumption behaviour, there are two options: on the one hand, consumers can choose to buy products that are in line with the ethical values they stand for or, on the other hand, they can boycott products which go against their ethical values (Carrigan and Attalla 2001).

The food industry is of particular interest for research regarding ethical consumerism, as making an ethical choice on what to consume does not only apply to the final product, but also to the choice of brand and the purchasing channel (Sebastiani et al. 2013). Additionally, as mentioned above, the food industry is overshadowed by criminal actions involving ethical concerns, such as animal exploitation, paying workers below the minimum wage, and the rising population demanding more and sustainably produced food (Rizzuti 2020). The sheer amount of different food options indicates that decision making and choosing between different options, especially ethical ones, can be a major challenge for consumers. However, ethical food labelling can potentially provide guidance for consumers by indicating why certain options might be more ethical than others (Hoek et al. 2013).

2.3 Food Labelling

Food labelling can be seen as a two-sided process where, on the one hand, the consumer is able to easily assess relevant information pertaining to the food product he or she wants to purchase but, on the other hand, it allows producers to display information to convince consumers to purchase their product over a competitors'. Zadek et al. (1998) explain labels as a "bridge" between consumers and producers, as they close the loop in the supply chain through two mechanisms of informing and influencing. Consumers can inform producers through their purchasing choices, thereby, emphasizing where there is demand and what kind of products are

desired. Conversely, producers can influence consumers in their purchase decision by highlighting key features and unique selling points of the product.

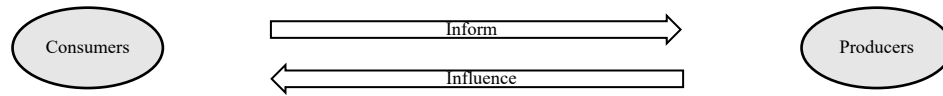


Figure 1: Adapted & Simplified Depiction of “Closing the Loop” (Zadek et al. 1998)

The importance of food labelling has been on the rise for decades with research on the topic dating back to the 1990s. One major reason for the increase in the importance of food labelling is the decrease of over-the-counter information by store staff (Wandel 1997). Food labels can be seen as a substitute for information which is no longer provided directly. Food labelling is not limited to the declaration of nutritional information or the ingredients of the product, but can also contain information pertaining to the geographic origin of the product (Dimara and Skuras 2005), whether the product was genetically modified or not (Ellen and Bone 2008) or whether it is organic (Larceneux et al. 2012), only to name a few. Hence, labels serve as providers of valuable information and knowledge, which allows consumers to use this information to make a rational decision (Wandel 1997). The information provided on the label of the product can be used for different purposes by consumers. Whereas some consumers might pay special attention to the ingredients for allergy reasons, others may focus on nutritional labelling as they might follow a specific diet and others might pay attention to the existence of an organic label (Szykman et al. 1997).

Despite the multiple different types of information to be found on food labels, the EU has set minimum requirements pertaining to the information that must be indicated on the label of food products (European Commission 2023). The regulation on the provision of food information to consumers (FIC regulation) was adopted by the EU in 2011, followed by a nutrition labelling section from 2016 onwards, which states that the energy value and the amounts of fat, saturates, carbohydrate, sugars, protein, and salt must be listed. The FIC regulation lays down that consumers must be appropriately informed about the food they consume according to

consumers' right to information, specifically stating that food "choices can be influenced by [...] environmental, social and ethical considerations." (European Union 2011). Therefore, since the FIC regulation has come into effect, a vast amount of information is available on a mandatory basis for consumers, which can be used in decision-making. However, research has found that consumers value the credibility of the food labels more than the amount of information supplied on them (De Pelsmacker et al. 2005b). In creating credible food labels, marketing efforts of companies play a great role. This includes the promotion of the product in-store, as well as traditional advertising through campaigns and the distribution and availability of the products. When it comes to ethical products, studies have shown that mass media advertising is not necessarily compatible with the idea of an ethical product and, therefore, consumers prefer more subtle marketing techniques (De Pelsmacker et al. 2004). Regarding the label itself, multiple factors play a role in appealing to the consumer, including the colours used, the quantity of arguments and claims presented, as well as the imagery and graphics pictured (Davies and Wright 1994).

2.4 (Types of) Ethical Food Labelling

Finding a definition for the holistic term of "ethical labels" is not a clear-cut process, as the understanding of what can be considered ethical varies according to different values that one may hold and consider ethical. Therefore, for the purpose of this research paper, the classification of labels that can be considered ethical relies on previous research conducted on the topic by Hartlieb and Jones (2009). The researchers investigated the potential of ethical labelling to humanize business as the labels could make ethical products visible and, therefore, influence consumer purchase decisions. They identified three areas of interest addressed by means of product labels that fall under the category "ethical": firstly, environmental sustainability, secondly, social justice and, lastly, labels relating to animal welfare.

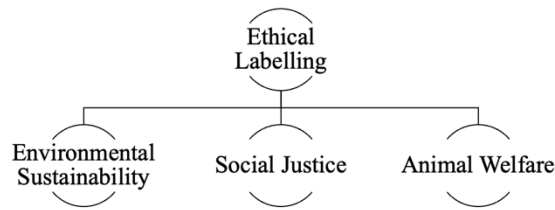


Figure 2: Sub-categories of Ethical Labelling

Appendix 1 presents some exemplary labels for each of the three categories (Ecolabel Index 2023), identified as the part of the three areas that fall under the term ethical labelling in the food industry according to Hartlieb and Jones (2009).

2.5 Food Labelling as an aid in the consumer purchase decision process

According to Dewey (1910), the consumer purchase decision process is comprised of five distinct phases as pictured below.

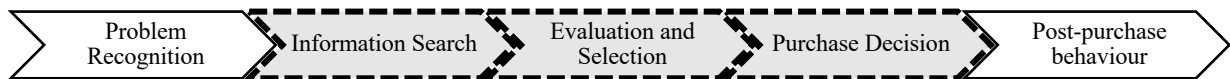


Figure 3: Consumer Purchase Decision Process according to Dewey (1910)

The relevant phases for the research of this paper are phase two to four, namely the *information search*, the *evaluation and selection* of different alternatives and, lastly, the *purchase decision*. These stages are relevant in the context of product labelling in the food industry, as the consumer searches for information pertaining to the product he or she desires. Thereby, a label can inform the consumer about various product aspects, as elaborated above. Additionally, the labels can help in the evaluation phase when choosing between different alternatives (i.e., brand or product) and, finally, in deciding for one product leading to satisfaction and can be squared with the consumer's conscience. Potentially, a successful purchase decision might lead to a re-purchase of a certain product in the future.

3. Methodology

3.1 Research Objective

The research objective of this paper is to synthesize the proliferating research on ethical labelling practices and their effect on consumer perception and purchase intention in the food industry. The objective is two-folded: firstly, to understand the research trends in the area, as

well as the current state of knowledge and research on the topic, and identify research gaps that need to be filled in the future. Secondly, this paper aims to summarize relevant findings from existing research in the field to understand how ethical labelling can influence consumer perceptions in the food industry, which is especially relevant considering upcoming legislations and labelling guidelines, such as the EU Green Claims Directive.

3.2 Research Method

For the purpose of this research, a SLR is an adequate research method to accomplish the stated objectives as it has the potential to give a trustworthy answer to a specific question, thereby, identifying gaps in the research and stressing the need for further research (Booth et al. 2016, 11). The SLR aims to understand how the different research papers on one topic contribute to the overall understanding by integrating and summarizing findings from a specific field and leading the way for further research to be conducted. The SLR follows a “replicable, scientific and transparent process” (Denyer and Tranfield 2009, 672), which reduces the potential for bias within the review. Researchers are less prone to selection bias, which occurs when a researcher primarily selects papers to support his or her belief (Booth et al. 2016, 19). Moreover, SLRs as a research method show high reliability due to the replicability of the findings (Krippendorff 2004, 18), meaning that other researchers are able to retrieve the same results when following the same systematic content analysis at a different point in time. Additionally, a SLR can be highly relevant when formulating public policy (Rousseau et al. 2008), which coincides with the above-mentioned Green Claims Directive (European Parliament 2023), as companies will have to reconsider and evaluate how to label their products and adhere to the directive in order to prevent greenwashing.

3.3 Research Questions

The research questions to be answered in this paper are divided into two sections, namely, descriptive and thematic. The descriptive question focuses on the trends of research to be observed in ethical food labelling and its impact on consumer perceptions and purchase

intentions. To ensure clarity, this question has been divided into five distinct sub-questions. It investigates how many publications there are on the topic of ethical labelling and its influence on consumer perception and purchase intentions per year and which journals prove to be the most influential on the topic. Additionally, the SLR examines the subindustries of the food industry that have received most attention in research, as well as which different types of ethical labels have been in focus. Regarding the thematic question, this paper aims to summarize the main findings of the effect of ethical labelling on consumer perceptions and purchase intentions. A full description of the research questions and the aims of each question, as well as information needed to answer the questions, can be found in *Appendix 2*.

Descriptive - RQ1: What is the current status of research investigating the relationship between ethical food labelling and consumer perceptions and purchase intentions?	
RQ 1.1	How many research papers have been published per year?
RQ 1.2	Which journals are contributing most to the topic?
RQ 1.3	Which types of ethical labelling has most research been focussed on?
RQ 1.4	Which subindustry of the food industry has most research been focussed on?
RQ 1.5	Which research approach is mostly used to derive results?
Thematic – RQ 2: How do ethical labels influence consumer perceptions and purchase intentions in the food industry?	

Table 1: Two main research questions with sub questions

3.4 Research Design, Scope, and Data Collection

Denyer and Tranfield (2009) set up certain principles for conducting SLRs in the field of organizational and management research. Based upon these principles – transparency, inclusivity, explanatory and heuristic – the authors agreed on five steps to follow, to make the review process systematic and, thereby, replicable for other researchers. This specific review process was selected for the thesis and is presented in *Appendix 3*. It highlights the specific steps taken as part of the SLR. After the initial development of the topic, as well as the formulation of research questions to be answered by the SLR, relevant research papers to be included in this synthesis were collected from two renowned databases for peer-reviewed literature in the field of management, namely Web of Science and Scopus. Hence, the extraction of research papers followed a computer-based approach. *Appendix 4* showcases the search terms and search strings used. The terms pertained to different types of labelling that can be

considered ethical according to the conceptualization in Chapter two. No search terms directly mentioning “food” were included as many research papers specifically refer to one subindustry, such as the chocolate industry, and thereby relevant papers would falsely be excluded from the search results. The inclusion and exclusion criteria applied to select research papers from the search results can be found in *Appendix 5*. Some of the inclusion criteria encompass that the research papers must be in the English language, the article must have been published including and from 2010 onwards, and the journal in which the paper was published needs to be ranked in the Academic Journal Guide (AJG) in 2021.

Furthermore, *Appendix 6*, the PRISMA (2020) flowchart, depicts the exact process of systematically including and excluding certain research papers in line with the defined criteria. Following the exclusion criteria, the number of research papers to be included in the systematic review was reduced from an original number of 2767 to 68 articles. Most papers were reduced in the step of removing duplicates as certain research papers appeared under multiple search terms and in both databases. Moreover, papers remaining after applying initial inclusion and exclusion criteria were subject to a review focusing on the title of the papers to determine whether they matched the purpose of this research. Additionally, the screening of abstracts proved to be an efficient method for eliminating articles from the synthesis that did not qualitatively address the topic concerned in this thesis. Lastly, full text screening was performed on the 97 remaining articles, for which relevance for the SLR did not become evident in the title or abstract.

4. Findings and Discussion

68 articles, retrieved from peer-reviewed and AJG 2021-ranked journals, make up the basis for the analysis and insights drawn from the SLR presented in this section. The descriptive analysis below outlines the current status of the research in the topic of ethical food labelling and its influence on consumer perceptions and purchase intentions. A full list of articles, which are part of the SLR with all relevant information, can be found in *Appendix 7*.

4.1 Descriptive Analysis

4.1.1 How many research papers have been published per year? (RQ 1.1)

Figure 4 illustrates the publication trend that can be observed in the time frame between 2010 and 2023. A clear upward trend in the number of research articles published per year can be denoted with a peak in 2022, where 14 articles were published on the topic. Multiple reasons can be held accountable for the upward trend, including increased consumer awareness towards ethical topics following scandals, such as the above-mentioned horsemeat scandal. The establishment of the UN SDGs in 2015 raised awareness to ethical issues, especially environmental aspects, and the need to act in this regard – where labelling is introduced as an option to guide consumer behaviour. Lastly, the Covid-19 pandemic in 2020 shed light on topics such as food security and safety (UN 2020), strengthening the need for research on the topic of labelling and its impact on ethical consumption.

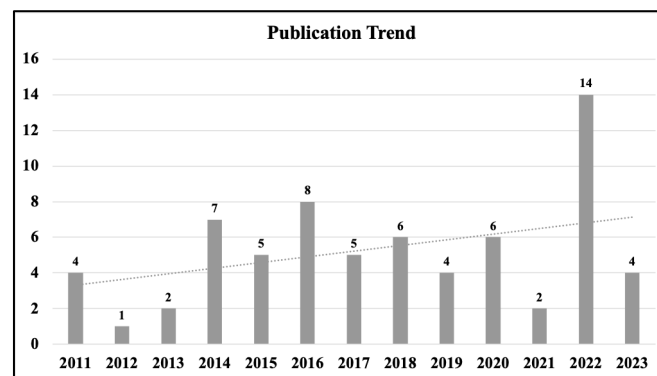


Figure 4: Publication Trend of SLR articles

4.1.2 Which journals are contributing most to the topic? (RQ 1.2)

The journals which appear to be most influential on the topic of ethical labelling in the food industry are displayed in Figure 5. One journal clearly stands out with a total of 19 articles published on the topic between 2011 and 2023, thereby, making up 28% of all articles part of this SLR. The “Journal of Cleaner Production” is known for publishing articles focussing on topics relating to sustainability, the environment and corporate social responsibility (Elsevier 2023), which coincides with the topic of this SLR. In the AJG 2021, the “Journal of Cleaner Production” was ranked 2 which, according to the rating definitions, implies that excellent

practitioner-oriented articles are published in this category. The journal with the second-highest number of published articles on the topic is the “British Food Journal”, which is respected and known for its transdisciplinary research in food-related topics and trends. It focusses on consumer choice, perception and decision making, which coincides with the research objective of this SLR (Emerald Publishing 2023).

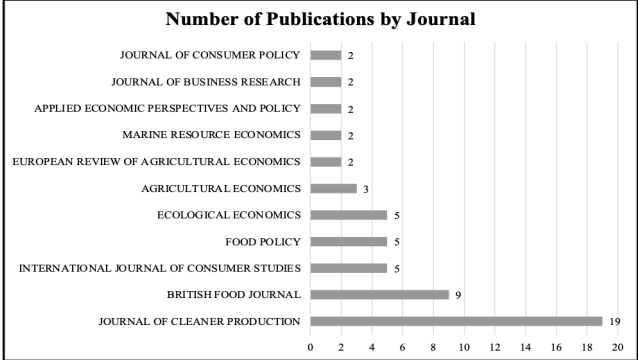


Figure 5: Number of Publications by Journal (>2 publications)

4.1.3 Which types of ethical labelling has most research been focussed on? (RQ 1.3)

According to the classification of labels that fall into the category of Ethical Labelling, as depicted in Figure 2, a clear difference can be seen between the number of articles that were published on each subcategory of ethical labelling, (1) Environmental Sustainability, (2) Social Justice, and (3) Animal Welfare. Some articles pertain to only one of these labelling types, whereas other articles refer to multiple labelling types in their research. Hence, 38 articles (56%) pertain to the topic of Environmental Sustainability only, and an additional 24 articles focus on Environmental Sustainability in combination with one of the other two or even both labelling types. Therefore, in total 62 out of the 68 articles deal with Environmental Sustainability as a subcategory of ethical labelling, with labels including the carbon footprint label or the eco-label.

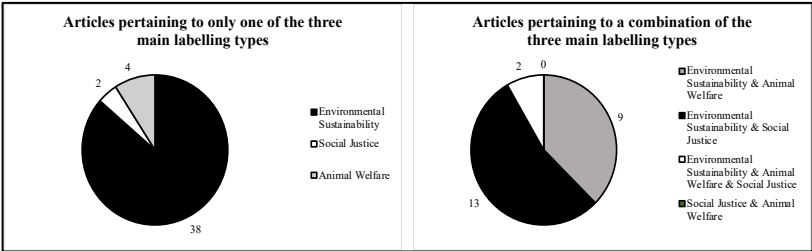


Figure 6: Number of articles pertaining to the different types of “ethical” labelling

4.1.4 Which subindustry has most research been focussed on? (RQ 1.4)

Of the selected SLR articles 26.5% do not focus on one food product in their studies, but rather look at the effect of labelling on consumer perception, purchase intention and willingness to pay with food products in general. However, multiple articles and studies choose to focus on one subindustry, such as the seafood industry, which appeared frequently within articles pertaining to the ethical labelling dimension “Environmental Sustainability”. Furthermore, the meat, dairy and egg industries are often related to studies focussing on “Animal Welfare”, whereas chocolate and coffee are often the food products in focus in studies looking at the ethical labelling dimension “Social Justice”.

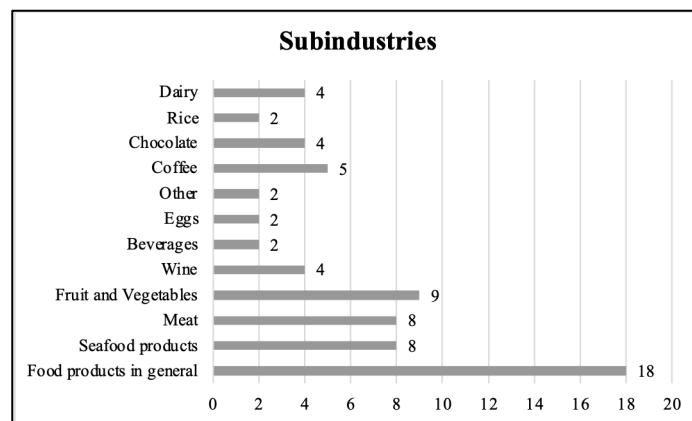


Figure 7: Number of articles pertaining to various subindustries of the food industry

4.1.5 Which research approach is mostly used to derive results? (RQ 1.5)

Empirical studies clearly dominate as a research approach in the existing set of SLR studies with 66 articles deriving their findings from empirical research and only two articles by means of theoretical research. Choice experiments are particularly used frequently to understand whether consumers would be willing to pick the labelled food product over the unlabelled one. Additionally, researchers often made use of mixed methods in their research by combining a questionnaire/ survey with an experimental laboratory test. Furthermore, qualitative focus groups, whether online or in person, were used in six research articles to understand consumer’s motivation behind their purchase decisions. Theoretical research approaches were only used in two articles, where secondary data from panels or other studies was used to derive results.

4.2 Thematic Analysis

4.2.1 General Findings

Before looking into the specific subtypes of ethical labelling and their influence on consumer perception and purchase attention, it was investigated what general information about the impact of food labelling on consumer perception and purchase intention can be derived from the SLR articles. The findings regarding the effectiveness of certain labelling types in the food industry are mixed (*See Appendix 8 & 9 for a graphical description of the thematic findings*).

On the one hand, researchers found that labelling initiatives can have a positive effect on consumer perception and purchase intention, and thereby, guide consumers when making food product choices by informing them about specific benefits or factors relating to the product (Piracci et al. 2022; Limnios et al. 2016). Additionally, the labelling of food products can lead to higher evaluations of the product itself, especially in terms of quality and safety of the product (Donato and D’Aniello 2022) and even be perceived as tastier than the un-labelled product (Wiedmann et al. 2014; Larceneux et al. 2012). On the other hand, however, Zepeda et al. (2013) found that in order for food labels to be effective, they need to match with the consumer’s values. Furthermore, labelling initiatives might not succeed in influencing consumers in their food purchase decisions, due to unfamiliarity of the labels, low levels of trust and too little time to evaluate labels in-store (Stampa and Zander 2022). Additionally, the labelling landscape may be confusing for consumers as the labels themselves, especially if unfamiliar, do not provide enough information to use it as a selection tool for products (Upham et al. 2011). It must be noted that consumers trust the labels with which they are familiar (Siriex et al. 2013) and, therefore, unfamiliar labels might even have a negative effect on their purchase intention and perception.

One insight derived by many researchers on the topic is to bring more awareness and education to different labelling initiatives and the meaning behind them (Lombardi et al. 2017), as it has been shown that providing initial information about the label to consumers resulted in higher

purchase intentions for the labelled product (Luckstead et al. 2022). Moreover, the implementation of policies could be a useful tool in making labels effective in guiding purchase decisions (Aprile and Punzo 2022). Therefore, to achieve meaningful changes in consumption patterns through the use of labels, more information as well as the implementation of labelling policies need to occur (Edenbrandt and Lagerkvist 2022). When assessing aspects that make the difference in whether labels influence consumer perception and purchase intention or not, researchers found a correlation between the level of education of consumers and the use of labels as a guide in purchase decisions (Galati et al. 2022; Zhao et al. 2018). Consumers with higher levels of education were more influenced by the presence of labels on food products, and consequently, also willing to pay more for labelled products (Shuai et al. 2014).

Furthermore, multiple researchers on the topic encountered the above-mentioned “attitude-behaviour” gap. In surveys consumers frequently claimed to value labels as a guide in the purchasing process and were willing to pay more for a labelled food product (Cerri et al. 2018). However, when placed in a real-life setting by means of a field experiment, the same consumers did not act in accordance with the claims they made, and consequently chose to buy the cheaper unlabelled product (Meyerding and Merz 2018; Uehleke and Huettel 2019).

4.2.2 Environmental Sustainability

Out of the 68 SLR articles 38 pertain to the topic of environmental sustainability labelling alone and 24 articles refer to environmental sustainability labelling in combination with one of the other two ethical labelling types. In total 91% of all SLR articles deal with environmental sustainability labelling in some way, thereby highlighting the current relevance of this dimension of ethical labelling. Therefore, the main part of this thematic analysis focuses on this category of ethical labelling. Ethical labels that were used most often in the SLR articles studying the impact of the dimension “environmental sustainability” on consumer purchase behaviour, were eco-labels, carbon footprint labels or organic labels. Different labels were used in the various subindustries of concern. For instance, a distinct set of labels focussing on

environmental sustainability in the seafood industry exists, including the Marine Stewardship Council (MSC) logo.

The findings in the field of environmental sustainability coincide with the general findings summarized above. Consumers, who are generally more conscious of the environment and who are also concerned about topics such as climate change, are willing to pay more for ethically labelled products as found in a survey-based study on Chinese consumers on food products in general (Singh et al. 2023). Additionally, when consumers have existing knowledge on the labels and their meaning, they are willing to pay attention to them in the purchase decision process (Aprile and Punzo 2022). A choice experiment on Italian consumers revealed that consumers prefer bigger labels, regardless of whether they are issued privately or publicly. Eight SLR studies pertain specifically to environmental sustainability labelling and the seafood industry. These studies showed that some consumers are willing to pay more for sustainably labelled seafood products, such as products carrying the MSC label (Salladarre et al. 2016; De Magistris et al. 2015). If consumers believe that they can make a difference through the purchase of an ethical product in terms of environmental sustainability, they are willing to pay a higher price (Galati et al. 2022).

However, the effect is even more increased if consumers receive more information in addition to the label on the product, which further strengthens the above-mentioned importance of policies and awareness (Ankamah-Yeboah et al. 2019). Another study in the seafood industry, performed with Italian consumers through face-to-face interviews, further stressed the importance of policies and awareness, as they found that there was generally a low level of knowledge concerning even the most-used ethical labels showcasing environmental sustainability in the seafood industry (Mulazzani et al. 2021). However, in contrast, a discrete choice experiment performed with Danish consumers showed that, although a significant number of consumers were aware of various labels relating to environmental sustainability and

the meaning behind them, they were not willing to pay more for such products or use the information as a purchase decision guide (Ankamah-Yeboah et al. 2020).

A further subindustry with multiple research articles focussing on environmental sustainability is the wine industry, with most studies focussing on the effect of an organic label, indicating that the wine was produced without the use of artificial pesticides or chemical fertilizers. In contrast to a study on food products in general by Donato and D’Aniello (2022) on Italian consumers, where the findings indicated that an environmental sustainability label increased the overall perception of the product in a positive way, Macht et al. (2022) could not confirm this finding in the wine industry with German consumers. They found that the existence of an organic label did not have a “halo effect” affecting the overall perception and liking of the product. Another study on German consumers in the wine industry by Wiedmann et al. (2014), which was performed by means of a blind test, confirmed that the presence of an environmental sustainability label did not increase overall product preference.

Common themes that could be observed in the research regarding environmental sustainability were that firstly, researchers touched upon the topic of consumer trust when assessing the willingness to pay for and use ethical labels in product evaluation, as consumers need to be willing to believe in the label and its credibility (Stampa and Zander 2022; Chen et al. 2019; Liu et al. 2023). Secondly, the topic of quality was mentioned frequently in terms of associating higher food quality with products that held environmental sustainability labels – the main findings were that products with such labels are perceived as higher quality than the unlabelled products (De Silva et al. 2017; Larceneux et al. 2012; Donato and D’Aniello 2022). Thirdly, safety was one aspect frequently pointed out by researchers, as it was found that consumers highly valued food safety and labels were one way of providing this safety to consumers (Tait et al. 2016; Yin et al. 2017; Chen et al. 2015; Donato and D’Aniello 2022). Lastly, the country of origin played a major role in the consumer purchase process as consumers valued products

that had been grown locally. However, in not all studies was the place of origin the most important factor (Xie et al. 2016; Aprile and Punzo 2022; Moscovici et al. 2022; Limnios et al. 2016; Lampert et al. 2016).

4.2.3 Social Justice

Only two articles part of the SLR pertain to the dimension of ethical labelling “Social Justice” alone. Mostly the topic is researched in combination with one of the two other dimensions of ethical labelling. The most-used label to study the impact of social justice labelling on consumer purchase decisions and intentions, as well as the willingness to pay for such labelled products, is the Fairtrade label. The Fairtrade label is used on a range of products in the food industry, originally known for being displayed on coffee and chocolate (Fairtrade Foundation 2023). Products carrying the Fairtrade label have been produced under fair working conditions with fair payments for workers in the supply chain. Chocolate and coffee stand out as the subindustries most studied regarding Social Justice labelling. The SLR articles reveal that the category of Social Justice labelling as part of ethical labelling might appeal the most to consumers’ ethical values as it concerns topics such as human rights and, therefore, something that is very likely to be close and “tangible” to consumers.

By means of a choice experiment on Danish consumers using chocolate as a food product, the researcher found that ethical labels influence consumer evaluations and purchase decisions by activating a holistic moral evaluation of the food offering (Bradu et al. 2014). Thereby, the values that consumers hold appear to be extremely important in the purchase decision making process when evaluating between labelled and unlabelled food product options (Zepeda et al. 2013; Hainmueller et al. 2015). Consumers were found to have positive attitudes towards the labels they were familiar with (Sirieix et al. 2013). Hence, familiarity and trust are two important factors that give the label the needed credibility for consumers to use them as a decision-making guide. A study on Italian and Spanish consumers showed that when the consumers firstly, understood the meaning behind the label, secondly, found it to be in line with

their values, and thirdly, believed that their purchase could make a difference, the likelihood of buying the labelled product increased significantly (Galati et al. 2022).

However, in line with the findings on environmental sustainability labelling, variables such as education and income, influenced whether labels were used in the evaluation process. A big difference between the purchasing behaviour of ethical labels in the category of social justice could be noticed between consumers of different demographical backgrounds. Certain factors, such as income and age, had a significant impact on whether consumers considered labels when making a purchase decision.

In a study on Italian consumers with chocolate, not only were social justice labels taken into account, but also environmental sustainability and animal welfare labels. The results of the experimental study revealed that social justice labels (i.e., Fairtrade labels) were valued especially and consumers were willing to pay higher price premiums than for the other labelling types (Vecchio and Annunziata 2015). Furthermore, a choice experiment with US consumers on coffee confirmed the findings that consumers valued the social justice labels over environmental sustainability labels (Van Loo et al. 2014). A study in the wine industry revealed that consumers were willing to pay a significant premium for ethical labels implying that workers were treated fairly and paid appropriately (Piracci et al. 2022). The social aspects of the product were valued a lot, which led to the consumer believing that he or she was making an ethical consumption decision, and hence, was willing to pay more for the product. Similar findings were made in a discrete choice experiment concerning coffee with participants mostly based in the US. Here, also, the consumers were willing to pay a significant price premium when the product was carrying a social justice label, ensuring that workers' rights were valued, and the farmers were paid adequately (Hindsley et al. 2020). Additionally, an in-store field experiment, also using coffee as a food product, revealed that consumers were willing to pay

more for coffee carrying the Fairtrade label and moreover, were less sensitive to price increases when the coffee was labelled as Fairtrade (Hainmueller et al. 2015).

However, in line with the findings of the other dimensions of ethical labelling, consumers were found not to be necessarily aware of the meaning of the different social justice labels and, therefore, did not pay too much attention to them (Eldesouky et al. 2020). However, when consumers were explained the meaning of the labels, for instance, the elimination of child labour in the supply chain, they were willing to pay a specific premium for such products and take them into account when purchasing products, as a choice experiment across four different countries revealed (Luckstead et al. 2022). Additionally, in line with the findings above, a big discrepancy can be seen between consumers attitudes and their behaviour, as consumers intentions to act in line with their values did not manifest in their purchasing behaviour (Grunert et al. 2014).

4.2.4 Animal Welfare

Similarly to the dimension of social justice labelling, animal welfare labelling often appears in combination with one of the two other ethical labelling types. The most frequently used animal welfare labels as part of the selected SLR studies are the Rainforest Alliance label or EU Animal Welfare labels. Most studies pertain to the meat, eggs, and dairy subindustries – hence, products derived from animals. Especially in the seafood industry, animal welfare labels proved to be more successful in altering purchase behaviour as well as willingness to pay, compared to other types of ethical labelling, such as environmental sustainability labelling (Ankamah-Yeboah et al. 2019). This was not only the case when looking at more premium fish such as salmon, but the same held true for “commodity” fish such as Anchovi (Mulazzani et al. 2021).

In a study with Swedish consumers, it was found that the willingness to pay for labelled products was the highest with animal welfare labels, compared to climate impact or green labels - indicating that consumers hold ethical values towards other living creatures and, thereby, are willing to pay more for products where animals have been treated properly (Carlsson et al.

2022). An experimental laboratory auction study on Spanish consumers also showed that consumers were willing to pay a significant price premium for food products - in this case meat - carrying an animal welfare label (Gracia et al. 2011). This was further backed up by a study on British consumers who were also willing to pay a substantial price premium for food products carrying an Animal Welfare Logo (Gorton et al. 2023). However, consumers who were especially price sensitive might not be willing to pay such a premium, which is where additional information and policies are needed for awareness and education. Interestingly, the same findings were made in the egg industry with Norwegian consumers. Price-sensitive consumers with little awareness about differences between products carrying different labels, were found to lean towards battery eggs as opposed to the animal-friendly free-range eggs (Gerini et al. 2016). However, consumers with high awareness for these topics, were willing to pay a significant premium for organic and free-range eggs. Another study confirmed that when consumers are confronted with different choices of food products (in this case meat) labelled organic versus regular or animal friendly, consumers were only willing to pay a certain amount more for the animal welfare labelled product. Hence, when the price got significantly higher, the consumer substituted the animal welfare products with regular meat products (Akaichi and Revoredo-Giha 2016).

In a study across three countries, it was found that animal welfare is one of the product attributes indicated on a label that consumers care for and value most (Tait et al. 2016). Along with the above-mentioned findings, consumers were willing to pay a significant premium for animal welfare labelled products during experimental settings, however, not necessarily in real life settings (Uehleke and Huettel 2019). The researchers explain that participants take more of a citizen's point of view in the experimental setting, rather than acting as consumers, which once again is in line with the phenomenon of the attitude-behaviour gap, also observed in the other two dimensions of ethical labelling.

5. Conclusion and Recommendations

5.1 Summary

Drawing on the findings from the 68 SLR articles, it can be concluded that the topic of ethical labelling and its influence on consumer perception and purchase decisions is of rising interest with a clear upward trend in research to be noted. The synthesized findings indicate that consumers are generally willing to use labels to guide them in their purchase decisions, as labels do appeal to the moral of the consumers. However, consumers need to be aware of the meaning of the label. As the research to date points out, there is currently too little awareness and understanding about the meaning behind the labels, thereby, hindering consumers from using labels to guide them when purchasing food products. Multiple articles concluded that consumers were willing to pay more for ethically labelled products, as soon as they were fully aware of what the label implied, thereby, stressing the need for education and awareness in the labelling landscape. It needs to be added, however, that the demographics of the consumer, such as education and household income, are variables that are likely to influence whether a consumer is willing to pay attention to labels and in the next step, pay a price premium for ethically labelled food products. Additionally, the values of the consumer need to be aligned with the purpose of the label. Furthermore, it was found that the currently existing labelling landscape in various food subindustries can be especially confusing for consumers, with a vast number of labels pertaining to similar issues.

5.2 Limitations

While this SLR followed a clear and structured process for selecting articles, thereby, trying to be as precise as possible to only include relevant articles, some research articles may have been omitted. Additionally, only a limited timeframe was taken into consideration, which automatically eliminated potentially valuable research from before 2010. Moreover, relevant research articles might have been excluded through the choice of search terms, search strings and the combinations used in the two databases. Different combinations and the use of

additional search terms might have yielded more relevant results. Another aspect is that this research only focusses on the food industry. However, multiple other industries, such as the textile industry are also overshadowed by ethical issues, where labelling can be an important indicator to promote ethical consumerism. Looking into other industries would add a further dimension to this research. Lastly, this SLR only considers three types of ethical labelling, namely environmental sustainability, animal welfare and social justice. Although these labelling subtypes have been considered as the main three ethical categories to focus on in the food industry by highly regarded authors, other potentially relevant subtypes might have been overlooked.

5.3 Implications and suggestions for further research

This SLR clearly identifies that education and awareness play a major role in further driving the use of ethical labels and ensuring that consumers use them in their purchase decision process. Consumers need to be informed about the meaning and implications of labels, as knowledge and understanding is one of the major drivers for increasing the use of ethical labels in the consumer purchase decision process. Therefore, before introducing policies and campaigns to increase consumer understanding and awareness in the labelling landscape, further research in the field of effective awareness campaigns for ethical labels could be done. Not only should the research focus on the food industry and ethical labelling practices, but also on other industries, which are overshadowed by ethically questionable practices. Moreover, due to the current confusion of the ethical labelling landscape for consumers, standardization of labelling practices across industries could lead to the more effective use of these labels when deciding between different products. This should be regarded as highly important if introducing mandatory labelling standards, for instance, with the above-mentioned EU Green Claims Directive. To conclude, standardization, as well as education and awareness about ethical labels and their meanings, could lead to higher credibility of the labels and, therefore, the increased use of ethical labels by consumers to guide them in their purchase decisions.

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7. Appendix

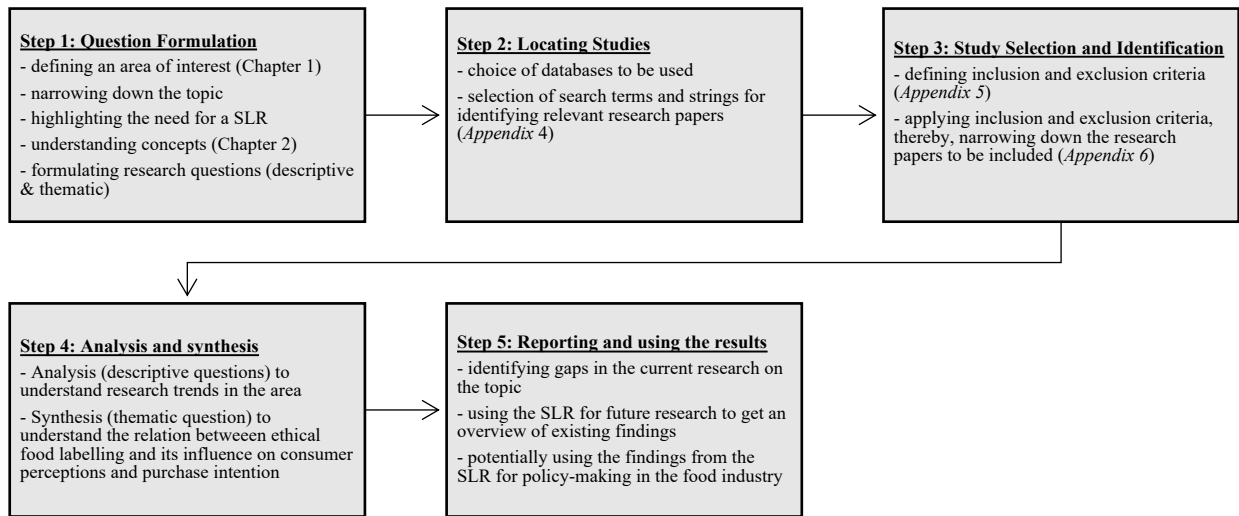
Appendix 1: Examples of Labels that are considered "ethical" according to the three categories by Hartlieb and Jones (2009)

Label	Name	Category	Sector (within food industry)
	Fairtrade	Social Justice, Environmental Sustainability	Food of all types
	Rainforest Alliance	Social Justice, Environmental Sustainability	Coffee, Tea, Fruit, Cocoa
	UTZ Certified	Social Justice, Environmental Sustainability	Coffee, Cocoa, and Tea
	Bio Siegel	Environmental Sustainability	Organic Farming
	Carbon Trust (Carbon Reduction Label)	Environmental Sustainability	Food of all types
	Marine Stewardship Council	Animal Welfare	Fish; Seafood
	Certified Vegan	Animal Welfare	Food of all types

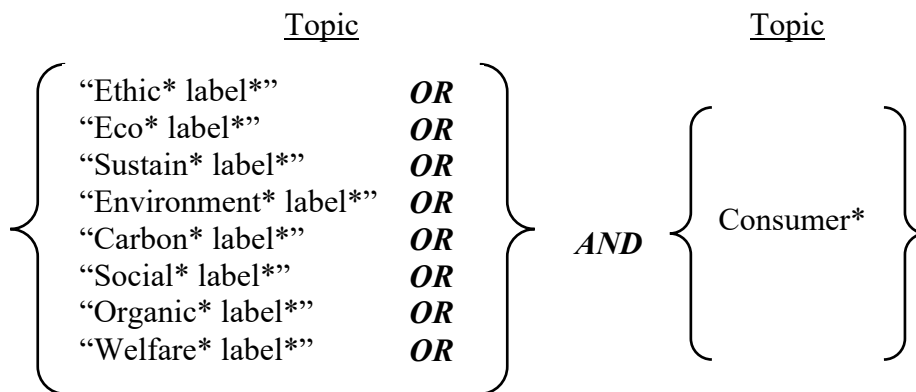
Appendix 2: Detailed research questions, aims, and information needed to answer them

Type of Question	Research Question (RQ)	Aim of research question	Information needed from research paper	Analysis to be run
Descriptive	How many research papers have been published per year?	Explore the development of the topic over the years & find out whether the topic is a mature or growing area of research	Publishing year	Number of articles published on the specific topic each year
Descriptive	Which journals are contributing most to the topic?	Understand which are the most influential journals in the field	Publishing journal	Number of articles published per journal
Descriptive	Which types of ethical labelling has most research been focussed on?	Explore which types of labelling have gained most attention	Type of Ethical Label examined [Environmental Sustainability; Animal Welfare, Social Justice or mixed]	Number of articles published per labelling type
Descriptive	Which subindustry of the food industry has most research been focussed on?	Explore which food subindustries are explored most often in connection with ethical labelling and its impact on the consumer decision making process	Subindustry being investigated (e.g., dairy, eggs, chocolate)	Number of articles published per subindustry
Descriptive	Which research approach is mostly used to derive results?	Investigate which research approach is used most often	Research approach [Conceptual; Empirical]	Number of articles per research approach
Thematic	How do ethical labels influence consumer perceptions and purchase intentions in the food industry?	Provide extensive insights into the relationship between ethical labelling in the food industry and its influence on consumer perceptions and purchase intentions	Author's findings on relation between ethical labelling and consumer perceptions and purchase intention	Qualitative Analysis

Appendix 3: Steps taken as part of SLR, based on model by Denyer and Tranfield (2009)



Appendix 4: Search terms and strings used to identify relevant research papers from databases

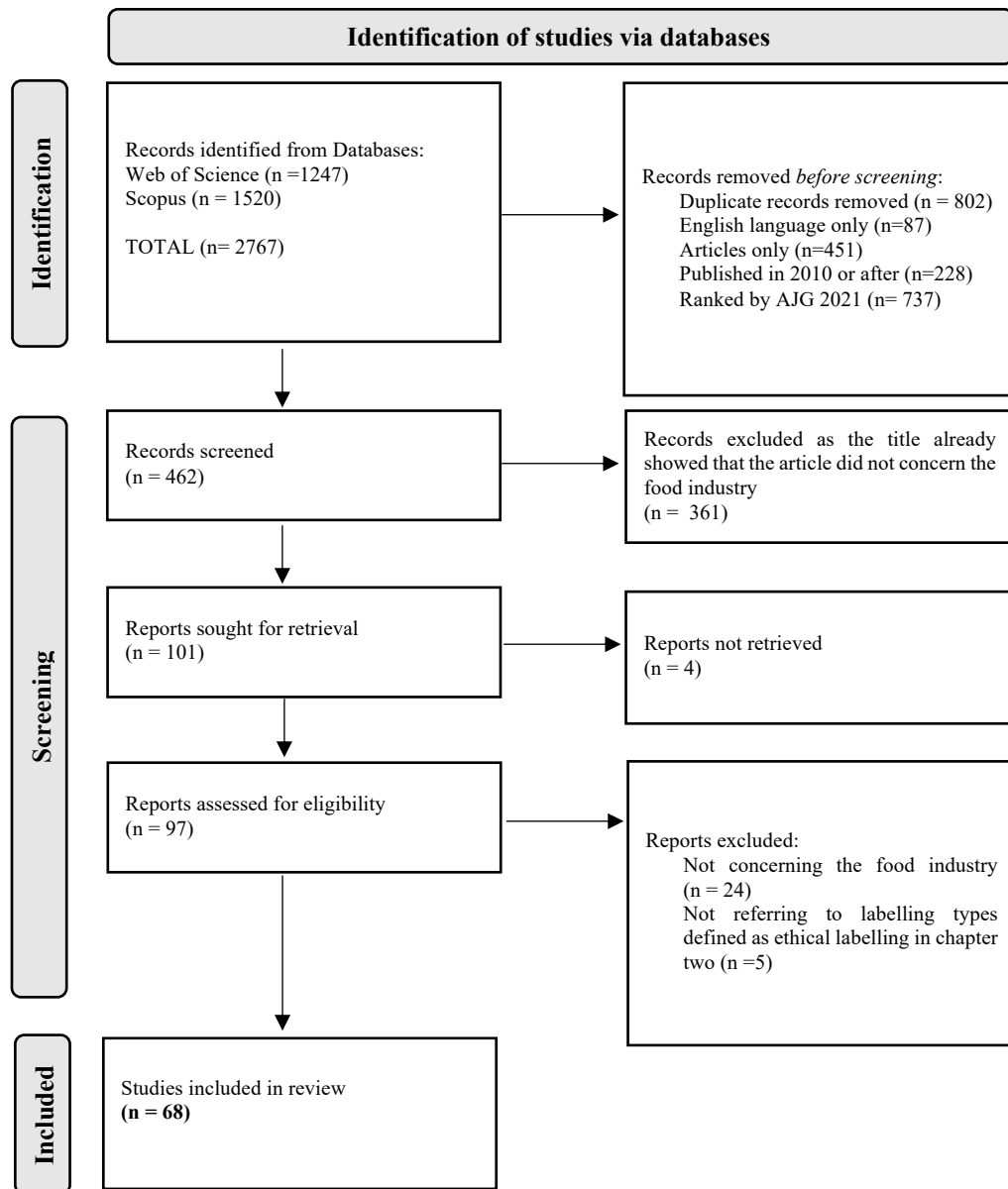


Appendix 5: Criteria for deciding which research papers to include in the SLR; based on the papers retrieved from the two databases (Web of Science & Scopus) using the search terms and strings from *Appendix 4*

	Inclusion Criteria	Exclusion Criteria
Database	Web of Science, Scopus	Any other database
Language	English	Any other language than English
Document Type	Articles	Conference papers, unpublished papers, editorial materials; Books; offline journal articles; reviews
Journal Ranking	Journals ranked by Academic Journal Guides (AJG 2021)	Journals not ranked by AJG 2021
Publication year	2010-2023	Earlier than 2010
Industry	Food industry	Any industry not related to food
Area of interest	Consumer perceptions and purchase intentions, willingness to pay	Studies not relating to the effect of labels on consumer perceptions and purchase intentions

→ *Download of articles according to search terms on 28th July 2023*

Appendix 6: PRISMA flow chart (2020) depicting the process of identifying, screening, and including research papers in the SLR



Appendix 7: Full list of 68 articles included in the SLR containing all relevant information for the descriptive analysis (RQ 1.1-1.5)

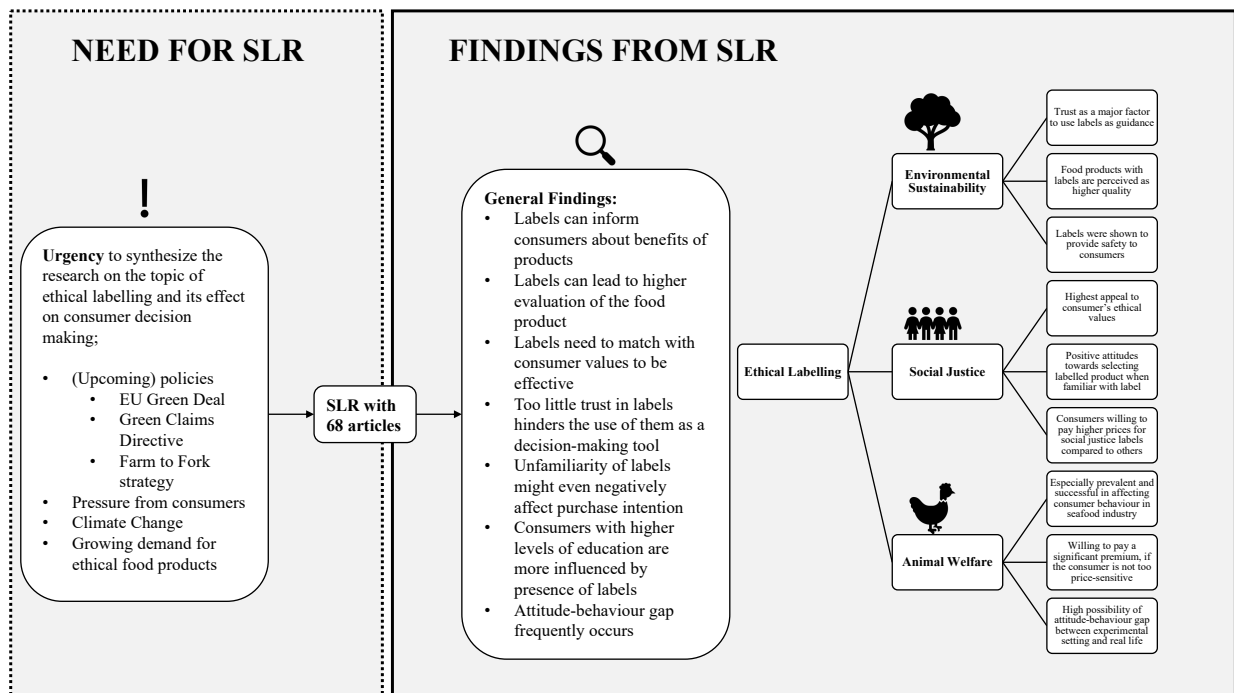
Authors	Title of Article	Year	Journal	Cited by	Subindustry	Type of Labelling	Research Method
Akaichi, Faical; Revoredo-Giha, Cesar	Consumers demand for products with animal welfare attributes Evidence from homescan data for Scotland	2016	BRITISH FOOD JOURNAL	14	Meat	Animal Welfare	Theoretical
Ankamah-Yeboah, Isaac; Asche, Frank; Bronnmann, Julia; Nielsen, Max; Nielsen, Rasmus	Consumer Preference Heterogeneity and Preference Segmentation: The Case of Ecolabeled Salmon in Danish Retail Sales	2020	MARINE RESOURCE ECONOMICS	18	Seafood products	Environmental Sustainability	Empirical
Ankamah-Yeboah, Isaac; Jacobsen, Jette Bredahl; Olsen, Soren Boye; Nielsen, Max; Nielsen, Rasmus	The Impact of Animal Welfare and Environmental Information on the Choice of Organic Fish: An Empirical Investigation of German Trout Consumers	2019	MARINE RESOURCE ECONOMICS	32	Seafood products	Environmental Sustainability & Animal Welfare	Empirical
Aprile, Maria Carmela; Punzo, Gennaro	How environmental sustainability labels affect food choices: Assessing consumer preferences in southern Italy	2022	JOURNAL OF CLEANER PRODUCTION	17	Food products in general	Environmental Sustainability	Empirical
Birkenberg, Athena; Narjes, Manuel Ernesto; Weinmann, Bettina; Birner, Regina	The potential of carbon neutral labeling to engage coffee consumers in climate change mitigation	2021	JOURNAL OF CLEANER PRODUCTION	28	Coffee	Environmental Sustainability & Social Justice	Empirical
Borin, Norm; Cerf, Douglas C.; Krishnan, R.	Consumer effects of environmental impact in product labeling	2011	Journal of Consumer Marketing	143	Food products in general	Environmental Sustainability	Empirical
Bradru, Cosmina; Orquin, Jacob L.; Thøgersen, John	The Mediated Influence of a Traceability Label on Consumer's Willingness to Buy the Labelled Product	2014	JOURNAL OF BUSINESS ETHICS	52	Chocolate	Environmental Sustainability & Social Justice	Empirical
Carlsson, Fredrik; Kataria, Mitesh; Lampi, Elina; Nyberg, Erik; Sterner, Thomas	Red, yellow, or green? Do consumers' choices of food products depend on the label design?	2022	EUROPEAN REVIEW OF AGRICULTURAL ECONOMICS	6	Food products in general	Environmental Sustainability & Animal Welfare	Empirical
Cerri, Jacopo; Testa, Francesco; Rizzi, Francesco	The more I care, the less I will listen to you: How information, environmental concern and ethical production influence consumers' attitudes and the purchasing of sustainable products	2018	JOURNAL OF CLEANER PRODUCTION	115	Food products in general	Environmental Sustainability	Empirical
Chen, Mo; Wang, Yiqin; Yin, Shijiu; Hu, Wuyang; Han, Fei	Chinese consumer trust and preferences for organic labels from different regions Evidence from real choice experiment	2019	BRITISH FOOD JOURNAL	16	Fruit and Vegetables	Environmental Sustainability	Empirical
Chen, Mo; Yin, Shijiu; Xu, Yingjun; Wang, Zhiwei	Consumers' willingness to pay for tomatoes carrying different organic labels Evidence from auction experiments	2015	BRITISH FOOD JOURNAL	10	Fruit and Vegetables	Environmental Sustainability	Empirical
Cho, Yoon-Na; Baskin, Ernest	It's a match when green meets healthy in sustainability labeling	2018	JOURNAL OF BUSINESS RESEARCH	42	Food products in general	Environmental Sustainability	Empirical
Chuammin, Shuai; Xiaomin, Yang; Yukun, Zhang; Chuanxi, Shuai; Penghui, Ding	Consumer behaviour on low-carbon agri-food purchase: a carbon labelling experimental study in China	2014	AGRICULTURAL ECONOMICS	6	Fruit and Vegetables	Environmental Sustainability	Empirical
de Andrade Silva, Adriana Reis; Bioto, Amanda Sodre; Efraim, Priscilla; Queiroz, Guilherme de Castilho	Impact of sustainability labeling in the perception of sensory quality and purchase intention of chocolate consumers	2017	JOURNAL OF CLEANER PRODUCTION	60	Chocolate	Environmental Sustainability	Empirical
De Magistris, Tiziana; Del Giudice, Teresa; Verneau, Fabio	The Effect of Information on Willingness to Pay for Canned Tuna Fish with Different Corporate Social Responsibility (CSR) Certification: A Pilot Study	2015	JOURNAL OF CONSUMER AFFAIRS	44	Seafood products	Environmental Sustainability & Social Justice	Empirical
De Valck, Jeremy; Rolfé, John; Rajapaksa, Darshana; Star, Megan	Consumers' preferences and willingness to pay for improved environmental standards: insights from cane sugar in the Great Barrier Reef region	2022	AUSTRALIAN JOURNAL OF AGRICULTURAL AND RESOURCE ECONOMICS	0	Other	Environmental Sustainability	Empirical
de-Magistris, Tiziana; Gracia, Azucena	Consumers' willingness-to-pay for sustainable food products: the case of organically and locally grown almonds in Spain	2016	JOURNAL OF CLEANER PRODUCTION	94	Other	Environmental Sustainability	Empirical
Donato, Carmela; D'Aniello, Alba	Tell me more and make me feel proud: the role of eco-labels and informational cues on consumers' food perceptions	2022	BRITISH FOOD JOURNAL	12	Food products in general	Environmental Sustainability	Empirical

Duckworth, Jay J.; Randle, Mark; McGale, Lauren S.; Jones, Andrew; Doherty, Bob; Halford, Jason C. G.; Christiansen, Paul	Do front-of-pack 'green labels' increase sustainable food choice and willingness-to-pay in UK consumers?	2022	JOURNAL OF CLEANER PRODUCTION	2	Food products in general	Environmental Sustainability	Empirical
Edenbrandt, Anna Kristina; Lagerkvist, Carl-Johan	Consumer perceptions and attitudes towards climate information on food	2022	JOURNAL OF CLEANER PRODUCTION	2	Meat	Environmental Sustainability	Empirical
Eldesouky, Ali; Mesias, Francisco J.; Escribano, Miguel	Perception of Spanish consumers towards environmentally friendly labelling in food	2020	INTERNATIONAL JOURNAL OF CONSUMER STUDIES	44	Food products in general	Environmental Sustainability & Social Justice	Empirical
Elofsson, Katarina; Bengtsson, Niklas; Matsdotter, Elina; Arntyr, Johan	The impact of climate information on milk demand: Evidence from a field experiment	2016	FOOD POLICY	27	Milk	Environmental Sustainability	Empirical
Feucht, Yvonne; Zander, Katrin	Consumers' preferences for carbon labels and the underlying reasoning. A mixed methods approach in 6 European countries	2018	JOURNAL OF CLEANER PRODUCTION	64	Food products in general	Environmental Sustainability	Empirical
Galati, Antonino; Miret-Pastor, Lluís; Siggia, Dario; Crescimanno, Maria; Fiore, Mariantonietta	Determinants affecting consumers' attention to fish eco-labels in purchase decisions: a cross-country study	2022	BRITISH FOOD JOURNAL	9	Seafood products	Environmental Sustainability & Social Justice	Empirical
Gerini, Francesca; Alfnes, Frode; Schjoll, Alexander	Organic- and Animal Welfare-labelled Eggs: Competing for the Same Consumers?	2016	JOURNAL OF AGRICULTURAL ECONOMICS	40	Eggs	Environmental Sustainability & Animal Welfare	Empirical
Gorton, Matthew; Yeh, Ching-Hua; Chatzopoulou, Elena; White, John; Tocco, Barbara; Hubbard, Carmen; Hallam, Fiona	Consumers' willingness to pay for an animal welfare food label	2023	ECOLOGICAL ECONOMICS	0	Meat	Animal Welfare	Empirical
Gracia, Azucena; Loureiro, Maria L.; Nayga, Rodolfo M., Jr.	Valuing an EU Animal Welfare Label using Experimental Auctions	2011	AGRICULTURAL ECONOMICS	37	Meat	Animal Welfare	Empirical
Grunert, Klaus G.; Hieke, Sophie; Wills, Josephine	Sustainability labels on food products: Consumer motivation, understanding and use	2014	FOOD POLICY	636	Food products in general	Environmental Sustainability & Animal Welfare & Social Justice	Empirical
Haimmueller, Jens; Hiscox, Michael J.; Sequeira, Sandra	CONSUMER DEMAND FOR FAIR TRADE: EVIDENCE FROM A MULTISTORE FIELD EXPERIMENT	2015	REVIEW OF ECONOMICS AND STATISTICS	107	Coffee	Social Justice	Empirical
Hartikainen, Hanna; Roininen, Taneli; Katajajuuri, Juha-Matti; Pulkkinen, Hannele	Finnish consumer perceptions of carbon footprints and carbon labelling of food products	2014	JOURNAL OF CLEANER PRODUCTION	129	Food products in general	Environmental Sustainability	Empirical
Hindsley, Paul; McEvoy, David M.; Morgan, O. Ashton	Consumer Demand for Ethical Products and the Role of Cultural Worldviews: The Case of Direct-Trade Coffee	2020	ECOLOGICAL ECONOMICS	11	Coffee	Environmental Sustainability & Social Justice	Empirical
Lampert, Paul; Menrad, Klaus; Emberger-Klein, Agnes	Carbon information on vegetables: How does it affect the buying process?	2017	INTERNATIONAL JOURNAL OF CONSUMER STUDIES	7	Fruit and Vegetables	Environmental Sustainability	Empirical
Larceneux, Fabrice; Benoit-Moreau, Florence; Renaudin, Valerie	Why Might Organic Labels Fail to Influence Consumer Choices? Marginal Labelling and Brand Equity Effects	2012	Journal of Consumer Policy	103	Seafood products	Environmental Sustainability	Empirical
Lee, Eung Jin; Bae, Joonheui; Kim, Kyung Hoon	The effect of environmental cues on the purchase intention of sustainable products	2020	JOURNAL OF BUSINESS RESEARCH	19	Seafood products	Environmental Sustainability	Empirical
Limnios, Elena Mamouni; Schilizzi, Steven G. M.; Burton, Michael; Ong, Angeline; Hynes, Niki	Willingness to pay for product ecological footprint: Organic vs non-organic consumers	016	TECHNOLOGICAL FORECASTING AND SOCIAL CHANGE	12	Fruit and Vegetables	Environmental Sustainability	Empirical
Lin, Wen; Nayga, Rodolfo M., Jr.	Green identity labeling, environmental information, and pro-environmental food choices	2022	FOOD POLICY	14	Food products in general	Environmental Sustainability & Social Justice	Empirical
Liu, Chenyu; Liu, Xuan; Yao, Liuyang; Liu, Jie	Consumer preferences and willingness to pay for eco-labelled eggs: a discrete choice experiment from Chongqing in China	2023	BRITISH FOOD JOURNAL	4	Eggs	Environmental Sustainability	Empirical
Lombardi, Ginevra Virginia; Berni, Rossella; Rocchi, Benedetto	Environmental friendly food. Choice experiment to assess consumer's attitude toward climate neutral milk: the role of communication	2017	JOURNAL OF CLEANER PRODUCTION	58	Milk	Environmental Sustainability	Empirical

Luckstead, Jeff; Snell, Heather A.; Nalley, Lawton Lanier; Nayga, Rodolfo M., Jr.; Sarpaning, Joshua	A multi-country study on consumers' valuation for child-labor-free chocolate: Implications for child labor in cocoa production	2022	APPLIED ECONOMIC PERSPECTIVES AND POLICY	5	Chocolate	Social Justice	Empirical
Macht, Janine; Klink-Lehmann, Jeanette; Piqueras-Fiszman, Betina; Hartmann, Monika	Insights into the organic labelling effect: the special case of wine	2022	BRITISH FOOD JOURNAL	1	Wine	Environmental Sustainability	Empirical
Mameno, Kota; Kubo, Takahiro; Ujiie, Kiyokazu; Shoji, Yasushi	Flagship species and certification types affect consumer preferences for wildlife-friendly rice labels	2023	ECOLOGICAL ECONOMICS	1	Rice	Environmental Sustainability & Animal Welfare	Empirical
Meyerding, Stephan G. H.; Merz, Nicolas	Consumer preferences for organic labels in Germany using the example of apple's - Combining choice-based conjoint analysis and eye-tracking measurements	2018	JOURNAL OF CLEANER PRODUCTION	45	Fruit and Vegetables	Environmental Sustainability & Social Justice	Empirical
Moscovici, Daniel; Gow, Jeff; Ugaglia, Adeline Alonso; Rezwani, Rana; Valenzuela, Lionel; Mihailescu, Radu	Consumer preferences for organic wine - Global analysis of people and place	2022	JOURNAL OF CLEANER PRODUCTION	4	Wine	Environmental Sustainability	Empirical
Mulazzani, Luca; Piredda, Laura; Cerjak, Marija; Camanzi, Luca	Consumer appreciation of a shark-free eco-label for small pelagics	2021	BRITISH FOOD JOURNAL	6	Seafood products	Environmental Sustainability & Animal Welfare	Empirical
Muller, Laurent; Lacroix, Anne; Ruffieux, Bernard	Environmental Labelling and Consumption Changes: A Food Choice Experiment	2019	ENVIRONMENTAL & RESOURCE ECONOMICS	38	Food products in general	Environmental Sustainability	Empirical
Piracci, Giovanna; Boncinelli, Fabio; Casini, Leonardo	Wine consumers' demand for social sustainability labeling: Evidence for the fair labor claim	2022	APPLIED ECONOMIC PERSPECTIVES AND POLICY	4	Wine	Environmental Sustainability & Social Justice	Empirical
Prell, Maximilian; Zanini, Marco Tulio; Caldieraro, Fabio; Migueles, Carmen	Sustainability certifications and product preference	2020	MARKETING INTELLIGENCE & PLANNING	11	Beverages	Environmental Sustainability & Social Justice	Empirical
Salladarre, Frederic; Breccard, Dorothee; Lucas, Sterenn; Ollivier, Pierrick	Are French consumers ready to pay a premium for eco-labeled seafood products? A contingent valuation estimation with heterogeneous anchoring	2016	AGRICULTURAL ECONOMICS	31	Seafood products	Environmental Sustainability & Animal Welfare	Theoretical
Shuai, Chuan-Min; Ding, Li-Ping; Zhang, Yu-Kun; Guo, Qing; Shuai, Jing	How consumers are willing to pay for low-carbon products? - Results from a carbon-labeling scenario experiment in China	2014	JOURNAL OF CLEANER PRODUCTION	54	Fruit and Vegetables	Environmental Sustainability	Empirical
Singh, Pallavi; Sahadev, Sunil; Wei, Xinya; Henninger, Claudia E.	Modelling the antecedents of consumers' willingness to pay for eco-labelled food products	2023	INTERNATIONAL JOURNAL OF CONSUMER STUDIES	0	Food products in general	Environmental Sustainability	Empirical
Siraj, Ahsan; Taneja, Shilpa; Zhu, Yongming; Jiang, Hongbing; Luthra, Sunil; Kumar, Anil	Hey, did you see that label? It's sustainable!: Understanding the role of sustainable labelling in shaping sustainable purchase behaviour for sustainable development	2022	BUSINESS STRATEGY AND THE ENVIRONMENT	13	Milk	Environmental Sustainability	Empirical
Siriex, Lucie; Delanchy, Marion; Remaud, Herve; Zepeda, Lydia; Gurviez, Patricia	Consumers' perceptions of individual and combined sustainable food labels: a UK pilot investigation	2013	INTERNATIONAL JOURNAL OF CONSUMER STUDIES	149	Food products in general	Environmental Sustainability & Social Justice	Empirical
Stampa, Ekaterina; Zander, Katrin	Backing biodiversity? German consumers' views on a multi-level biodiversity-labeling scheme for beef from grazing-based production systems	2022	JOURNAL OF CLEANER PRODUCTION	1	Meat	Environmental Sustainability & Animal Welfare	Empirical
Tait, Peter; Saunders, Caroline; Guenther, Meike; Rutherford, Paul	Emerging versus developed economy consumer willingness to pay for environmentally sustainable food production: a choice experiment approach comparing Indian, Chinese and United Kingdom lamb consumers	2016	JOURNAL OF CLEANER PRODUCTION	69	Meat	Environmental Sustainability & Animal Welfare	Empirical
Takahashi, Ryo; Todo, Yasuyuki; Funaki, Yukihiko	How Can We Motivate Consumers to Purchase Certified Forest Coffee? Evidence From a Laboratory Randomized Experiment Using Eye-trackers	2018	ECOLOGICAL ECONOMICS	17	Coffee	Environmental Sustainability	Empirical
Uehleke, Reinhard; Huettel, Silke	The free-rider deficit in the demand for farm animal welfare-labelled meat	2019	EUROPEAN REVIEW OF AGRICULTURAL ECONOMICS	13	Meat	Animal Welfare	Empirical
Upham, Paul; Dendler, Leonie; Bleda, Mercedes	Carbon labelling of grocery products: public perceptions and potential emissions reductions	2011	JOURNAL OF CLEANER PRODUCTION	149	Food products in general	Environmental Sustainability	Empirical

Vanclay, Jerome K.; Shortiss, John; Aulsebrook, Scott; Gillespie, Angus M.; Howell, Ben C.; Johanni Rhoda; Maher, Michael J.; Mitchell, Kelly M.; Stewart, Mark D.; Yates, Jim	Customer Response to Carbon Labelling of Groceries	2011	Journal of Consumer Policy	232	Food products in general	Environmental Sustainability	Empirical
Van Loo, Ellen J.; Caputo, Vincenzina; Nayga, Rodolfo M., Jr.; Seo, Han-Seok; Zhang, Baoyue; Verbeke, Wim	Sustainability labels on coffee: Consumer preferences, willingness-to-pay and visual attention to attributes	2015	ECOLOGICAL ECONOMICS	189	Coffee	Environmental Sustainability & Social Justice	Empirical
Van Loo, Ellen J.; Caputo, Vincenzina; Nayga, Rodolfo M., Jr.; Verbeke, Wim	Consumers' valuation of sustainability labels on meat	2014	FOOD POLICY	195	Meat	Environmental Sustainability & Animal Welfare	Empirical
Vecchio, Riccardo; Annunziata, Azzurra	Willingness-to-pay for sustainability-labelled chocolate: an experimental auction approach	2015	JOURNAL OF CLEANER PRODUCTION	119	Chocolate	Environmental Sustainability & Animal Welfare & Social Justice	Empirical
Wiedmann, Klaus-Peter; Hennigs, Nadine; Behrens, Stefan Henrik; Klarmann, Christiane	Tasting green: an experimental design for investigating consumer perception of organic wine	2014	BRITISH FOOD JOURNAL	88	Wine	Environmental Sustainability	Empirical
Wong, Eugene Yin Cheung; Chan, Fanny Fong Yee; So, Stuart	Consumer perceptions on product carbon footprints and carbon labels of beverage merchandise in Hong Kong	2020	JOURNAL OF CLEANER PRODUCTION	24	Beverages	Environmental Sustainability	Empirical
Xie, Jing; Gao, Zhifeng; Swisher, Marilyn; Zhao, Xin	Consumers' preferences for fresh broccolis: interactive effects between country of origin and organic labels	2016	AGRICULTURAL ECONOMICS	81	Fruit and Vegetables	Environmental Sustainability	Empirical
Yin, Shijiu; Chen, Mo; Xu, Yingjun; Chen, Yusheng	Chinese consumers' willingness-to-pay for safety label on tomato: evidence from choice experiments	2017	CHINA AGRICULTURAL ECONOMIC REVIEW	35	Fruit and Vegetables	Environmental Sustainability	Empirical
Zepeda, Lydia; Sirieix, Lucie; Pizarro, Ana; Corderre, Francois; Rodier, Francine	A conceptual framework for analyzing consumers' food label preferences: An exploratory study of sustainability labels in France, Quebec, Spain and the US	2013	INTERNATIONAL JOURNAL OF CONSUMER STUDIES	33	Food products in general	Environmental Sustainability & Social Justice	Empirical
Zhao, Rui; Geng, Yong; Liu, Yiyun; Tao, Xueqin; Xue, Bing	Consumers' perception, purchase intention, and willingness to pay for carbon-labeled products: A case study of Chengdu in China	2018	JOURNAL OF CLEANER PRODUCTION	82	Milk	Environmental Sustainability	Empirical
Zhou, Jiehong; Liu, Qing; Mao, Rui; Yu, Xiaohua	Habit spillovers or induced awareness: Willingness to pay for eco-labels of rice in China	2017	FOOD POLICY	45	Rice	Environmental Sustainability	Empirical

Appendix 8: Graphical Illustration of the findings from the thematic analysis



Appendix 9: Factors contributing to the usage of labels as a guidance when purchasing food products

Factors contributing to the usage of labels on food products in the consumer decision making process:

- ✓ Familiarity of the label
- ✓ Trust towards the label
- ✓ Alignment of values with what the label stands for (especially high for social justice labels)
- ✓ Belief that the purchase of the labelled product will have a positive impact
- ✓ High awareness of the topic supported by the label