Chasing Sustainable Palm Oil: Consumers as a Catalyst for Change?

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Abbreviations

ACOP	=	Annual Communications of Progress
CPOPC	=	Council of Palm Oil Producing Countries
CSR	=	Corporate Social Responsibility
CSPO	=	Certified Sustainable Palm Oil
DIEH	=	Dansk Initiativ for Etisk Handel (The Danish Ethical Trading Initiative)
ISPO	=	Indonesian Sustainable Palm Oil
LCA	=	Life-cycle Analysis
MPOA	=	Malaysian Palm Oil Association
MSPO	=	Malaysian Sustainable Palm Oil
RSPO	=	Roundtable on Sustainable Palm Oil
POF	=	Palm oil-free (label)
PCE	=	Perceived Consumer Effectiveness
POIG	=	Palm Oil Innovation Group
P&C	=	Principles & Criteria
SCM	=	Supply Chain Management
SDGs	=	Sustainable Development Goals
SPI	=	Sustainably produced ingredients
SSCM	=	Sustainable Supply Chain Management
TBL	=	Triple Bottom Line
UNGC	=	United Nations Global Compact
WWF	=	World Wide Fund for Nature

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Abstract

For the past decades, sustainability has become an integral part of the global as well as many consumers' personal agenda. As a result, companies are prone to face several risks e.g., loss of competitiveness, reputational damage, stranded assets etc., if they do not adhere to the prominent stakeholder demands for sustainability and ethical behavior. In the case of palm oil, the negative implications that persist throughout the supply chain have been granted limited publicity. Thus, there is a general lack of awareness surrounding palm oil as a commodity, despite it being present in half of the products in most Danish supermarkets. Due to a gap in consumer research concerning Danish consumers' familiarity with the implications of the palm oil industry and perception of palm oil labeling, the purpose of the thesis is to identify the role of consumers in achieving sustainable palm oil practices in the Danish food industry.

Through exploratory research, the thesis examines Danish consumers' perception of the palm oil industry and labeling in the Danish food industry through survey research. By conducting choice experiments, consumers' purchasing behavior and their perception of sustainability labels are explored to determine whether Danish consumers demand sustainable palm oil or palm oil-free products or potentially neither. Through four semi-structured interviews with palm oil industry actors and secondary sources, we investigate the significance of the RSPO certification scheme on palm oil production practices alongside companies' incentives to transition to sustainable palm oil practices in the Danish food industry using Coop as an example. With 300 completed surveys, we found that the respondents were not particularly familiar with palm oil industry implications, nor did they know or consider the palm oil labels to a notable degree. The choice experiments illustrate that the RSPO label and palm oil-free label had little to no influence on consumers' purchasing choices, and in conjunction with the views from interviewees, this signifies the ineffectiveness of the RSPO certification. We found that the Danish food industry has acknowledged the issues surrounding palm oil and therefore conducts sustainable palm oil practices on the basis of RSPO certification, yet the companies do not advocate their stance directly to consumers. We found that sustainable palm oil practices do not grant a competitive advantage but is rather seen as a license to operate. Our findings suggest that consumers are considered an important driver in companies' incentives to conduct sustainable palm oil practices, but due to the absence of palm oil labels on packaging in the Danish food industry there is less direct pressure from the consumers. Thus, the role of consumers is rather limited, and the Danish food industry is to a larger degree pushed towards more sustainable palm oil practices by NGOs and industry actors.

1. Introduction

Palm oil is the most cultivated and utilized vegetable oil globally, and today 50% of supermarket products contain palm oil (Verdens Skove, 2018). Due to palm oil's low market price, high yield and applicability, and its neutral taste in food products, it has become a key component in many of the supermarket supply chains. Despite the many great qualities, palm oil is a significant threat to the environment with many rainforest areas being cleared by burning to make room for palm oil plantations, which emits high levels of CO2, threatens biodiversity and impacts endangered species such as the Orangutan. Furthermore, human establishments who reside in the rainforests are also destroyed and people are forced to move elsewhere to make room for palm oil plantations (Verdens Skove, 2018), also known as land grabbing. However, oil palms occupy the smallest proportion of all the land used for oil and fat production in the world, while in the meantime it supplies the largest proportion of oil production (32% worldwide) and it also uses less water (Forum Nachhaltiges Palmöl, n.d.; Ingredients Network, 2020). The substantial consumption of palm oil is reliant on heavy import of palm oil from mainly Malaysia and Indonesia which will go through many logistical and production stages throughout the supply chain before sitting on the shelves in Denmark (Ceres, 2018). The supply chain is complex and made up of many actors in several different regions and countries. The complexity and many steps of the palm oil supply chain points toward the importance of sustainable supply chain management (SSCM) in ensuring more sustainable palm oil practices.

In general, studies show that there is a negative consumer perception of the palm oil industry (Aguiar et al., 2018), which has given palm oil a tarnished reputation (NOAH, 2019a). Though the consumer knowledge of the impact of the palm oil industry is generally low, where not many consumers are actually aware of the consequences of the extensive use of palm oil in food products (Hinkes & Christoph-Schulz, 2019). Despite the efforts to increase sustainable production in the palm oil industry, some consumers associate palm oil with environmental destruction and prefer products free from palm oil as opposed to certified palm oil (Ingredients Network, 2020). Therefore, many initiatives and certification schemes have been launched to counteract the negative implications. The largest global certification scheme for palm oil is the Roundtable on Sustainable Palm Oil (RSPO) which develops and implements global standards for minimizing negative impact of the cultivation of palm oil in the producing regions (RSPO, 2021a). Certification schemes and labels work as tools for decreasing information asymmetry for consumers whilst promoting sustainability of consumption patterns (Thøgersen et al., 2010). However, to reap the

benefits of RSPO and sustainability labeling in general, consumers need to become aware of the palm oil problem in order for them to adopt these labels and thus consider them in purchasing decisions (Thøgersen et al., 2010). The general lack of awareness of the RSPO label is emphasized by a UK YouGov survey which found that only 3% of the public recognize the RSPO label (Brown, 2014). Many critics argue that RSPO certification does not improve the sustainability of the palm oil industry (Forbrugerrådet Tænk, 2018; NOAH, 2019a). The Danish food industry is subject to a manifold of certifications and standards and thus tend to bombard consumers with sustainability labels. This makes it increasingly difficult for the consumer to navigate what is and what is not actually sustainable and thus inhibits the consumer's ability to participate in the sustainable transition. Therefore, the purpose of the thesis is to address the present gap in research concerning consumer perception of palm oil and RSPO in the Danish food industry, and how the RSPO certification and consumers' salience subsequently impacts palm oil supply chains and incentivizes sustainable transition in Danish food companies. Consequently, the thesis aims to answer the following research question.

1.1. Research Question

What role do consumers play in achieving sustainable palm oil practices in the Danish food industry?

1.1.1. Sub-questions

To aid the answering of the research question, the following sub-questions are used to investigate the issues and opportunities within the palm oil industry.

- To what extent is RSPO actually improving sustainability in the palm oil industry?
- How is palm oil labeling perceived by consumers?
- What incentives do companies have in regard to changing to sustainable palm oil practices in the Danish food industry?

1.2. Motivation and Relevance

There has been a significant shift in consumer perception of sustainability which has caused many to favor products that are ethically sourced and produced. This has inevitably had implications for supply chains that rely on palm oil-based products, which includes the Danish food industry. An important motivational aspect for this particular topic is founded in our own lack of awareness of the severity of the industry and

its far-reaching applications. These considerations are the foundation for the project which seeks to investigate the role of consumers in businesses' transition towards more sustainable palm oil practices and SSCM. Aspects of the SCM domain have shifted to incorporate sustainability considerations and the increasing demands of conscious consumers, and thus the notion of SSCM has emerged. This project builds on consumer buying behavior and perception of sustainability and palm oil in particular. Parallel hereto, the thesis is motivated by the shift in SCM and thus seeks to investigate how SSCM can be utilized to spread good practices throughout the supply chain network. Whilst there is much research suggesting consumers are aware of the negative consequences of many supply chains and product types, we experience less concentration surrounding palm oil implications, and therefore the pressure on this particular ingredient is less so than on e.g., meat, dairy etc.

The thesis is of particular relevance as it seeks to create a deeper understanding of the correlation between the shift to a sustainably conscious society and the lack of consumer knowledge of palm oil production and consideration of palm oil labeling. The findings of the thesis, alongside supporting academic articles and previous research, will enable a discussion of the future of palm oil in the Danish food industry. This contributes to the relevance of the thesis by seeking to highlight the importance of understanding and shifting to more sustainable practices in the palm oil supply chain on the basis of industry and consumer demands.

1.3. Delimitation

The project will focus on the Danish food industry with Coop as a case company example, and thus will not be considering how palm oil is perceived and utilized in other industries. Since two thirds of the import of palm oil in Denmark is used for food products, and still increasing (NOAH, 2019a), we have chosen to focus on the food industry instead of e.g., biofuel or cosmetics. The thesis acknowledges the importance and significance of palm oil in other industries, yet the delimitation has been made to limit the scope of the analysis in order to gain a deeper understanding within the food industry. On the basis hereof, the survey takes consumer perception of food products into consideration and not other product types. This poses limits to the scope of the data, as some respondents of the survey may only be knowledgeable of the use of palm oil in other industries.

Due to time limitations, we will not be making a comparative analysis of companies within the Danish food industry. We acknowledge that this could potentially provide a nuanced view of different approaches

to palm oil within the food industry. However, we believe that these approaches are unlikely to differ significantly and thus we have chosen a more in-depth approach to focus only on one of the major players in Denmark, namely Coop. The time constraints will furthermore impact the survey, as it will only be available for responses for two weeks as significant time will be dedicated to organizing and analyzing the data collected. Since Coop is a frontrunner in terms of sustainability, this limits nuances and challenges that other companies may have when first integrating a strategy for sustainable palm oil. To limit the scope further, the project will focus predominantly on Denmark and Danish consumers, as a global focus would be too extensive. Also, many initiatives for sustainable palm are not taken into consideration. There are a manifold of initiatives working for promoting a sustainable future for palm oil, and they work towards many of the same things. We therefore focus on RSPO as this is the globally most recognized and used certification for palm oil (Fonap, n.d.).

1.4. Structure of the Thesis

Chapter 1: Introduction

Chapter 1 introduces the topic and presents the reader to the chosen focus which the thesis will investigate, and the research question which it seeks to answer. Furthermore, the motivation and relevance of the thesis are included, and the delimitations of the thesis will be discussed.

Chapter 2: Palm Oil Industry Literature Review

Chapter 2 introduces literature and studies of the palm oil industry with the purpose of enlightening the reader of the current practices and the manifold of appertaining problems and challenges. In connection herewith, RSPO will be introduced alongside a short introduction to other palm oil initiatives. The purpose of this chapter is to establish background information for the thesis.

Chapter 3: Academic Literature Review

Chapter 3 introduces a review of the existing literature surrounding certain aspects of sustainability and consumer perception that are relevant for the thesis topic in order to gain understanding of the academic work that exists and thus create a foundation for which our findings can be related to. By establishing a knowledge base and determining the relevant themes and knowledge gaps, the thesis gains its focus and theoretical approach.

Chapter 4: Theoretical Framework

Through an understanding of the academic work conducted in the research field in the previous chapter, the theoretical framework is determined in order to address the gaps identified. The theoretical framework seeks to take on a new angle on the topic and subsequently advance the theoretical debate of the issues within the palm oil industry. Key terms, theories and concepts which will be used to frame the research field of the thesis are introduced, defined and related to the thesis' focus.

Chapter 5: Methodology

Chapter 5 presents the methodological choices which shape the thesis, including the research philosophy, approach and design. The methodological choices are explained in order to provide the motivation behind the choices and also transparency in terms of how the research has been conducted. This includes an explanation of the reliability and validity of the methodology and data collected.

Chapter 6: Findings

Chapter 6 presents the empirical findings of the thesis by using the theoretical framework. The chapter is structured in accordance with the theoretical framework and is divided into three parts to link the findings to the focus areas of the thesis. Sub-conclusions are provided by the end of each section in the analysis.

Chapter 7: Discussion

Chapter 7 discusses the key findings of the thesis and relates it to additional perspectives and research within the field. This chapter focuses on questioning the findings of the thesis by exploring the meaning and implications of the results from different perspectives.

Chapter 8: Conclusion

Chapter 8 recites the main findings and final reflections of the thesis and provides answers to the research question and sub-questions initiated in the introduction of the thesis. The chapter includes a discussion of whether the purpose of the thesis is fulfilled and suggestions for further research.

2. Palm Oil Industry Literature Review

2.1. Palm Oil Production

Palm oil production is predominantly being carried out in developing countries with Indonesia and Malaysia being the primary producers, carrying out respectively 57.6% and 25.8% of total global production in 2019 (IDH, 2020). Between 1995 and 2020, annual production of palm oil more than quadrupled from 15.2m metric tons to 75.45m metric tons (Statista, 2021). By 2050, it is expected to quadruple again, reaching 240m metric tons (Tullis, 2019). The EU is accountable for 10.8% of global palm oil usage, of which 86% of the imported palm oil in 2019 is certified sustainable (IDH, 2020). Palm oil consumption in the EU was 7.1m metric tons 2020/2021 and 5.5m metric tons in 2011/2012, which equates to a 29% rise in just 9 years (Statista, 2021). This indicates the transitioning of palm oil production to more sustainable practices is of great importance.

Today, the use of palm oil is versatile and favored due to the high yield of the crop. In the food sector, palm oil is advantageous for many products such as e.g., potato crisps, ice cream and bakery goods (Aguiar et al., 2018). Palm oil is increasingly used as a replacement for fat in dairy products, and in confectionery for replacing cocoa butter which is a lot more expensive. Also, in ready meals that are chilled or frozen, palm oil is widely used (Aguiar et al., 2018). Many foods require palm oil for preparation due to its stability and it is therefore the only economically viable alternative for use in certain applications as a substitute for trans-fats (Gesteiro et al., 2019). The food industry is transforming and is evidently adopting a more holistic view, which encompasses not only health, but also environmental protection and traceability. There are many substitutes available to replace palm oil, e.g., cocoa- and shea butter, animal fats, coconut oil etc. However, these suffer from high price volatility, lower yields, require more fertilizer, and are less available, which encourages the industry to lean towards palm oil (Gesteiro et al., 2019).

Production growth in Malaysia and Indonesia partly stems from their early embrace of integrated plantation systems and large-scale, modern refineries that offer superior economies of scale (GRO Intelligence, 2016). The plantations have significant importance for the economies of these countries as they provide jobs and are often based in rural areas; 40% of total global palm oil production are accounted for by smallholders, thus helping to alleviate poverty (RSPO, n.d.-c). The consumption of palm oil is often questioned in regard to the sustainability of its cultivation which entails significant environmental costs (Gesteiro et al., 2019). In Malaysia and Indonesia, fires are often deliberately set to clear rainforests and

thus create more land for palm oil plantations, which threatens the ozone layer, and it places the rich biodiversity at huge risk (NOAH, 2019a). In order to meet the growing demand for palm oil, more processing plants are built which results in methane emission from palm oil wastewater which contributes significantly to climate change (Euromonitor, 2018). In the period 2000-2017, Indonesia experienced a 115.7% rise in methane emission from agriculture with the vast majority stemming from palm oil cultivation (Euromonitor, 2018). Tropical forests store more carbon per unit area than any other area in the world, which means that the fires being set to clear vegetation for oil palm plantations contribute to climate change (Euromonitor, 2018). The purchasing of palm oil in Denmark has been increasing over the last many years from 3m DKK in 2002 to 7.9m DKK in 2018 (Appendix 6), which refers back to the fact that palm oil is an increasingly important ingredient in the Danish food industry.

2.2. Palm Oil Supply Chain

The palm oil supply chain is complex and varies to a large part depending on the downstream suppliers. The complexity is enhanced by the multiple changes of corporate ownership of the palm oil as it passes from palm oil plantations and growers to local traders and collections centres, to mills and is then collected in collection ports. The palm oil is then traded and shipped to refining factories where downstream suppliers receive the oil to manufacture products to sell to retailers which in the end sells the final product to consumers (IDH, 2020). Most palm oil supplies are derived from different sources which are then mixed together at multiple stages of the production cycle which poses a significant challenge in relation to identifying and tracing back palm oil in the supply chain (Ceres, 2018). Fig. 1.1 depicts a generalization of the supply chain illustrating how the palm oil goes through multiple stages and oftentimes owners before reaching the shelves in the supermarkets in Denmark.

Figure 1.1 - Palm Oil Supply Chain

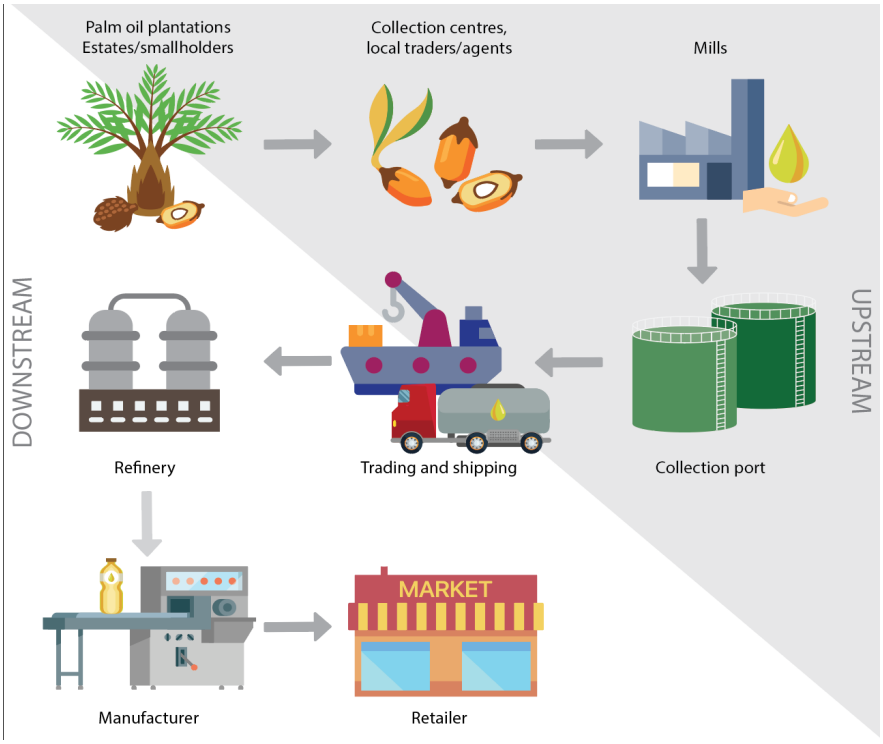


Fig. 1.1 is based on IDH (2020).

Due to the manifold of implications that take place throughout the supply chain, many organizations have been initiated with the purpose of establishing better and more sustainable conditions throughout the supply chain. The largest organization that certifies sustainable palm oil production is the Roundtable on Sustainable Palm Oil (RSPO). The RSPO has two certification systems, whose common denominator is that both involve third-party certification bodies. The first ensures that palm oil is produced sustainably through the Principles & Criteria (P&C). The second ensures integrity of the trade, i.e. that the palm oil that is sold as sustainably is indeed produced by certified plantations (RSPO, n.d.-b). As part of RSPO's approach to ensuring sustainable palm oil in the supply chains, they have developed four different supply chain models for RSPO certified palm oil (EFECA, n.d.).

Table 1.1 - RSPO Supply Chain Models

RSPO Supply Chain Certification Standard	**Origin of Certified Palm Oil**
Identity Preserved	Sustainable palm oil from a single identifiable certified source is kept separately from ordinary palm oil throughout the supply chain.
Segregated	Sustainable palm oil from different certified sources is kept separate from non-certified palm oil throughout the supply chain.
Mass Balance	Sustainable palm oil from certified sources is mixed with non-certified palm oil throughout the supply chain.
Book and Claim	The supply chain is not monitored for the presence of sustainable palm oil. Manufacturers and retailers can buy credits from RSPO certified growers, crushers and independent smallholders.

The increasing demand for sustainability is particularly evident in the increase in imported sustainable palm oil. In 2019, approximately 86% of all palm oil imported to the EU was considered sustainable (IDH, 2020), whilst in Denmark only 65% is certified sustainable (Amsterdam Declarations Partnership, 2018b). However, the overall import increased by 5% with only a 1% increase in RSPO certified sustainable palm oil, and a 7% decrease in RSPO and Independent Smallholder credits, which amounts to a 1% drop in total RSPO volume (IDH, 2020). This further highlights the importance of promoting sustainable supply chains in regard to palm oil in order to improve the landscapes and livelihoods of palm oil producers (IDH, 2020). Risk management of SSCM can be a particular challenge, especially within the palm oil supply chain as it requires downstream suppliers to work with supplier countries and other linkages that may have conflicting political and cultural differences. Research suggests that "*proactive strategies for companies can and do regularly include the utilization of predominantly third-party certifications as evidence of sustainable management practices and assurance that the supply chain members are following what are considered to be reasonable and responsible practices*'' (Jensen et al., 2016: 9). There are two underlying groups that should be considered when assessing supply chain risks and SSCM integration: the physical and economic risks. The physical risks are those affecting the agricultural assets, being the plantations,

which include changes to the physical environment, most likely driven by climate change alongside other factors such as land degradation and water scarcity (Morel et al., 2016). The economic risks, and thus drivers, include political and regulatory change, as well as issues of environmental and social responsibility (Morel et al., 2016). In terms of addressing the physical and economic risks, the RSPO is still considered the most comprehensive, however, its historically limited enforcement has threatened its legitimacy to investors and observers (Morel et al., 2016).

One approach to a more sustainable supply chain is to centralize it by choosing either domestic or neighbor country suppliers in order to enable a less comprehensive due diligence process, as well as to avoid the cultural complexities of a global supply chain (Alghababsheh et al., 2018). There are several major challenges with managing the palm oil supply chain that makes it increasingly difficult to implement and ensure true sustainability. Firstly, the palm oil production stems from areas where specific geographic conditions of the production are necessary. Secondly, a large part of suppliers are smallholder farmers, and thirdly the many chains and linkages that the oil goes through makes tracking difficult. Moreover, the further away the supplier is from stakeholder and consumer pressure, the less is the incentive to pursue sustainability initiatives (Foerstl et al., 2015). Therefore, ensuring compliance and due diligence of upholding standards and requirements is a challenging task. Ultimately, it would be easier to ensure a sustainable supply chain if there were less tiers and if those tiers were more concentrated around HQ or the final tiers of the chain (Alghababsheh et al., 2018).

2.3. Palm Oil Certification Schemes

RSPO is the largest organization that certifies sustainable palm oil production and most widely used certification standard with 19% of the palm oil worldwide being RSPO certified (RSPO, n.d.-a). RSPO is a non-profit organization that unites stakeholders from different parts of the palm oil industry. This includes the oil palm producers, processors, traders, manufacturers of consumer goods, retailers, banks and investors, and NGOs from environmental and social organizations (RSPO, 2020a). The founding members of RSPO include WWF, Malaysian Palm Oil Association (MPOA), Unilever, Migros and AAK (RSPO, n.d.-a). RSPO has more than 4,000 international members from every part of the supply chain, which are committed to the sustainable production and sourcing of palm oil which is certified by RSPO (RSPO, 2021a). Subsequently, the organization structure seeks to provide a diversified view on the industry and create favorable circumstances for each link of the industry. RSPO develops and implements global

standards for sustainable palm oil production, which companies must comply with in order to gain the certification of Certified Sustainable Palm Oil (CSPO) (RSPO, 2021a). According to RSPO, if the criteria of the certification standards are complied with, then they can help to minimize the negative impact of the cultivation of palm oil in terms of the environment and the communities in the palm oil-producing regions (RSPO, 2021a). However, with the relatively small part of the global palm oil market being certified limits the impact of the certification standard considerably (Nikoloyuk et al., 2010). Non-certified palm oil is easily sold and encounters no obstacles as there are sufficient food and energy markets demanding it, for instance growing markets in China and India (Nikoloyuk et al., 2010). Whilst RSPO is adopted by the majority of the businesses operating in the European market, the European demand only counts for no more than 20% globally (Nikoloyuk et al., 2010).

RSPO certification is a voluntary certification but requires companies to abide by national laws and requirements (EFECA, n.d.). As it is not free to become a member of RSPO, and thus to be certified (RSPO, 2021c), it creates inequality and makes it difficult for smaller palm oil producers and other links of the palm oil supply chain to become sustainable. Other palm oil certification schemes include national standards such as Indonesian Sustainable Palm Oil (ISPO) and Malaysian Sustainable Palm Oil (MSPO). The governments in these countries have formed national standards to ensure sustainability in palm oil cultivation and supply chains (EFECA, n.d.). In Indonesia, it is mandatory for all oil palm growers to adhere to the ISPO standard, although the requirements for the size of plantation companies vary. The large producers were required to comply with the standards by 2014, and if they do not, they face penalties and risk losing their license to operate. The smallholders are to comply with the ISPO certifications standards by 2022 (EFECA, n.d.). In Malaysia, the MSPO certification is currently not mandatory and is seen as a standard for small or mid-range cultivators that cannot afford RSPO certification. The main difference between RSPO and the national certification schemes ISPO and MSPO is that RSPO includes directives on business practices and plantation management (EFECA, n.d.). RSPO requires commitment to transparency and ethical conduct in the members' business operations and transactions, which ISPO and MSPO also mention but have not explicitly made into a principle. In addition, RSPO is more transparent regarding auditing and the development of standards (EFECA, n.d.). Due to the comprehensive coverage of RSPO and the fact that it is the most widespread certification scheme in the world, the thesis will focus on the RSPO certification scheme rather than other sustainable palm oil certification schemes.

2.3.1. RSPO's Principles & Criteria

RSPO has established a guideline called Principles & Criteria (P&C), where seven principles which need to be complied with in order to be RSPO certified. These principles are listed in appendix 7. Accredited certifying bodies audit all the organizations in the supply chain in order to prevent mixing palm oil with conventional palm oil and to ensure compliance of production standards (RSPO, 2021b). According to the RSPO, the certification will be withdrawn in case of infringement of the rules and standards (RSPO, 2021b), however there are several examples where organizations in the palm oil supply chain are not complying to the criteria, but which are still credited with the certification (NOAH, 2019a). The certifying bodies are all accredited by the Assurance Services International (ASI), which is appointed to oversee conformity of assessment bodies all over the world (ASI, n.d.). Therefore, the certifying bodies are third-party auditors which increases the reliability of the certifications, as it is not RSPO itself who are certifying their paying customers. Additionally, to assess the RSPO members' progress of producing and procuring RSPO certified sustainable palm oil, they must submit Annual Communications of Progress (ACOP) (EFECA, n.d.). In the ACOPs, the members must state clear timelines for producing or sourcing 100% RSPO certified palm oil (EFECA, n.d.). The standards and criteria for certification set by RSPO exist in several levels which is visualized in appendix 8. The fundamental level about statements of RSPO's desired outcomes are stated in the principles (Appendix 7). The principles are based on the objectives of the organization but provide greater detail and are normative of nature. A principle is followed by criteria which contain some preconditions for when the principle is fulfilled (RSPO, 2018). Criteria add operationality to a principle, as they state implementation requirements. However, the criteria do not offer direct measures of performance, and therefore indicators are used to measure the implementation of the criteria. The indicators convey whether or not the criteria are being met (RSPO, 2018). Subsequently, guidance offers additional information that assists with the implementation, understanding and auditing of the indicator. This is not normative, but informative i.e., useful information to help the unit of certification and auditor (RSPO, 2018). Procedural note is used for standards under development in order to clarify terms, conditions and procedure (RSPO, 2018).

An example of an RSPO standard is by working on the impact goal "Planet" through objectives and outcomes regarding protection and restoration of ecosystems, sustainable consumption, and sustainable management of natural resources. These objectives and desired outcomes are in line with SDG 15, which concerns e.g., deforestation (RSPO, 2018). This objective is followed by principle 7: "*Protect, conserve and*

enhance ecosystems and the environment". One of the criteria for fulfilling principle 7 is for instance criteria 7.2: *Pesticides are used in ways that do not endanger health of workers, families, communities or the environment (RSPO, 2018: 53).* Under this criterion are indicators such as:

- *7.2.1: Justification of all pesticides used is demonstrated. Selective products and application methods that are specific to the target pest, weed or disease are prioritized (RSPO, 2018: 53).*
- *7.2.2 Records of pesticides used (including active ingredients used and their LD50, area treated, amount of active ingredients applied per ha and number of applications) are provided (RSPO, 2018: 53).*

The desired outcome of this criteria is reduced pollution and that the resources used are minimized. Some of the information listed in the guidance for criteria 7.2 includes alternatives to pesticides and herbicide use. In addition, it is mentioned in the guidance that due to issues in measuring and monitoring toxicity in pesticide use, its criteria do not apply to Independent Smallholders (RSPO, 2018: 108).

2.3.2. Assessment of RSPO's Functioning

A study by Morgans et al. (2018) evaluates the effectiveness of RSPO compared to non-certified plantations regarding relative performance of several key sustainability metrics compared to business-as-usual practices (Morgans et al., 2018). The sustainability metrics that were researched included Orangutan presence, fire hotspots, poverty in villages, healthcare facilities, profits and yields. The findings included no significant difference between certified and non-certified plantations for any of the sustainability metrics, except positive outcomes for economic sustainability and greater fresh fruit yields for RSPO certified plantations (Morgans et al., 2018). Thus, the authors suggest that substantial improvement of the RSPO P&C is needed in order to achieve the intended outcomes set by RSPO (Morgans et al., 2018). It is noted that the high degree of variation in environmental and social conditions in the palm oil plantations are not accounted for in the RSPO principles. For example, it is easier for already deforested areas to meet zero deforestation targets, and plantations without peat soil are less vulnerable to fire than plantations with large proportions of, or close to, degraded peat soils (Morgans et al., 2018).

A comparative study by the Forest People Programme deems RSPO the most robust and comprehensive coverage of social and environmental issues in the palm oil industry (Forest People Programme, n.d.). RSPO is compared to the following certification schemes: MSPO, ISPO, International Sustainability & Carbon Certification, Roundtable on Sustainable Biomaterials, Sustainable Agriculture Network and High Carbon Stocks Approach (Forest People Programme, n.d.). The study concluded that RSPO should be the

standard when it comes to palm oil certification, although there is room for improvement in the RSPO P&C (Forest People Programme, n.d.). It is recommended that RSPO: 1) improves audits to avoid potential conflicts, 2) provides remedy for communities with economic and environmental losses, 3) improves protection mechanisms for people complaining about e.g., land grabbing to avoid violence, 4) supports development of smallholders to adopt production practices and RSPO certification, and 5) includes indigenous people in RSPO's scheme's governance in a committee, as they are poorly represented.

RSPO has answered to criticism from NGOs through two specific efforts to raise the bar and satisfy the market's expectations, firstly the Palm Oil Innovation Group (POIG) was initialized to build upon the RSPO P&C, and secondly RSPO Next was developed to recognize the RSPO members who exceeded requirements (Forest People Programme, n.d.). RSPO has decided on a new set of standards for smallholders which aim at adjusting the criteria that has been developed for large-scale plantation companies (Neo, 2018). According to Greenpeace, more work needs to be done by RSPO to ensure inclusion of smallholders (Greenpeace, 2021). Another weakness of RSPO, is the reliance on the mass balance supply chain model, where untraced and uncertified palm oil is mixed with certified palm oil, and the Book & Claim supply chain model where companies can buy credits to cover the uncertified palm oil used (Greenpeace, 2021).

The RSPO Next standard launched in 2016 to strengthen the fundamental RSPO P&C. RSPO Next was a voluntary set of advanced add-on criteria which included: no deforestation, no fire, no planting on peat, reduction of GHGs and respect for human rights and transparency (RSPO, 2020b). This enabled RSPO's members to go beyond the basic standards and help drive change and improvement in the production of sustainable palm oil (RSPO, 2020b). Six members managed to achieve the RSPO Next certification. However, in 2020 RSPO announced the discontinuation of the RSPO Next scheme (RSPO, 2020b). RSPO decided to let the RSPO Next certification scheme expire in order to unite all members along the supply chain on the existing standards, and on the basis of their guidelines for "Shared Responsibility" and their common mission to make sustainable palm oil the norm (RSPO, 2020b). The discontinuation of RSPO Next illustrates the level of ambition set by RSPO after only 4 years of including the voluntary additional commitment to sustainable practices.

2.4. Initiatives and Alliances to Improve the Palm Oil Industry

There are many initiatives that focus on improving the practices in the palm oil industry to secure sustainable development. Companies and sector associations are working together in widespread alliances in Europe, which include national alliances that are committed to 100% certified sustainable palm oil (EPOA, 2021c). Some of the more prevailing and relevant initiatives are described below:

The Amsterdam Declaration pursues the use of 100% sustainable palm oil in Europe by 2020 (Gesteiro et al., 2019). As Europe the second largest global importer of palm oil, the Amsterdam Declaration states that Europe has an opportunity, but also a responsibility to move the palm oil industry onto a more sustainable path (Amsterdam Declarations Partnership, 2018a). The Declaration seeks to find a way to make public and private stakeholders work together, including industry parties, civil society and governments of both producer and consumer nations (Amsterdam Declarations Partnership, 2018a). The Declaration continually attempts to strengthen national initiatives for sustainable palm oil, in the hope of it leading to potential governmental support (IDH, n.d.). In 2019, 86% of the imported palm oil in Europe was certified sustainable palm oil (IDH, 2020).

European Palm Oil Alliance (EPOA) is a business initiative of palm oil refiners and producers (EPOA, 2021a). EPOA works closely with national initiatives in the European countries and covers most of the EU market. The alliance believes that sustainably produced palm oil is a key food ingredient which helps feed the world, protects biodiversity and improves socio-economic development (EPOA, 2021a). Therefore, EPOA works for pushing the sustainable palm oil market transformation and creating a positive image of palm oil used in food (EPOA, 2021a). The EPOA takes a stand against “Palm oil-free” labeling stating that it confuses consumers by creating conflicting messages of sustainable palm oil (EPOA, 2021b).

Sustainable Palm Oil Choice (SPOC) initiative is set up to strengthen and solidify European investments in sustainable palm oil by promoting RSPO certified palm oil, improving value chains and building sustainable supply chains (SPOC, n.d.). The participants in SPOC unite European refining industries with bold NGO voices, and also have ambitions of 100% uptake of sustainable palm oil in Europe by the UN Climate Change Conference in 2021 (SPOC, n.d.).

Dansk Industri (DI) has entered an alliance with Dansk Initiativ for Etisk Handel (The Danish Ethical Trading Initiative) (DIEH) and other organizations, where they seek to ensure more responsible use of palm oil in

Denmark (DI, 2020). The alliance started as a joint Danish effort and spokesbody for the discussion on responsible use of palm oil in Denmark (DI, 2020). It includes organizations such as the Danish Ministry of the Environment and Food, Danish Agriculture and Food Council, trade organization for cosmetics and WWF etc. (DIEH, 2020).

The Palm Oil Innovation Group (POIG) is a multi-stakeholder initiative that develops and shares a verifiable benchmark building on the RSPO, in order to achieve the adoption of responsible palm oil production in key players' supply chains (POIG, n.d.). Since its establishment, POIG has created and promoted innovations for the industry together with leading NGOs and palm oil producers (POIG, n.d.). These innovations include POIG Indicators which companies can use to assess their supply chains and act as additional requirements on top of RSPO's Principles and Criteria. In example, RSPO does not address specific working hours, whilst POIG Indicator 2.5.6 states that a normal work week does not exceed 48 hours (excluding voluntary overtime) and workers are entitled to at least one day off in 6 consecutive days (POIG, 2016).

3. Academic Literature Review

3.1. Sustainability and Sustainable Development

In 1987, the United Nations' Brundtland Commission published the report "Our Common Future, From One Earth to One World" which defined sustainability as "*meeting the needs of the present without compromising the ability of future generations to meet their own needs.*" (UN, 1987: 16). The call for sustainable development has increased the number of initiatives and actions seeking to improve social, environmental and economic development. Noticeable initiatives include the Kyoto Protocol from 1997 that took the seriousness of climate change a step further and the Millennium Development Goals from 2000 that provided insight into social justice, public health and environmental concerns (McGill, n.d.). The latest major agenda for sustainable development is the Sustainable Development Goals (SDGs). The SDGs provide a shared blueprint for the UN member states in the form of 17 goals that call for urgent action to secure peace and prosperity for the people and the planet today and in the future (UN, n.d.). The term 'sustainability' has in recent times undergone a noticeable change and moved from being a term often used to describe biological systems to now being a cornerstone of more and more businesses across industries as they seek to balance people, planet and profit. Accordingly, sustainability issues continue to rise along with a growing recognition of global challenges. Thus, it is quintessential that companies are able to implement effective strategies designed to anticipate and mitigate detrimental consequences. A particularly important asset to sustainable development is the role of entrepreneurship and innovation, where sustainable innovations can yield both bottom- and top-line returns whilst solving problems on the global environmental agenda (Kuckertz et al., 2009). The many available sustainability certifications are a testament of the fact that sustainability and sustainable development continues to gain global support and endorsements with the sustainable consumers prevailing in more and more industries. These trends further highlight the importance for companies to include sustainable development considerations in their activities throughout the supply chain and integration in the core business.

3.2. The Sustainable Consumer

With environmental and green issues such as climate change, pollution and over-consumption being more present in consumers' minds, the sustainable consumer is becoming a more prevalent figure in the supermarkets (Weber et al., 2015). More consumers value environmentally friendly products including ecological labeling, charity donations and recyclable packaging. The European Commission recognizes that consumers are becoming more aware of sustainability and are increasingly demanding more

sustainable standards in their products (ITC, 2019). In 2017, 64.7% of consumers globally stated that they tried to have a positive impact on the environment through everyday actions, such as ethical grocery shopping (Euromonitor, 2018). Additionally, the new report from the Sustainable Brand Index 2021 states that 73% of Danish consumers consider sustainability when deciding which product or service to buy (SBI, 2021). The sustainable consumer has been researched in manifold with the purpose of uncovering consumer perception of responsibility. A survey carried out by Arla in 2018 found that 37% of the 1,000 individuals asked believed that they as consumers have the primary responsibility to ensure sustainable development, and 30% believed politicians are most responsible and lastly 19% believed that the companies are most responsible (Skovlund, 2018). Correspondingly, a Futerra survey of 1,000 consumers in the US and UK was carried out in 2018 with the purpose of uncovering the extent to which consumers feel their actions can make a difference in ensuring sustainable development. The survey found that 96% of individuals asked felt that their own actions can make a difference, with 51% of these believing that they personally can make a big difference (Townsend, 2018).

According to Niva & Timonen (2001), the traditional approach to study consumer decision making has shifted from a purely rational decision-making understanding in the form of calculating the options of products or services available and then maximizing the received value or utility, towards now having a focus on the psychological and social attributes of the consumer decision-making. Consumers' decision-making processes is a multi-faceted process, and the emphasis on environmentally friendly products, fair and ethical trade, and labor rights has gotten strong customer support (ITC, 2019).

3.3. Institutionalization of Sustainability Through Certification

Organizations that formulate standards for ethical issues play an important role for societies and businesses by maximizing businesses and organizations' contribution to society (Ingenbleek et al., 2007). Businesses and community stakeholders cooperate to formulate standards or criteria that tackle social, environmental and other ethical issues by establishing rules that market actors have to comply with to receive license to sell with a formal certificate attached (Ingenbleek et al., 2007). By adopting standards voluntarily, businesses enhance the legitimacy of their sustainability program and build on other stakeholders' reputation and knowledge (Ingenbleek et al., 2007). The participation in the criteria-formulating organization (CFO) aids the business' societal ambitions and strengthens strategic alliances. The CFO covers domains where legislation on the particular ethical issue falls short, or where it is difficult to control by policies. The institutionalization of certification schemes can further be seen within the EU

as the European Commission explicitly recognizes the consumer demand for sustainably certified products as it supports and promotes sustainably certified products and sustainability schemes in the 2015 "Trade for All" strategy (ITC, 2019). The strategy states that "*promoting fair and ethical trade schemes reflects EU consumer demand and contributes to developing more sustainable trade opportunities for small producers in third countries*" (ITC, 2019. p. 11).

3.4. Labeling on Palm Oil Products

Product labeling can be defined as ''any policy instrument by a government or other third party that somehow regulates the presentation of product-specific information to consumers'', and they may be voluntary or mandatory (Teisl & Roe, 1998: 1). In many countries, labeling of palm oil on the ingredient lists is not legally mandatory, however, in the EU, products that contain palm oil must state it (Giam et al., 2016). Even though it is legally mandatory to state that a product contains palm oil, it is very difficult for consumers to navigate the ingredient lists on products, as palm oil goes under many aliases (Yildiz, n.d.):

> *PKO - Palm Kernel Oil, PKO fractionations: Palm Kernel Stearin (PKs); Palm Kernel Olein (PKOo), PHPKO - Partially hydrogenated Palm Oil, FP(K)O - Fractionated Palm Oil, OPKO - Organic Palm Kernel Oil, Palmitate - Vitamin A or Asorbyl Palmitate, Palmate, Sodium Laureth Sulphate (can also be from coconut), Sodium Lauryl Sulphates (can also be from ricinus oil), Sodium dodecyl Sulphate (SDS or NaDS), Elaeis Guineensis, Glyceryl Stearate, Stearic Acid, Chemicals which contain palm oil, Steareth -2, Steareth -20, Sodium Lauryl Sulphate, Sodium lauryl sulfoacetate (coconut and/or palm), Hydrated palm glycerides, Sodium isostearoyl lactylaye (derived from vegetable stearic acid), Cetyl palmitate and octyl palmitate.*

Voluntary labeling is mostly used for highlighting preferred product attributes, where mandatory labeling is used to inform consumers of product attributes that are essential knowledge (Janssen & Hamm, 2014). As mandatory labeling is required by law, it typically attempts to make either quantity of ingredients or undesirable attributes more transparent for consumers, as companies would otherwise try to disguise these (Janssen & Hamm, 2014). Correspondingly, Hinkes & Christoph-Schulz (2019)'s study found that the labeling of RSPO certified palm oil will potentially make the consumers aware of the palm oil content. Instead of portraying a positive contribution to a product by using certified sustainable palm oil, RSPO informs and makes consumers deter from purchasing a product due to palm oil content (Hinkes &

Christoph-Schulz, 2019; Forbrugerrådet Tænk, 2018). Therefore, some businesses choose not to place the voluntary RSPO label on products, as it does not have the intended effect but rather makes the consumer aware that the product actually contains palm oil (Hinkes & Christoph-Schulz, 2019; Forbrugerrådet Tænk, 2018; Appendix 1).

RSPO certification is found to be largely unknown among consumers (Hinkes & Christoph-Schulz, 2019); a UK YouGov survey revealed that only 3% of the public recognize the RSPO label on products (Brown, 2014), and the Danish consumer council magazine Tænk states that very few consumers actually know the RSPO certification label (Forbrugerrådet Tænk, 2018). Hinkes & Christoph-Schulz (2019) found that most consumers do not trust the RSPO certification, and they perceive the label for "mixed" palm oil, which is certified through the mass balance system, as a case of greenwashing. It was identified in the study that the German consumers had a lack of knowledge on palm oil certification and alternative vegetable oils, and that the majority of the consumers prefer products without palm oil over products that contain RSPO certified palm oil (Hinkes & Christoph-Schulz, 2019).

According to Thøgersen et al. (2010), ecolabels provide consumers with information on the environmental aspects of products, in order to enable them to choose products that are acceptable with regard to the environment. Labels for sustainability provide consumers with a tool for improving sustainable consumption, without compromising consumer freedom and it reduces consumers' information search costs (Thøgersen et al., 2010). Thøgersen (2000) posits that knowing a label is a prerequisite for utilizing it in the decision-making process of purchasing products, i.e. knowing that it exists, what it looks like and what it entails. Additionally, consumers will only use a label as intended in decision-making, if they trust the message, it stands for (Thøgersen, 2000). The increasing number of labeling schemes may inflict information overload for consumers, and the many labels to consider may hamper the adoption of a new label (Thøgersen et al., 2010).

Other types of labeling schemes are also relevant in terms of palm oil products, such as climate labels that cover wider problem areas than simply one product group. A recent consumer study in Denmark has examined the effects on climate labels that measures CO2 on food products (Nielsen, 2021). The study showed that consumers who were initially interested in their food consumption's climate impact, and consumers who did not have the interest, both made more climate-friendly shopping decisions based on the climate labels (Nielsen, 2021). In 2021, a study investigated different cognitions and responsibility

feelings of 803 Swedish consumers through a choice experiment in the domain of climate change and how it affects food choices when consumers are exposed to information on the topic (Edenbrandt et al., 2021). The study found that irregardless of the consumers' interest in knowing the CO2 footprint of their products, the labels had an effect on their product choices in that their purchases become more climate friendly (Edenbrandt et al., 2021).

3.5. Consumers' Attitudes of Palm Oil Industry Practices

Increasing consumer concerns regarding palm oil industry practices, including rising pressure from NGOs, has resulted in parts of industries taking action and eliminating palm oil from their products (Verneau et al., 2019). Research suggests that consumers are an important driver towards the transition to sustainable practices within the food industry (Kasim et al., 2020; Verneau et al., 2019), yet there is currently little evidence that consumers' ability is being utilized for the palm oil industry. Thus, it is essential that consumers are educated on the importance of selecting sustainable products in relation to palm oil to help drive the transition. This education should highlight the influence of buying behavior and how choosing sustainable products contribute to maintenance of the environment and local economies in the producing countries (Gesteiro et al., 2019).

Giam et al. (2016) attempts to fill the knowledge gap on consumer research related to palm oil through surveying consumers in Singapore. They research the consumers' awareness of palm oil in certain products and whether there is consumer bias against products that contain palm oil. Giam et al. (2016)'s results show that consumers were less likely to purchase a product when informed on deforestation compared to when they were only told the product contained palm oil. The vast majority of consumers are more likely to buy a sustainable alternative if it is available (Giam et al., 2016). The majority of consumers were willing to pay a premium price for a sustainable, deforestation free, product, especially highly educated and female consumers (Giam et al., 2016). Giam et al. (2016) argues that manufacturers of palm oil have economic incentive to use certified sustainable palm oil, as the premium price consumers are willing to pay exceeds the average premium paid to growers of segregated certified sustainable palm oil. Thus, Giam et al. (2016)'s study suggests that informing consumers about the sustainability of palm oil can potentially create economic demand for sustainable practices in the palm oil industry. Furthermore, a big data analytics study made in 2020 on the environmental impacts of palm oil and consumer perception showed that the public has predominantly negative opinions on palm oil (Teng et al., 2020). The dataset of 4,260 online posts including 104,986 words had an overwhelming occurrence

of negative emotions in relation to palm oil, which goes to show that there is a perception of palm oil being the “bad guy” (Teng et al., 2020).

Pearson et al. (2014) sought to address a lack of public awareness of palm oil and to create public support for labeling of palm oil on food products to be mandatory to enable consumers to make informed purchasing decisions. The study was conducted in Melbourne Zoo, while the respondents were visiting the Orangutan exhibit and had viewed at least one of the Orangutan exhibits before being approached to participate in the survey. Melbourne Zoo launched a conservation campaign named “Don’t Palm Us Off” about the impact of palm oil on Orangutans which was visible in the Orangutan exhibit and on social media. The campaign managed to increase awareness of the palm oil issues and knowledge of human actions that contribute to decreases in Orangutan populations (Pearson et al., 2014). The results saw support for palm oil labeling increased from 70% to 90% with the respondents reporting they wanted mandatory labeling after only 6 months of running the campaign (Pearson et al., 2014). Additionally, the survey showed an increase from 66% to 87% in whether mandatory labeling would influence the respondents purchasing decisions. In terms of avoiding palm oil products, the results showed only approx. 19% at the baseline but increased to 38% at the end of the campaign (Pearson et al., 2014). Subsequently, the study found that consumers are affected by endangered species with the majority being willing to reduce their impact (Pearson et al., 2014).

Aguiar et al. (2018) have researched the consumers’ awareness of palm oil as a product ingredient in edible and non-edible products sold in main stores and supermarkets in the UK. The authors studied which attributes consumers most favoured in their purchasing decision. The study found that the respondents regarded social and environmental concern values to be high. Environmentally driven consumers play an important role for palm oil industry actors to consider when bringing a product containing palm oil to market. The findings also showed polarized attributions to palm oil, as the consumers attribute palm oil as being unsustainable, but also as a source of employment that contributes to developing countries economic growth. It was found that the consumers in this study would not stop consuming products with palm oil, as they tended to be ignorant about the ingredients in the products they consume (Aguiar et al., 2018). Correspondingly, consumers lack greater awareness of what the ingredients in the products they purchase might be and rank palm oil as a natural product that could lead to a preference for the product (Aguiar et al., 2018).

A survey conducted by IBM in association with the National Retail Federation in 2020 included 18,980 consumers in 28 countries. The study sought to explore how consumer preferences and priorities change, specifically focusing on shopping habits, drivers of brand and product choice, consumption patterns and the willingness to change behavior (Haller et al., 2020). The survey found that 71% of respondents indicated that they are willing to pay a premium for brands that provide traceability of products and their supply chain, and 57% of consumers stated that they are willing to change their purchasing habits to help reduce negative environmental impact (Haller et al., 2020). The study suggests that every age group in the study indicates that sustainability, environmental, and/or personal wellness attributes are significant considerations; consumers want details about sourcing of products, not just the ingredients list (Haller et al., 2020). The studies described in the section above all provide a picture of the global consumer attitude and perception on sustainability and palm oil but leaves a gap in terms of investigating Danish consumers' awareness and perception of palm oil.

3.6. Drivers of Sustainable Transition

There are many factors that influence the sustainable transition, and the pressure for companies and industries to engage in more sustainable practices is constantly increasing. A predominant driver is mitigating future risks. Existing research highlights that there are many risks associated with refusing to transition to more sustainable practices, including the risk of stranded assets, resource scarcity, loss of competitiveness, inability to adhere to legal requirements, etc. (Morel et al., 2016). It is fundamental to have good relationships with stakeholders in order to tackle issues both upstream and downstream of the supply chain (Kasim et al., 2020). Through stakeholder management, companies can implement and improve their sustainability performance (Kasim et al., 2020). Active dialogue with stakeholders and building trust in the relationship with the suppliers is extremely valuable when approaching suppliers with commitment tasks to sustainability. According to Kasim et al. (2020), the external pressure from stakeholders, including NGOs, consumers, government and others, is one of the most important drivers for taking action on sustainability issues. Therefore, an important risk to consider is that of the sustainable consumer. Much research provides evidence of the presence of an increasingly more demanding consumer who values sustainability (Haller et al., 2020; Niva & Timonen, 2001; Heiskanen, 2005). Thus, if a given company is unable to provide those sustainable options, the consumer is likely to seek products elsewhere, where the product lives up to their ethical standards (Haller et al., 2020). The consumer pressure is in the majority of cases a more prominent driver for downstream suppliers who are in direct contact with the end-consumers (Foerstl et al., 2015). The incentives to proactively pursue sustainability

initiatives often lie with the downstream suppliers rather than the upstream suppliers (Foerstl et al., 2015), such as the individual plantations that supply the palm oil or the refinery. The different tiers of the supply chain experience different amounts and types of pressure, with upstream suppliers being less in the spotlight and therefore more inclined to feel less obligated to engage in more than the bare minimum (Foerstl et al., 2015). In addition, these upstream suppliers have less contact with consumers and therefore are not directly impacted, whereas downstream suppliers are confronted with the expectations of the consumers constantly. This suggests that there are more and stronger drivers of the sustainable transition with the downstream suppliers.

Villena & Gioia (2020) adds to the SSCM literature through their study of three supply networks of global MNCs. The study did not cover the food industry, but all firms included worked proactively to encourage sustainability (Villena & Gioia 2020). The study touches upon general challenges that companies utilizing global supply chains are highly likely to encounter. The study found that many upstream suppliers were violating the standards imposed by the MNCs, in part because the suppliers were lacking knowledge about the sustainability requirements and had little incentive to comply (Villena & Gioia 2020). The upstream suppliers of the study only acted on allegations if the MNCs to which they supplied actively intervened; NGOs and the media had little effect on changing unethical behavior (Villena & Gioia 2020). Ultimately, the study found that collaborative initiatives have many benefits, including increasing the efficiency of suppliers (Villena & Gioia 2020).

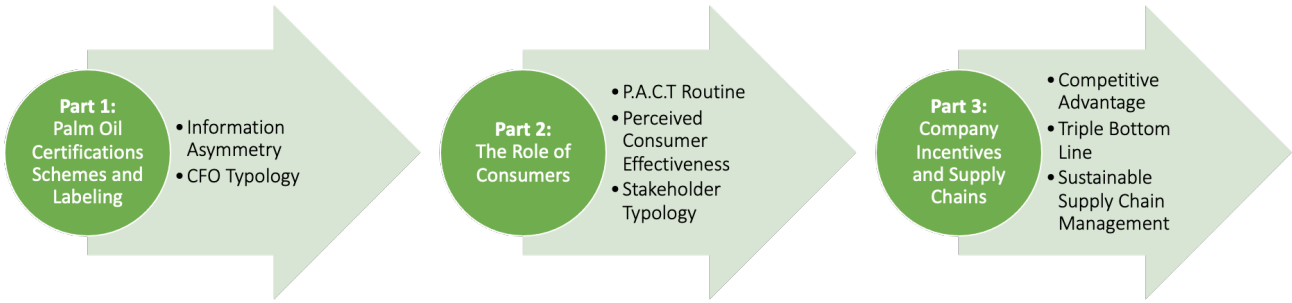
Another important driver of sustainable transition is the legal entities. We have witnessed the EU as well as the Danish government introduce measures that aim at increasing sustainability e.g., the EU ban on the use of palm oil in biofuels. In the context of ever increasingly globalized and interconnected markets and challenges, the EU is a powerful force to drive forward sustainability transitions (EEA-EPSC, 2019). It is broadly understood that sustainable transitions require a combination of top-down government interventions and bottom-up actions by a vast range of actors, including businesses, communities and NGOs etc. (EEA-EPSC, 2019). These transitions are long term and are profoundly dependent on the emergence and spread of innovations that can initiate alternatives to current, unsustainable ways.

4. Theoretical Framework

It is evident from the previous chapters that a large body of literature focuses on general consumer awareness and the sustainability of the palm oil industry, yet there appears to be a gap in terms of focusing on how consumers perceive palm oil in relation to their food purchases, and what role the Danish food industry has in the stipulated knowledge gap. Many initiatives and alliances have been launched to attempt to improve the conditions in the industry but there is little evidence suggesting that the current approach is able to ensure a transition to sustainable palm oil practices. The current development of the palm oil industry and the supply chains remains a pressing environmental issue and many consumers remain in the dark of the severity of the negative impacts. Hence, a study focused on consumers' perception of and role in how to drive sustainability regarding palm oil in the Danish food industry is necessary to uncover not only the main challenges but potential approaches to counteract the issues identified.

The theoretical framework builds on the stakeholder theory, emphasizing that stakeholder concerns and demands are important catalysts for changing company practices. The theoretical framework is structured into three parts, which subsequently frames the findings section into: Part 1) an analysis of consumer perception of palm oil certification schemes and the effectiveness of RSPO, Part 2) a consumer-oriented section which seeks to analyze the role of consumers in driving sustainability of palm oil in the Danish food industry and lastly Part 3) a company-oriented section which seeks to analyze companies' incentives to incorporate consumer demands into SSCM towards more sustainable palm oil practices, taking a point of departure in Coop.

Figure 4.1 - Theoretical Framework



4.1. Stakeholder Theory

As proposed by Freeman, Stakeholder Theory is a theory of management and business ethics that articulate two core questions: What is the purpose of the firm, and what responsibility does management have to stakeholders? (Freeman et al., 2004). The theory neglects the separation thesis i.e., that economics and ethics can be neatly separated, and is thus based on the assumption that values are an inevitable part of doing business (Freeman et al., 2004). The theory is particularly relevant as there is evidence of changing business and consumer behaviors where sustainability is taking increasing priority, and stakeholders are becoming more active and powerful. The project will utilize a broad definition of stakeholders in order to capture as many aspects as possible. Stakeholders are defined as "*any group or individual who can affect or is affected by the achievement of the organization's objectives*" (Mitchell et al., 1997: 854). The theory proposes that in order to create economic value, "*managers must develop relationships, inspire their stakeholders and create communities where everyone strives to give their best to deliver the value the firm promises*" (Freeman et al., 2004: 364). The theory will act as an underlying foundation throughout as the thesis will discuss the importance of stakeholders, specifically consumers, and how businesses can satisfy these to create additional value and optimize resources and capabilities in such a way that they contribute to a more sustainable supply chain and business model (Geissdoerfer et al., 2018).

4.2. Part 1: Palm Oil Certification Schemes and Labeling

4.2.1. Information Asymmetry

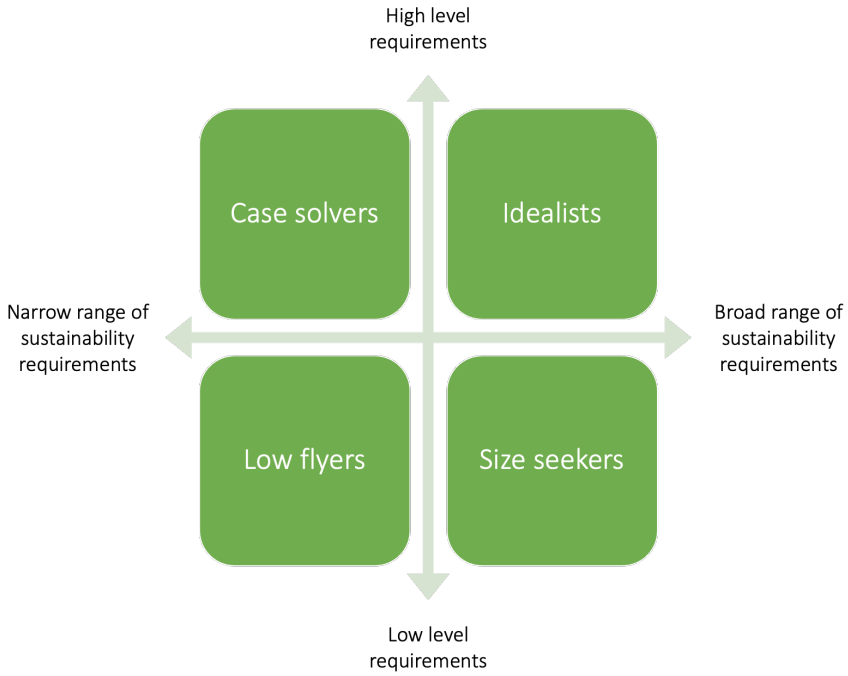
The Information Asymmetry concept refers to the condition in which one party has more or better information than another (Marcel et al., 2010). Information asymmetry regards the ability to assess the value of inputs and outputs that individuals will have, whereby the concept can aid in understanding why individuals have different behavior and decision-making patterns (Marcel et al., 2010). Certification of sustainable palm oil is a credence attribute, i.e. an attribute that consumers cannot evaluate even after use (Darby & Karni, 1973), which consequently results in information asymmetry between consumers and the supply side. Typically, labeled products come with a price premium over the conventional alternative, which consequently can make suppliers prone to fraudulent claims and opportunistic behavior to gain the economic benefit (Janssen & Hamm, 2014). This can compromise consumers' trust in the labeling schemes - if they become aware of companies taking advantage of the information asymmetry. For this reason, third-party certifications may provide credibility of labeling schemes and justify the differentiation

of the product by ensuring that the requirements are upheld. Information asymmetry can occur as the increasing number of labels potentially leads to information overload for consumers, whereby the consumers become increasingly unaware of groups of labels (Thøgersen et al., 2010). Limiting the information asymmetry through transparent sustainability labels can lead to more sustainable consumption, without compromising consumer freedom whilst reducing consumers' information search costs (Thøgersen et al., 2010). The information asymmetry concept will be related to survey findings on consumers' knowledge and perception of palm oil labeling to establish whether there is information asymmetry.

4.2.2. CFO Typology

Criteria-formulating organizations (CFOs), such as RSPO, provide a platform for businesses and stakeholders to discuss the desirable level and feasibility of standards and joint responsibility (Ingenbleek et al., 2007). Ingenbleek and Meulenberg (2006) as cited in Ingenbleek et al. (2007) have developed a framework of the dimensions of the CFO.

Figure 4.2 – CFO Typology Model



The first dimension shows the range from low to high on the level of criteria the CFO sets for the actors to comply with. High requirements often entail suppliers having difficulties with complying to the set of

criteria, which subsequently translates into higher prices for consumers as the suppliers must make necessary investments to comply with the requirements (Ingenbleek et al., 2007). This results in relatively few being able to comply, and those who do, will often establish niche markets for consumers who are insensitive to prices. Low level requirements do not require specific investments, which results in more suppliers being able to adopt them (Ingenbleek et al., 2007). The second dimension builds upon the range from narrow to broad in which the criteria cover the ethical issue at hand. A narrow range entails focusing on rather specific ethical issues such as cage eggs or animal welfare (Ingenbleek et al., 2007); a broad range covers multiple ethical domains that regard both animal welfare, environmental and labor conditions. Subsequently, four typologies of CFOs occur: case solvers and idealists; who have high requirements but vary in broadness of focus, and size seekers and low flyers; who have low requirements but vary in broadness of focus (Ingenbleek, 2007). The typology framework will be used to establish the type of CFO RSPO is, and to what extent this type of certification scheme is actually improving industry standards for sustainable palm oil practices.

To further examine the effectiveness of RSPO, interviews and previous publications will be used to better establish whether the certification scheme is actually improving palm oil industry circumstances. The purpose of this analysis is to investigate whether it is sufficient for companies to comply with RSPO requirements, as this is the primary mean for companies to implement more sustainable palm oil practices. In connection, RSPO labeling is the main attribute that decreases information asymmetry for consumers, so the effectiveness is relevant when considering consumers' ability to pressure companies.

4.3. Part 2: The Role of Consumers

4.3.1. P.A.C.T Routine

According to Giesler & Veresiu (2014), responsible consumption stems from increased awareness of the impact of consumption decisions on the environment, consumer health and society in general. Giesler & Veresiu (2014) theorize what strategies are involved in shaping and governing consumers as rational, moral market actors. Four processes of consumer responsibilization are composed into a framework, namely the P.A.C.T routine, which includes personalizations, authorization, capabilization and transformation (Giesler & Veresiu, 2014).

- **P**ersonalization refers to the solution of a social problem becoming the individual consumer's responsibility rather than solely a collective responsibility.
- **A**uthorization concerns the available economic, psychological and other expert knowledge that makes the adoption of responsible consumer's subjectivity legitimate.
- **C**apabilization is what makes consumers capable of ethical self-management through products and services materially provided by the market, so the consumers can "vote" through their purchase.
- **T**ransformation refers to the individual consumer's new moralized self-understanding and thus transformation in interests, desires and behavior. This may result in a self-governed identity project with the opportunity to lead and enrich the individual's respective communities.

The main point of Giesler & Veresiu (2014)'s framework is that responsible consumption is a result of the macro-level constitution of an individual who willingly accepts social responsibility and exercises moralized understanding as a free, autonomous, rational choice. The P.A.C.T routine does not force one to be responsible but encourages consumers to believe in the knowledge being distributed in the market. The routine postulates that it is difficult to act otherwise, as it is regarded as irrational or irresponsible by the market actors not to adhere. Rather than assigning responsibility to the state and corporations through social protectionism, this neoliberal view assigns self-governance by making the individual responsible for ethical actions (Giesler & Veresiu, 2014). This framework will be used to analyze the responsibilization of sustainable consumers in terms of acting socially responsible in relation to palm oil.

4.3.2. Perceived Consumer Effectiveness

The Perceived Consumer Effectiveness (PCE) concept is defined as "*a consumer's estimate of his or her ability to contribute to specific sustainable development-related outcomes through specific behaviors*" (Hanss & Doran, 2020: 535). The sustainable consumer makes decisions on the basis of whether he or she feels they contribute to solving issues through their own behavior (Hanss & Doran, 2020). In other words, PCE seeks to determine the subjective level of confidence a consumer has on contributing and influencing the outcome. This concept will be used to analyze whether the survey respondents feel responsible for sustainable development of the palm oil industry, or whether they rate other parties as more responsible, e.g. companies, the government etc. PCE will be linked to consumers' willingness to boycott and/or confront companies that do not live up to their expectations. It is relevant to consider consumers' subjective estimates as it may affect their willingness to take action (Hanss & Doran, 2020), and thereby

aid in promoting sustainable consumption and turn more attention to sustainable palm oil. Nevertheless, awareness of environmental issues and positive attitudes towards the need for change does not necessarily translate into consistent sustainable consumption patterns (Hanss & Doran, 2020). Discrepancies between consumers' attitudes and their actual buying behavior is commonly found in literature on sustainable consumption (Hanss & Doran, 2020). So, whilst consumers may have good intentions, drastic changes are needed in order to not exceed the biocapacity of the world (Hanss & Doran, 2020).

4.3.3. Stakeholder Typology

To determine consumers' role in pushing for sustainable transition in the palm oil industry, the stakeholder typology will be used as it defines the salience of consumers in relation to Coop. In stakeholder typology, stakeholders are identified by their possession or attributed possession of one or more of the following attributes: *"(1) the stakeholder's power to influence the firm, (2) the legitimacy of the stakeholder's relationship with the firm, and (3) the urgency of the stakeholder's claim on the firm"* (Mitchell et al., 1997: 854). In appendix 9, an illustration of Michell et al. (1997)'s Stakeholder Typology model is shown, which encompasses the stakeholder categories in order to determine where consumers are placed based on the three attributes: power, legitimacy and urgency.

4.4. Part 3: Company Incentives and Sustainable Supply Chains

4.4.1. Competitive Advantage

A competitive advantage is dependent on the company's ability to offer a better and more desirable product than their competitors. What constitutes a better offer is determined by internal and external factors. Internal factors include e.g., efficient organizational structure and distribution network, branding and product quality. External factors include e.g., macroeconomic trends and consumer preferences. The company's ability to tap into these is also of significant importance (CFI, n.d.). A company's competitive advantage is therefore created when value provided to buyers exceeds the costs of production (Porter, 1985). Porter identified two main routes to creating a competitive advantage: differentiation and cost leadership (Porter, 1985).

The sustainable competitive advantage is identified as follows: "*For an advantage to be sustainable, the rarity of the resources used to create it must be sustained over time*" (Hooley et al., 2017: 240).

Sustainability matters more to the consumer of today and has become a key factor in obtaining long-term success (Yang et al., 2017). Recent research indicates that implementing sustainability into SCM is economically viable and leads to a competitive advantage (Beske-Janssen et al., 2015). In relation, the food industry is one of the industries most concerned with maintaining a high level of product quality whilst satisfying consumer demands (Gesteiro et al., 2019). Sustainable products have gotten more space on the supermarket shelves which is evident, e.g., with the global retail sales of Fairtrade products increasing with over 86% from DKK 32.42 bn in 2010 to DKK 60.52 bn in 2018 (Statista, 2020b). The ultimate aim of introducing sustainable products is to satisfy customers and gain a competitive advantage in a market that increasingly values sustainability (Seuring & Müller, 2008). We will analyze whether sustainable palm oil practices can create a competitive advantage and secure a company's long-term profitability in the Danish food sector.

4.4.2. The Triple Bottom Line

The Triple Bottom Line (hereafter TBL) was introduced by Elkington as a challenge for businesses to rethink capitalism and include a new way of improving social circumstances and the environment, rather than solely focusing on profits (Elkington, 2018). The framework has become part of the business lexicon and is looked upon as a necessity for taking full costs of doing business into account (Elkington, 2018).

The economic bottom line includes company reports and accounts that indicate profit and loss accounts, balance sheet and statement of total recognized losses and gains (Elkington, 1998). However, it also includes wider economic sustainability e.g., long-term sustainability of company costs, demand for its products and services, the pricing and profit margins, the innovation programs and the "business ecosystem" (Elkington, 1998).

The social bottom line includes social capital in the form of education and skills, public health and wealth creation potential (Elkington, 1998). Social capital is also about lowering social friction and distrust in societies, and social impact often includes issues within community relations, product safety, training initiatives, employment of disadvantaged groups, human rights, land rights, wages and working conditions (Elkington, 1998).

The environmental bottom line comprises the use of natural capital, e.g. when lumbering forest it is the price of trees, but also the underlying natural resources that are affected such as the forest ecosystem, regulation of water, greenhouse gases etc. There are two main forms of natural capital; critical natural

capital and natural capital that is renewable, replaceable or substitutable (Elkington, 1998). When conducting the TBL, businesses must figure out what forms of natural capital are affected by their activities. Accounting measures of environmental impacts include life-cycle analyses (LCA) of the businesses' products, energy, materials and water usage, polluting emission, environmental hazards and risks, generation of waste and use of critical natural capital (Elkington, 1998).

The TBL theory will be used to evaluate Coop's efforts towards enhancing sustainability by improving social and environmental circumstances, rather than solely considering the monetary perspective. Within this framework the stakeholder theory is dominant, as we will consider the necessity of regarding stakeholder concerns for the TBL and whether this can generate incentives for companies to pursue sustainable business practices.

4.4.3. Sustainable Supply Chain Management

The understanding of SSCM will be based on the definition by Seuring & Müller (2008) who argue that SSCM is "*the management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e., economic, environmental and social, into account which are derived from customer and stakeholder requirements.*" (Seuring & Müller, 2008: 1700). This rather broad definition will be supported by the views of Foerstl et al. (2015) who includes the notion of strategic, transparent integration and achievement of the organization's sustainable goals in the systemic coordination of key inter-organizational business processes. The purpose of incorporating SSCM is to gain insight into how companies throughout the palm oil supply chain can implement more sustainable practices, which in the end can have a greater impact on the transition towards sustainability in the industry. SSCM differs from the traditional understanding of SCM in that it involves the coordination and integration of both the economic goals of its actors and the social and environmental goals, i.e., it includes the TBL. Our understanding of SSCM will be supported by the views of Alghababsheh et al. (2018) whose findings will be applied to provide a nuanced view on SSCM and how it affects buyer/supplier relationships. The study provides insight into the extent to which companies are able to implement SSCM through a range of propositions, which found that by providing an equal share of the value created in the relationship, the buying firm can mitigate the risk of suppliers engaging in unethical activities (Alghababsheh et al., 2018). It is evident that the implementation and conveyance of company policies that address environmental and social impacts, along with third-party certification and other codes of conduct in the supply chain are

becoming more commonplace (Grosvold et al., 2014). The emergence and importance of SSCM can in part be accredited to the increasing awareness being raised by stakeholders, both internally and externally (Meixell et al., 2014). Additionally, all of the supply chain's stakeholders play a part in facilitating or potentially hindering sustainability aspects of SCM (Meixell et al., 2014).

The notion of stakeholder theory is important in relation to the influence of stakeholders on SSCM. Stakeholders influence SSCM in three progressive stages. Firstly, stakeholders influence SSCM by creating awareness of a given sustainability issue, e.g., through internal self-learning or media/NGO attention (Jensen et al., 2016). Secondly, they influence the process of adoption of a sustainability goal, as this must follow the raising of awareness done by stakeholders. Lastly, the implementation of a given sustainability practice will be influenced by stakeholders in that they push for measures such as product certification (Jensen et al., 2016). By utilizing SSCM, the thesis seeks to investigate how consumers impact the supply chain and businesses' conducts.

5. Methodology

5.1. Research Philosophy

The philosophical underpinning of the thesis is based on ontological assumptions, which refer to the nature of reality as opposed to epistemological assumptions that refer to human knowledge e.g., differences in individual contexts and experiences (Saunders et al., 2019). The ontological assumptions of the thesis include a focus on how there is a need for increased sustainability in the palm oil industry. The ontological stance seeks to discover the realities that govern consumers' perception of palm oil and labeling, and consequently companies' management of palm oil practices in relation to consumers' role. The thesis will take on an objective viewpoint in that it focuses on explaining the empirical, i.e. what we see and experience, rather than including the subjective assumptions of individual consumers.

According to Buch-Hansen & Nielsen (2012), critical realists seek deep knowledge and regard individuals' interpretations and attitudes as fallible sources. However, they believe that social structures are dependent on individuals' actions, interpretations and discourses - thus the hermeneutical aspect matters, but here actions are more relevant than their opinions (Buch-Hansen & Nielsen, 2012). The thesis identifies with the critical realism paradigm as it seeks to understand the underlying structures of reality that shape the observable events (Saunders et al., 2019). This layered approach to understanding the ontology of the field, focuses on the empirical: what we can actually observe; the actual: events or non-event generated by the real, which may or may not be observed; and the real: the causal structures and mechanisms (Saunders et al., 2019). Subsequently, we aim to explore the causal structures of consumers' role in pressuring companies towards sustainable palm oil practices to create knowledge about the empirical and the actual i.e., the observed salience of consumers on companies' incentives to change to sustainable palm oil practices and the actual pressure they implement on companies. The observed reality is only a limited reflection of the actual reality; what we observe does not show the whole truth, as one can never truly verify a theory, but it brings one closer to the best possible explanation (Jacobsen et al., 2015).

5.2. Research Approach

Research is often divided into two contrasting approaches, namely the inductive approach and the deductive approach. The inductive approach seeks to explore a phenomenon, identify themes and establish new theory (Saunders et al., 2019). The deductive approach on the other hand seeks to test

hypotheses or propositions against existing theory in order to generalize from the general to the specific (Saunders et al., 2019). As both approaches are deemed necessary to combine and modify existing knowledge, an abductive approach is used as the methodological foundation for the research, which seeks to explore the best explanation by moving back and forth between data and theory (Saunders et al., 2019). Abductively, the thesis examines known themes of the palm oil industry and explains patterns in order to adjust existing theory and knowledge towards the thesis' research field (Saunders et al., 2019). The two approaches were applied for different parts of the project. The first part seeks to deductively test existing consumer perception of palm oil and labels literature on empirical evidence collected through a survey. Since the existing theory does not match the context which the thesis is researching i.e., tendencies in consumers' perception of palm oil and labeling in the Danish food industry, it is necessary to collect primary data which enables testing of the research field more exactly. The second and third part of the thesis is more exploratory in nature and works inductively by comparing existing theories with the collected data. This is then used to establish themes concerning occurrences in the industry in order to grasp the nature of the issues of palm oil cultivation and utilization. Here we utilize a case-based approach in which we research specific instances of Coop, and thus build a generalized conceptual framework for a broader perspective of the palm oil industry. Shifting between the two approaches enables us to contribute to the research field by considering what has already been researched and then modifying the research field with new themes on consumers in the Danish food industry.

5.3. Research Design

The research design considers how we go about answering the research questions and how we intend to collect and analyze data, and from which sources we derive knowledge (Saunders et al., 2019). In addition, the research design considers the ethical issues and constraints that will be encountered (Saunders et al., 2019). Using Saunders et al. (2019)'s research onion (Appendix 10), the following methodological choices are utilized in the thesis. The study draws on both quantitative and qualitative research methods. Instead of a mixed methods research design which integrates the techniques of quantitative and qualitative data, the methods are used separately. The thesis thus uses a multi-method approach, where the quantitative method is used for a survey strategy which is followed by a quantitative analytical procedure, and the qualitative method is used for the interviews. The use of multiple methods overcomes the weaknesses associated with only using one method and provides scope for a richer approach to data collection and analysis (Saunders et al., 2019). Through an exploratory research design, the thesis seeks to discover what is taking place in the palm oil industry with reference to how consumers have a role in ensuring

sustainable development through certification schemes as well as the incentives companies have to integrate consumer pressure into business practices.

By carrying out a case study analysis of an actor in the palm oil industry, the study obtains a closer inspection of the impact of consumers on the supply chain and business practices in relation to palm oil. Coop is selected as a case company due to its notable focus on responsibility in its corporate strategy alongside its focus on sustainable palm oil. Rather than Coop being the focal point of the thesis, it acts as a support to our findings as well as an example on how RSPO and consumer pressure affects Danish food companies. We have actively chosen not to construct the thesis as a solely case-based project. Through exploratory research we believe more can be understood on the topic by incorporating several different aspects of the debate on how consumer practices influence the Danish food industry.

The time horizon of the thesis undertakes a cross-sectional approach, which focuses on a phenomenon at a particular time, whilst a longitudinal approach studies change and development over time (Saunders et al., 2019). The thesis focuses on the specific phenomenon of consumers' role in the sustainable transition at a point in time, rather than over a longer period. The cross-sectional time horizon is more feasible for the thesis, as the time horizon is stretched over a shorter time period rather than collecting data over a longer time schedule to e.g., measure changes in consumer perception when informed through palm oil information campaigns.

5.4. Data Collection

5.4.1. Primary Data

The primary data collected consists of a quantitative survey and four qualitative semi-structured interviews. The purpose of the survey is to uncover consumer perception of the palm oil industry and labeling schemes, consumer pressure on company practices, and purchasing decisions of products with sustainable palm oil or free of palm oil. The purpose of collecting primary data through interviews is to gain insight into palm oil industry actors and incentives to transition the palm oil industry. Below the designs of the data collection methods are presented.

5.4.1.1. Survey Design

The survey strategy is exploratory in nature and is useful for collecting standardized data on how a group of people thinks and behaves in relation to a particular issue (Saunders et al., 2019). In the survey, an experimental research design is conducted in order to understand the effect of labels on consumer choices of products with and without palm oil. The first part of the survey included a planned experiment in order to capture responses of subjects on outcome measures under different conditions (Agresti, 2018) to truly record consumer choice between products. The conditions included different variables that could possibly influence the outcome, i.e. some subjects were exposed to RSPO labeling on products, some were exposed to "palm oil-free" (hereafter POF) labeling and some were exposed to both, thus receiving different treatments. Additionally, a control group was exposed to neither the RSPO label nor POF label in order to ensure viability of the experiment as these were not subject to any planned intervention on the products (Saunders et al., 2019). This sought to eliminate threats to internal validity as the control group is likely subject to the same external influences as the experimental groups besides the planned intervention. Consequently, this makes the planned intervention the only explanation for any changes to the dependent variable, i.e. the observed outcome of the experiment. Subsequently, we are able to compare the results of the different groups and observe whether the different product attributes had significance on the subjects' choices. Randomization was used to determine which treatment each subject was exposed to, in order to reduce bias and to use statistical inference to make predictions (Agresti, 2018). The experimental research design was executed through choice experiments where respondents had to choose between specific products, where they got information on ingredients, price and a picture of the product (Appendix 5, Q1-12). As the choice experiments were the first questions of the survey, the subjects had less contextual significance of what the survey sought to investigate, which is expected to provide results less prone to response bias.

The second part of the survey included more conventional questions in which the experiments conducted first in the survey were put into context of consumer pressure related questions. This allowed collection of standardized data and further exploration of correlation between purchasing decisions and consumer pressure. This part of the survey included three questions relating to the familiarity, consideration and trustworthiness of six sustainability labels: Fairtrade, Ø-label, MSC, Rainforest Alliance, RSPO and a POF label. The first three were chosen as they are some of the more conventional labels that are widely used in the Danish food industry. Rainforest Alliance was included because it touches on similar industry

implications as RSPO. The purpose was to be able to relate the respondents' perception of the RSPO and POF labels with more established labels and thus enable a better understanding of where RSPO and the POF label are situated in the consumers' minds. A data analysis plan was thoroughly drafted before sending out the survey, which especially sought to map how we intended to analyze the questions, in order to ensure that the right questions were asked. All the questions and their respective answers had one or more correlations with each other, where the purpose was to enable better data analysis and comparisons. Additionally, the survey used only closed-ended questions to ensure the highest amount of completed surveys. The target group of the survey was Danish consumers who make purchasing decisions in supermarkets, thus primarily ages 18 and up. This broad target group was reached by spreading the survey in different online forums, such as Facebook groups with a broad audience and on personal LinkedIn profiles. Facebook is used by a large share of the Danish population, which makes it possible to reach the broad target group (Møller Hansen et al., 2015). The full survey is attached as appendix 5.

5.4.1.2. Interview Design

The primary qualitative data is collected through four semi-structured interviews. The interviews seek to inductively explore the implications of palm oil and certification schemes from different industry perspectives. Hence, interviews have been conducted with industry actors from: Coop as a retail company selling products with palm oil, Concito as an expert in the palm oil industry, Dansk Industri for the industry and political perspective, and lastly with NOAH for the NGO perspective.

Table 5.1 - List of Interviewees

Name	**Title**	**Organization**
Pernille Hartington	CSR Project Manager	Coop
Torben Chrintz	Scientific Adviser, Climate, Energy and Food Products	Concito
Sven Pedersen	Head of Subject, Food Policy	Dansk Industri - Fødevarer
Sarah Strunge Albertsen	Project Development Manager - Investments and ISDS, Palm Oil, Gender & Equality	NOAH

The interviews were prepared on the basis of Kvale's framework (2011) for conducting interviews. Firstly, thematization and purpose of the interviews were investigated before the interviews started. The purpose of the interviews was to obtain empirical knowledge of palm oil industry actors; thus, the questions were quite similar for all the interviewees, with different perspectives to the same aspects posed. However, small variations were necessary as for example in the interview with Coop, the questions were more concrete in terms of specific sustainability business practices. Next, the designing of the interview study was considered e.g., how we were going to obtain the intended knowledge and how many subjects were necessary to gain the information needed. Due to time limitation, both in regard to having time to prepare the interviews and to analyze them, but also due to other data collection methods, we decided to limit the number of interview subjects to four. Before the interviews, the interview guide was prepared individually to each interviewee with a script of questions that structured the course of the interviews and topics to be covered (Kvale, 2011). Predetermined questions mostly work as a guideline, as the interview may take a different course, if the interviewees' answers open up to new directions of the interview. This semi-structured interview format allows exploration of new themes, if the interviewees deem it relevant. As preparation, the interviewee received the list of questions prior to the interview. The interviews lasted from 30-45 minutes and were recorded and transcribed shortly after the interview. The transcripts of all four interviews are included in appendices 1-4. Since the interviews were conducted using largely the same questions with only minor moderations depending on the specific expertise of the interviewee, the similarity between questions were used as markers for the topics and categories, which consequently deemed coding of the interviews unnecessary for the analysis of the data.

5.4.2. Secondary Data

Furthermore, secondary quantitative data is collected in the form of annual reports, including the CSR and ACOP report from the case company Coop, whereby we obtain information on the company's situation and strategy with the purpose of establishing an understanding of potential consequences of integrating sustainable palm oil into the business. Other secondary data sources include research papers, market statistics, industry reports and studies within the field of palm oil and certification schemes. This will provide an understanding of the development within the industry, which is used to analyze the correlation between shifting consumer preferences and sustainable palm oil production. The thesis will in large parts utilize existing studies on palm oil in both a supply chain perspective and a consumer

perception perspective as a framework to which our primary data is compared to. The purpose of these studies is to analyze and discuss the findings of the primary research, its relevance as well as validity.

5.5. Reliability and Validity

5.5.1. Reliability

Reliability refers to the extent to which the data collection produces consistent findings that can be repeated under the same conditions, and that provide transparency in how sense was made from raw data (Saunders et al., 2019). According to Saunders et al. (2019), there are four threats to reliability: participant error, participant bias, researcher error and researcher bias. The first two threats refer to the studied subjects and can be difficult to control, as it includes any factor that may alter the way in which participants answer in the survey. In terms of the interviews conducted, the threat can be considered minimal, as the people interviewed were all chosen due to their relevant knowledge of the research field, and they were all provided with questions and topic clarification beforehand to make sure they would be prepared to discuss the relevant themes. It is important to recognize the risk of the interviewees making statements that seek to make the respective company they work for appear in a certain way, whereby the answer may not be completely accurate. By researching the company and interviewees beforehand, we were able to make assessments of the reliability of the interviewees' answers.

The last two threats identified by Saunders et al. (2019) refer to risks in relation to the researcher. Factors may alter our interpretations of the answers and we may also have bias which may get in the way of fairly interpreting participants' responses (Saunders et al., 2019). These risks have been considered throughout the data collection process, and all the collected primary data are included in appendices to provide the reader with full transparency and the ability to see where the results of the thesis stem from. This includes the full survey with all the questions, transcriptions of all interviews and other relevant information. Furthermore, Saunders et al. (2019) states that reliability can be achieved through consistent research and by including more than one researcher within the research project when conducting interviews and observations, and when analyzing the data collected. Subsequently, we both participated in every interview, collaborated on drafting the survey and naturally both evaluated the data and contributed to the analysis hereof. In terms of another researcher being able to repeat the research to ensure external reliability, Saunders et al. (2019) notes that qualitative research is not necessarily intended to be repeated. This assumption is based on the premises that a semi-structured interview is both dynamic and

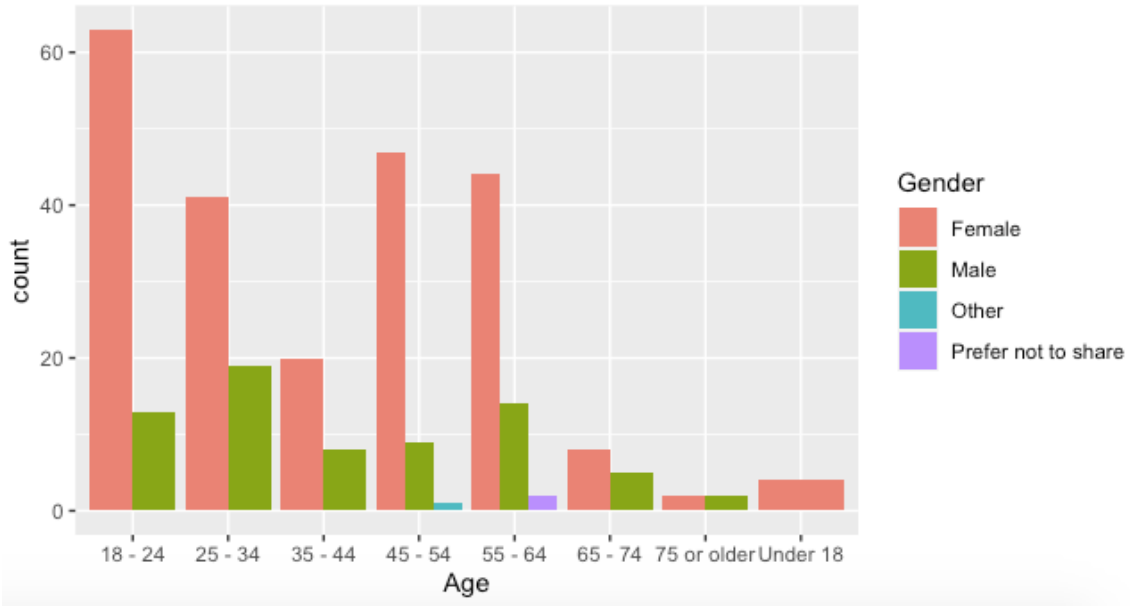
complex with interrelating factors that determine the output of the data collection. However, all the interviews are transcribed carefully and have been listened to several times in order to ensure the right interpretation of what is being said.

5.5.2. Validity

According to Saunders et al. (2019), validity refers to the appropriateness of the measures used, the accuracy of the analysis of the results and the generalizability of the findings. Social desirability bias can often explain the difference between environmental attitudes and environmental behavior (Heiskanen, 2005), as respondents may lie if they think their belief or actions are socially unacceptable (Agresti, 2018), which compromises the validity of the survey results. By phrasing the questions of the survey to not imply obvious specific behavior or answer, and by considering the order of the questions, it is attempted to avoid social desirability bias. For example, in the first questions we asked the respondents to choose between two products, one product with certified sustainable palm oil and one product without palm oil, but without stating the purpose of the study i.e., any information concerning sustainability, palm oil or RSPO (Appendix 5, Q1-Q12). Nevertheless, we can still not be sure that respondents chose the product which they would choose on an actual grocery trip, which consequently may affect the validity of the survey.

Through ensuring that the questions are actually measuring what they intend to measure and not intervening in terms of priming the respondents with information, the validity of the research increases. The respondents were assured of the anonymity of their responses, which potentially made their answers truthful and not prone to participant bias. As illustrated in figure 5.1 below, the age group distribution of the survey respondents was somewhat spread across the different age groups.

Figure 5.1 – Age and Gender Distribution of Survey Respondents



As anticipated, we acquired more responses from people in the younger age groups, as we shared the survey with our social networks which mainly consist of people close to our ages, 18-24 (25%) and 25-34 (20%). However, we did acquire an almost similar number of responses in the age groups 45-54 (19%) and 55-64 (20%). Surprisingly, the age group 36-44 (9%) was poorly represented, but more so for those under 18 and above 65. In relation to the gender distribution, there was a notable overweight of female respondents with 76% being female and only 24% male. Additionally, due to a default setting in the survey program Qualtrics, all partial responses were registered after a week, resulting in a varying number of answered questions. Nevertheless, the number of fully answered surveys amount to 300, but by including the partial responses the total amount of responses is 324. When computing our statistics, we have used the number 300 as a baseline for conducting regressions and other variance related tasks. The number 324 has only been utilized when conducting a diagram on a specific question where the total responses amount to 324 and where these are not compared to questions where the total number of responses has been 300. In cases where it has been necessary to compare questions with differing total responses, we have chosen to do the comparisons in percentages as this gives a more fair and true result.

Semi-structured interviews can achieve a high level of validity and credibility, when conducted carefully through the use of clarifying questions, probing meanings and by exploring responses from different perspectives (Saunders et al., 2019). This includes using open questions which are phrased clearly in order to avoid misunderstandings or potential bias, but which instead provide help with exploration of the topic

(Saunders et al., 2019). Furthermore, using multi-methods can provide a greater diversity of the views and thus a greater validity in terms of reflecting multiple perspectives from different actors within the industry. The case study approach has been criticized for the ability of producing generalizable, reliable and theoretical contributions to knowledge, as they take point of departure in one case company (Saunders et al., 2019). However, it is important to note that the thesis does not claim to produce generalizable results. Rather the aim of the thesis is to test the results from the survey on the case company and to include different perspectives from industry actors in order to identify the mechanisms of pushing the sustainable development for the palm oil industry. For more generalizable results, a larger quantity of survey respondents would be necessary to ensure representativity and the data collected should be put into context of several companies instead of a single case company.

6. Findings

This chapter will present the findings and analysis of the thesis and is divided into three parts which aim at answering the sub-questions. The findings of these will then be accumulated with the purpose of answering the main research question: What role do consumers play in achieving sustainable palm oil practices in the Danish food industry?

The first part aims at answering the sub-questions: "*To what extent is RSPO actually improving sustainability in the palm oil industry?"* and "*How is palm oil labeling perceived by consumers?"*. This is assessed by analyzing the familiarity, consideration and trustworthiness of the RSPO and POF label in relation to other sustainability labels via survey findings and the information asymmetry concept. Our findings will be linked to labeling and certification research articles to analyze whether the labeling scheme carries any significance for the consumer. Furthermore, RSPO's requirements will be assessed on the basis of the CFO typology framework to establish the level of the criteria, which will be related to the effectiveness of the RSPO certification. In order to analyze the extent to which the RSPO certification is effectively improving the industry standard for palm oil, we will incorporate secondary data that depicts critics' views of the certification scheme, which will be compared to the interviewees' viewpoints.

The second part aims at answering the sub-question: "*How is palm oil labeling perceived by consumers?"* whilst it also notably contributes to answering our RQ. The sustainable consumer's buying behavior and pressure on companies to transition towards more sustainable business practices is analyzed through the use of the P.A.C.T Routine framework and stakeholder typology which analyzes consumer stakeholder salience in Coop. This part will be supported by the analysis of the survey data findings, the conducted interviews and secondary data.

The third part aims at answering the sub-question: "*What incentives do companies have in regard to changing to sustainable palm oil practices in the Danish food industry?"*. This part focuses on an analysis of the company perspective on transitioning towards more sustainable palm oil practices throughout the supply chain. The analysis assesses the incentives for companies to work towards more sustainable practices both in terms of whether it is the most profitable and competitive strategy and how to manage the consumers' demands for more sustainable supply chains. The analysis is based on competitive

advantage theory, the triple bottom line and SSCM, and has a predominant focus on the case company Coop's work with implementing sustainable palm oil.

6.1. Overview of Survey Results

Table 6.1 - Description of the Sample: Socio-demographic Characteristics

Description	Control group (N = 75), 25%	Treatment group 1 (N = 75), 25%	Treatment group 2 (N = 75), 25%	Treatment group 3 (N = 75), 25%
Gender:				
Female	80%	81.6%	72.4%	70.7%
Male	20%	18.4%	26.3%	26.7%
Other	0%	0%	0%	1.3%
Prefer not to share	0%	0%	1.3%	1.3%
Age:				
<18	0%	1.3%	2.6%	1.3%
18-34	45.3%	44.7%	43.4%	50.7%
35-54	33.3%	32.9%	19.7%	24%
55-74	18.7%	19.7%	34.2%	21.3%
>74	1.3%	1.3%	0%	2.7%
Prefer not to share	0%	0%	0%	0%
Highest education:				
Primary + secondary school	1.4%	2.7%	5.4%	4%
High school	17.6%	10.8%	13.5%	17.3%
Apprenticeship/skilled worker	14.8%	18.9%	20.3%	16%
Bachelor's degree	33.8%	31.1%	35.1%	34.7%
Master's degree	32.4%	35.1%	24.3%	28%
Phd.	0%	1.4%	1.4%	0%

An overarching focal point of the analysis is the survey results which were collected during a two-week period with a baseline of 300 completed surveys. Table 6.1 shows the distribution of respondents' gender, age and highest education completed. The majority of respondents are women (75.6%), and 63.2% have a university degree. There is a decent variation in age distribution, making the responses relatively representative of the age-groups.

Table 6.2 - Experiment with Consumer Choices

Product	Control group No labels	Treatment group 1 RSPO label	Treatment group 2 POF label	Treatment group 3 RSPO label + POF label	P-value
Biscuits:					0.227
Karen Volf (PO)	25.3%	27.6%	25%	21.3%	
Mdm. Butterfly (No PO)	74.7%	72.4%	75%	78.7%	
Nut spread:					0.227
Levevis (PO)	76%	71.1%	73.7%	60%	
Mdm. Butterfly (No PO)	24%	28.9%	26.3%	40%	
Pizza dough:					0.227
Dej'li (PO)	33.3%	32.9%	35.5%	24%	
Coop (No PO)	66.7%	67.1%	64.5%	76%	

Notes: PO = Content of Palm Oil in product. %=participants that chose the product in question.

To examine whether palm oil labeling has an effect on consumer purchasing decisions, we established three choice experiments. In table 6.2 above, the findings of the choice experiments are illustrated. These sought to measure the possible effects on products with the RSPO label and the POF label, and whether these had either positive contributions to the choices or whether it deterred the respondents from picking the labeled product. Therefore, the following null-hypothesis has been established to measure upon the survey data collected.

H0 = The label manipulation will result in no significant differences in product choices between the groups

6.1.1. Chi-Square and Fisher Exact Test

In order to conduct a chi-square test on our survey findings, we converted the data into a contingency table, whereby the matrix displays the frequency distribution of the variable. By doing so, we gain a picture of the interrelation between the variables and are thus able to find interactions between them (Agresti, 2018). We conducted the chi-square test to test differences between the groups, using the control group as the benchmark, since these were not exposed to any label manipulation of the product choices. We firstly conducted the Pearson chi-squared test and afterwards used the Fisher exact test to

increase the reliability of our findings. A p-value of less than 5% (i.e. >0.05) is considered insignificant. Through the chi-square test, we found that all groups tested against the null-hypothesis have a p-value of 0.227, which suggests that there are no significant differences between the groups in relation to product choices, therefore we accept our null-hypothesis. In order to verify that the null-hypothesis must be accepted, we conducted a Fisher exact test on all groups. The Fisher exact test found the p-value of all groups to be 1, wherefore we can accept the null-hypothesis. Ultimately, the observed odds ratio is 1, which means the observed deviation is zero, thus the probability is 1 that any other hypothetical sample will have a deviation that is at least as large as the one observed (Wickham & Grolemund, 2020). We use the Fisher exact test as a supportive instrument to the chi-square test because the false rejection rate equals the significance level of the test, which is not necessarily true for approximate tests such as the chi-square test (Agresti, 2018). The purpose of the sample statistics is to compute descriptive statistics for the sample and thus draw conclusions for the population which the sample has been selected from. It should be noted that the sample statistics used in this thesis are unable to draw perfect estimates of the corresponding population parameters, due to random variability.

6.1.2. Two-Proportions Z-Test

The Two-Proportions Z-test is used to compare two observed proportions, which in the case of the thesis will be the control group and treatment groups. The Two-Proportions Z-test has been conducted for each product in the respective choice experiment across all treatment groups, taking a point of departure in the control group as one of the two groups included in each test. The test seeks to identify the proportion of two given groups in order to establish whether there is a significant difference. The test is based on the equation below:

$$z = \frac{p_A - p_B}{\sqrt{pq/n_A + pq/n_B}}$$

The significance level, α=0.05, is the probability that the null hypothesis is true, i.e. whether a relationship between variables is just due to chance. We found that the p-values for all tests were above the significance level of 0.05 which means that there is no significant difference between the two tested proportions and thus we accept the null-hypothesis.

Table 6.3 - P-values of All Two-Proportions Z-Tests

	Treatment Group 1	Treatment Group 2	Treatment Group 3
Biscuit 1	0.8922	1.0	0.6994
Biscuit 2	1.0	1.0	0.6994
Nutspread 1	0.7097	1.0	0.05418
Nutspread 2	0.5796	0.8511	0.05418
Pizza 1	1.0	0.8638	0.2787
Pizza 2	1.0	1.0	0.2787

6.1.3. Two-Sample T-Test

The purpose of the t-test is to estimate the significance between respondents choosing the palm oil-free product in the choice experiments and their responses to the question on how important sustainably produced ingredients (SPI) is to their purchasing decision. To do so, we use a 95% confidence interval and calculate the mean of the choice experiments. Here we coded the first variable, the responses of the choice experiments, into binaries with 0=product with certified palm oil and 1=products without palm oil. The second variable in the t-test is the SPI category which we coded into 0-4, with the importance scale going from 0=very unimportant to 4=very important; the mean of the SPI category=2.546358. We hypothesize that there is a significant correlation between respondents choosing the certified palm oil product and those who value SPI, thus:

> *H0 = There is no significant correlation between respondents choosing the certified sustainable palm oil product and those who value SPI significantly*

The test is based on the accumulated responses and not divided into the treatment groups, as there were no significant differences in the treatment groups' answers on the choice experiments. The p-value is below the 0.05 significance level and can thus be considered statistically significant wherefore we can reject our null-hypothesis and conclude that there is a correlation between respondents choosing the product with certified sustainable palm oil and those who value SPI significantly.

Table 6.4 - T-Test Results

Product group	Mean	P-value	T-value*	df**
Oat biscuit	0.7516556	2.2e-16	-29.122	414.18
Hazelnut spread	0.2980132	2.2e-16	-36.129	426.66
Pizza	0.6854305	2.2e-16	-29.822	430.15

*T-value measures the size of the difference relative to the variation in the data.

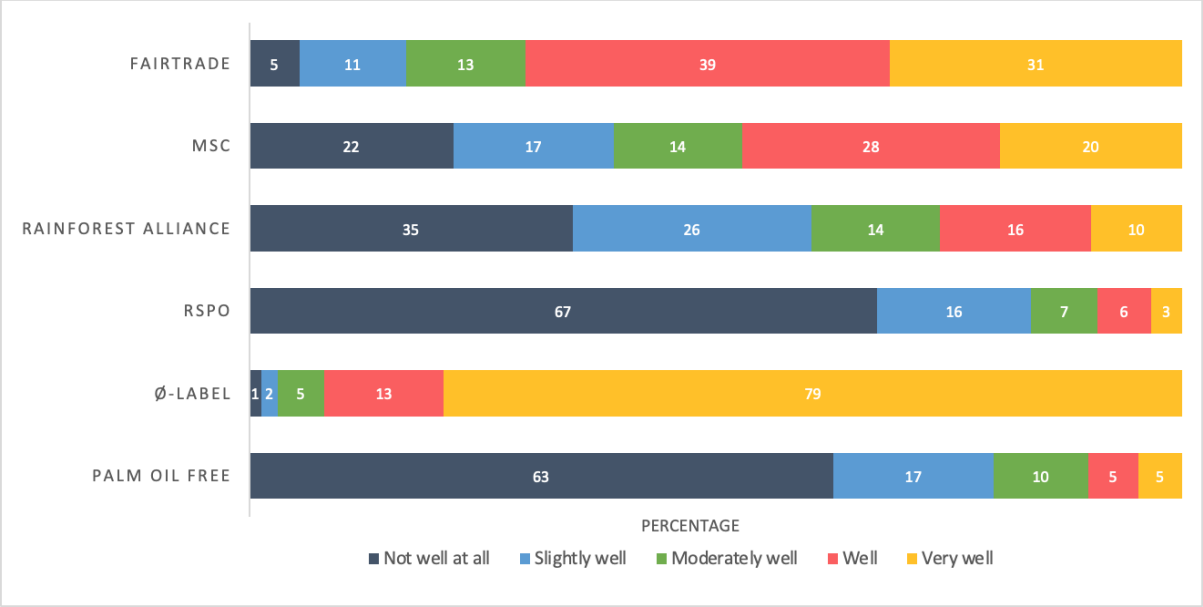
**df=degrees of freedom, the number of independent pieces of information that were taken into account when calculating the estimate.

Part 1 - Palm Oil Certification Schemes and Labeling

6.2. RSPO Labeling and Consumer Perception

In the last couple of decades, we have seen an emergence of many public and private initiatives that have started communicating on sustainability-related labels on food products for consumers (Grunert et al., 2014). The European Commission has identified 129 sustainability-related food information schemes available at EU or national levels (European Commission, 2012). The objective of the labeling schemes is to increase transparency, yet the abundance of sustainability labels potentially causes consumer confusion, which may limit the effects of such labels in purchasing decisions (Grunert et al., 2014; Thøgersen et al., 2010). In the figure below, the six sustainability labels from the survey are depicted, illustrating the respondents' familiarity with RSPO in comparison to the other labels.

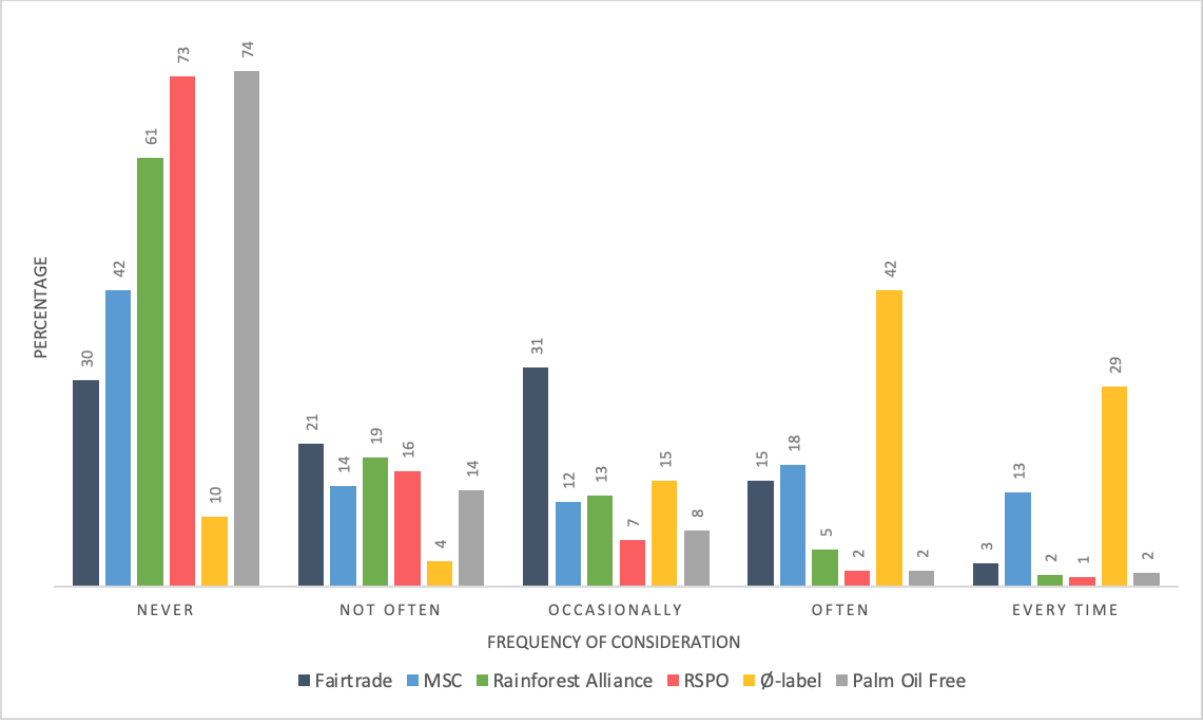
Figure 6.1 - Familiarity of Labels



As illustrated in figure 6.1, the survey findings show that RSPO is the least known of all the sustainability labels, with 67% stating they do not know it well at all - it is even less known than the unofficial POF label, where 63% stated they do not know it well at all. In comparison, the most known sustainability label of the survey is the Ø-label (a Danish label for organic goods), which accumulated only 1% of respondents stating they do not know it well at all and 79% who know it very well. Comparatively, only 3% know RSPO very well, signifying that information asymmetry is likely high in regard to RSPO. Our survey findings, as well as all interviews conducted, show that consumer familiarity with the RSPO label is relatively low

compared to other labels, which is also portrayed in the consideration of RSPO when grocery shopping, where the majority of respondents (73%) never consider the RSPO label (Fig. 6.1). In general, the sustainability labels used in the survey are not considered much by the respondents. This however does not apply to the Ø-label which has a high degree of consideration with 71% of the respondents who considered the label either often or every time they went grocery shopping within the last two weeks. We can thus derive that the palm oil labels do not have a significant effect on the respondents' purchasing behavior, which may be true for the wider population. On this matter we can only make educated guesses. Compared to the other labels, RSPO and the POF label are the least considered labels, and in fact RSPO is to a small degree less considered than the unofficial POF label. Only 3% of the respondents either consider RSPO often or every time, which emphasizes the infrequency of consumers considering the label.

Figure 6.2 - Consideration of Labels



Our survey measured the degree of trustworthiness of the six labels and found that the trustworthiness assigned to the RSPO label compared to other sustainability labels is weak, it was in fact deemed the least trustworthy label, even ranging below the unofficial POF label (Fig. 6.3). The Rainforest Alliance label derived similar results. On the basis of the label familiarity and consideration findings from the survey, it can be postulated that the reason for the RSPO, the POF and the Rainforest Alliance labels being considered noticeably less than the other three labels is due to the low awareness of said labels, which

correlates with Thøgersen's (2000) study that found familiarity of a label is a prerequisite for considering it in the purchasing decision. If consumers are not aware that a label exists, they cannot intentionally use them in the decision-making process when buying products. Moreover, the infrequent consideration of RSPO and POF can also be explained by the low trustworthiness in the labels, as consumers mostly choose labels if they trust the label and the message it stands for. Likewise, Pedersen says that "*Because the label [RSPO label] is not particularly recognized, it gets lost in the jungle (of labels) if you are a consumer*" (Appendix 3), which signifies a lack of consumer consideration of RSPO due to a generally poor perception of the certification scheme in relation of other labels. Additionally, the number of labels available may inflict information overload for consumers according to Thøgersen et al. (2010) which also correlates with the low consideration of the RSPO label due to the adoption of other more established labels like the Ø-label.

Figure 6.3 - Trustworthiness of Labels

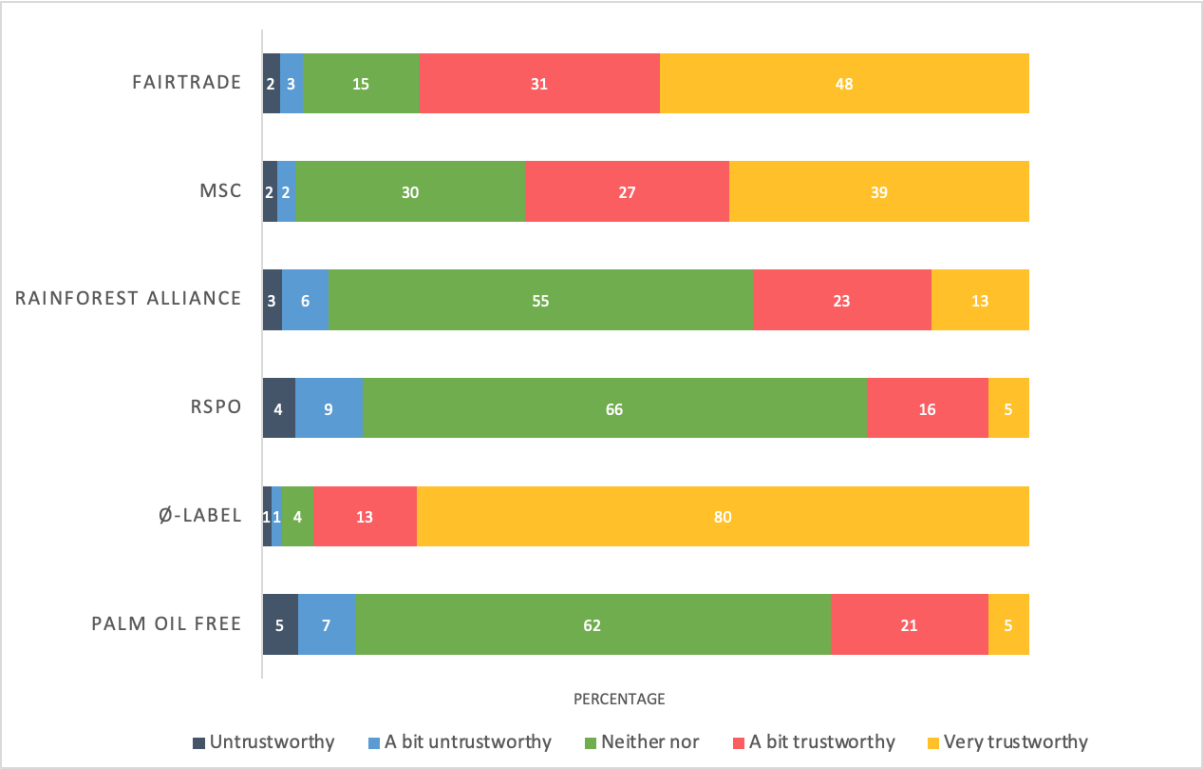
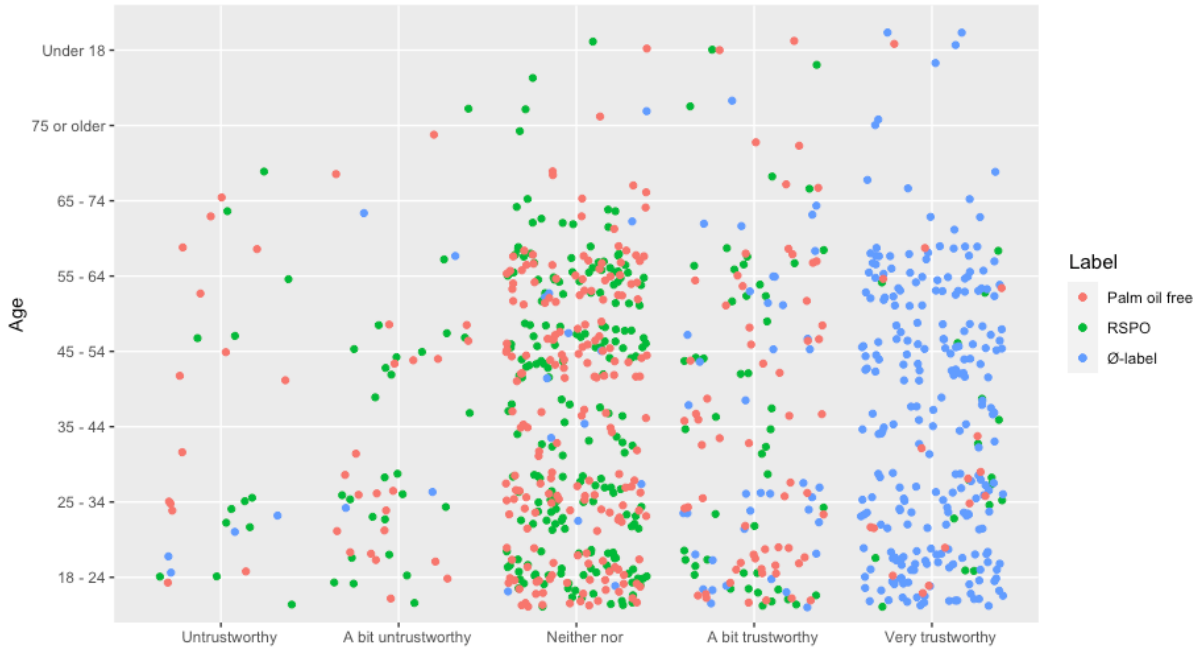


Figure 6.4 below depicts the trustworthiness associated with three different labels from our survey: Fairtrade, RSPO and Ø-label. Here it is evident that the respondents deemed RSPO significantly less trustworthy than the two most trustworthy labels from our survey, namely the Ø-label and Fairtrade. It should however be noted that the majority of answers to RSPO make up the "Neither nor" category which

implies that many consumers may not have an opinion on the label or are just unfamiliar and thus indifferent. Yet it should also be noted, that of all respondents, only 2.5% and 5.6% deemed, respectively, Ø-label and Fairtrade "a bit untrustworthy" or "untrustworthy" as compared to RSPO where 13% deemed it either "a bit untrustworthy" or "untrustworthy".

Figure 6.4 - Perceived Trustworthiness of POF, RSPO and Ø-label



Our findings can be related to the study by Teng et al. (2020) which found an overwhelming occurrence of negative emotions in relation to palm oil, which goes to show that there is a perception of palm oil as being the "bad guy". We can however not conclude that there is a negative perception of palm oil in our survey, or if the findings are rooted in a lack of awareness as respondents were largely unfamiliar (59%) with the implications of palm oil. Existing research suggests that people generally have low trust in global organizations, as these are accused of giving out certifications for money (Teng et al., 2020). Likewise, certification schemes are credence attributes, which result in information asymmetry between consumers and suppliers, as consumers cannot verify the certification themselves (Darby & Karni, 1973). Our findings on palm oil labeling suggest similar tendencies as these are not particularly trusted, however since we do not have the individual consumers' detailed rationale behind their choices in the survey, we can draw no definitive conclusions. The tendencies concerning a lack of trust in global organizations have only been apparent in a limited amount of the literature included in this thesis and thus cannot be

considered to be entirely true. Furthermore, this does not correspond with our survey findings regarding the more established labels; Fairtrade, Ø-label and MSC.

Increased RSPO labeling can lead to increased awareness of palm oil content in products (Appendix 1-2; Hinkes & Christoph-Schulz, 2019), which thus minimizes information asymmetry. Yet, instead of granting consumers a positive perception of RSPO certified palm oil as a product component, it sometimes leads to boycotting of those products due to the palm oil content, which they were not even aware of beforehand (Appendix 1-2). Therefore, many businesses, including Coop, have been reluctant to display the RSPO label on their products (Coop, 2019c). In connection, there is a significant risk associated with companies making sustainability claims, such as they are utilizing 100% certified sustainable palm oil and then being exposed by a third-party demonstrating that the claim was false (Madhusoodanan, 2019). This is particularly more damaging to the company's reputation than if it made no claim whatsoever, as we see in the Danish food industry. Correspondingly, a study by Kasim et al. (2020) found that due to the controversiality of palm oil as a commodity, displaying the RSPO label on product packaging affects consumers' purchasing decisions so that they refrain from the products. Instead of eliminating the information asymmetry being a positive, it rather negatively affects consumers' purchasing decisions. As a result, counter initiatives to the RSPO labeling are POF labels, where businesses brand themselves on their products not containing palm oil, yet these likely contain another more unsustainable and less yielding vegetable oil. The EPOA argues that this type of labeling is confusing for consumers, and it creates conflicting messages around sustainable palm oil (EPOA, 2021b), which only increases information asymmetry. Accordingly, this view is supported by Hartington (Appendix 1), who states that boycotting palm oil is the easy solution for businesses, as it creates an easily decipherable signal of taking a stand on the palm oil subject. In addition, it is evident from the t-test conducted on the survey data (Table 6.4) that consumers had a significant preference for the sustainably produced ingredients (SPI) (Appendix 5, Q13), where we found a correlation between respondents choosing the product with certified sustainable palm oil and those who value SPI significantly. Thus, this correlation contradicts the tendency for consumers to choose the POF option in a belief of it being more sustainable, as the respondents who value SPI significantly also tend to choose the product with certified palm oil.

There is no apparent long-term value to be derived from an exclusion approach, as it is likely that it will harm the economic bottom line and not lead to any positive changes in the palm oil industry (Appendix 4). 21.5% of the respondents deemed RSPO as trustworthy, while 25.8% deemed the POF label

trustworthy. This illustrates that there is a more positive perception for the unofficial label, which we included for the sake of comparing it to the perception of RSPO. This supports the perspective of palm oil having a bad reputation and the deterrence the RSPO label may have on consumers' product choices. Additionally, the tendency for consumers to prefer palm oil-free products, even though they contain alternative oils, is supported through this data finding. Furthermore, the untrustworthiness for RSPO is higher than in the POF label, as shown in table 6.5 below. The preference for POF products over RSPO certified products corresponds to Hinkes & Christoph-Schulz's study (2019) which found that the majority of the consumers prefer products without palm oil over products that contain RSPO certified palm oil (Hinkes & Christoph-Schulz, 2019). This however contradicts the correlation found in the t-test, which signifies that the respondents who chose the product with CSPO, did so as they perceived it as the sustainable option, which can be attributed to the value they attached to SPI. This could potentially signify that these consumers were more informed on palm oil implications than their counterparts.

Table 6.5 - Trustworthiness of RSPO vs. POF label

Trustworthiness	RSPO	POF
Trustworthy	21.5%	25.8%
Neither nor	65.5%	62.3%
Untrustworthy	14.2%	11.9%

Conclusively, RSPO is relatively unknown by the survey respondents, which is also the perception gathered through other research articles (Hinkes & Christoph-Schulz, 2019; Brown, 2014). The RSPO label is the least considered of all the researched labels, which consequently tells us that it has not been adopted by the consumers. This acts as an indication that consumers may have a negative perception of palm oil and will potentially deem any palm oil related label untrustworthy, as reflected in the two least trustworthy labels being the POF label and RSPO, or it might simply be that the Danish consumers are unfamiliar with both labels and the implications of the industry. Therefore, it can be argued that sustainability labels like RSPO are only useful if consumers understand, trust and value them in the decision-making process (Thøgersen, 2000). Due to the low familiarity, consideration and trustworthiness in RSPO by the survey respondents, the effect of RSPO as a contributor to consumers making sustainable choices in regard to palm oil in the supermarket is then probably comparably low as well for the general population. This

affects the effectiveness of RSPO, since if there is no consumer support for the certification then it gives companies less incentive to become certified.

6.3. RSPO as a Criteria-Formulating Organization

By having high levels of requirements, a CFO makes it difficult for many companies to comply as several investments are often necessary, which consequently leads to increased prices and thus the establishment of niche markets with consumers insensitive to prices (Ingenbleek et al., 2007). This does not correlate much with RSPO as a CFO, as 19% of the world's palm oil supply is RSPO certified (RSPO, n.d.-a) which cannot be categorized as a niche market. However, sustainable palm requires large investments to meet sustainability targets and is more expensive to source than conventional palm oil, resulting in higher end prices (Guindon, 2018). Whether RSPO sets high- or low-level requirements is disputable. Many critics state that RSPO is not ambitious enough (Appendix 1, 3, 4) and that the standard requirements are too low (Nikoloyuk et al., 2010; NOAH, 2019a). However, by setting the standard at a level where more suppliers want to comply and are not too overwhelmed to participate, may be the best tactic right now to include as many actors as possible and spread the sustainability requirements. As RSPO's P&C apply to all parts of the supply chain (RSPO, 2018), it signifies a broad inclusion of industry actors. RSPO revises and develops the P&C every five years (RSPO, 2021b), which can be regarded as rather infrequently compared to other CFOs (Ingenbleek et al., 2007). Hartington (Appendix 1) states that RSPO's requirements are what is possible in the industry at the moment, as there are many stakeholders that need to coordinate and agree on the requirements which complicates the process. However, she also states that the level of requirements is not high enough when considering the needs of the planet's ecosystem (Appendix 1). From this perspective, the RSPO may be categorized as having low level requirements with the purpose of involving as many stakeholders as possible, and thus RSPO cannot be categorized an idealist nor case solver CFO but rather a low flyer or a size seeker.

Regarding the range of sustainability requirements, RSPO focuses on many different aspects of the palm oil industry including prosperity, people and planet (RSPO, 2018). For this reason, the range cannot be categorized as narrow, as it involves a wide array of criteria to make an impact on for instance economic viability and development of the sector, human and labor rights and conservation of environmental resources (RSPO, 2018). If RSPO only focused on the environmental aspect of the palm oil industry, the range of sustainability requirements would be narrower. Consequently, by having low levels of requirements and a broad scope of ethical issues, RSPO can be categorized as a size seeker CFO. Whether

RSPO encompasses more efficiency for the industry with this strategy rather than setting higher and more narrow requirements, is a question left unanswered. However, the interviewees (Appendix 1-3) agree that if stakeholders collaborate on improving the sustainability of the palm oil industry, they can do more as an industry which correlates with the broad scope of RSPO. Nevertheless, since RSPO is the largest organization that sets standards and criteria for conducting sustainable palm oil practices, it also sets the bar for the sustainability engagement within the industry. If companies use RSPO certification as their contribution to make the palm oil industry more sustainable, then the aspirations and effectiveness of RSPO is extremely important as it guides the behavior of palm oil supply chain actors. Therefore, the effectiveness of RSPO will subsequently be assessed to determine whether the organization does enough to ensure sustainable palm oil.

6.4. The Effectiveness of RSPO Certification

Secondary sources showcase the manifold of critics of the RSPO certification scheme, which especially includes the NGOs; Greenpeace, Friends of the Earth and the Danish environmental organization NOAH. Greenpeace remains critical of the RSPO process and the actual impact on the industry, while Friends of the Earth criticizes RSPO for setting the standards too low and for not sanctioning members (Nikoloyuk et al., 2010). Albertsen and a report from NOAH state that the certification scheme legitimizes overconsumption, as it gives false hope to consumers about saving the climate and indigenous people if they purchase products containing CSPO (NOAH, 2019b; Appendix 4). According to NOAH, the consumers' comfortability with continuing their overconsumption by just picking the product with a certification label, is not a sustainable solution as it continuously contributes to the climate crisis and social challenges in the palm oil producing areas (NOAH, 2019b). Likewise, Chrintz agrees that certification standards legitimize overconsumption (Appendix 2). However, he also states that it is better to buy certified palm-oil than non-certified palm oil due to better wastewater treatment and worker conditions etc., but that it is wrong for companies to claim that it is sustainable and not harmful (Appendix 2). Western organizations repeatedly look at certification schemes as the solution to the climate crisis, so they can continue their conducts and ease consumers' worries (NOAH, 2019a; Appendix 4). Consequently, RSPO can be viewed as a maneuver around public concern and a way to satisfy consumer demands for sustainable practices. This can be argued to not be entirely true for the Danish food industry, where our findings indicate that RSPO has little influence on consumers and purchasing decisions. This limits public debate and national and international regulation of the palm oil industry by satisfying consumers and the public with a belief of the industry being sustainable (NOAH, 2019a; Appendix 4). Furthermore, Albertsen (Appendix 4) states

that the RSPO certification standard works as a pillow for companies to rest on by portraying it to be sustainable in order to sell more. Yet, our survey findings found no evidence indicating that RSPO acts as a selling point in the Danish food industry. This may however change if consumer familiarity with both RSPO and palm oil implications increases. Another point is that since it is the industry actors who have come together to initiate RSPO, they do not have any interest in sanctioning themselves if they do not comply to requirements, thus the pressure for change must come from a supranational level and legislation in order for it to be effective (Appendix 4). This will be further elaborated in the discussion.

NOAH argues that the certification schemes contribute significantly to the creation of an unequal world, where industrialized countries overuse resources from developing countries, which makes it harder for the developing countries to build up a local food supply (NOAH, 2019b). Amnesty International reports that one of the founding members of RSPO, Wilmar International which is the world's largest palm oil producer, is not living up to the requirements of RSPO (NOAH, 2019a). Wilmar International is infringing RSPO principle 2 and principle 6, as the company is utilizing child labor (NOAH, 2019a). Despite this, Wilmar International is certified as conducting sustainable practices and is receiving the stamp of approval from RSPO; thus, it is clear that the certification scheme does not ensure full sustainability in palm oil supply chains. These findings are contradicted by Morgans et al. (2018) whose study revealed positive outcomes for economic sustainability and greater fresh fruit bunch yields were present for RSPO certified plantations (Morgans et al., 2018). Though in all other cases, there were no significant differences between certified plantations and non-certified plantations (Morgans et al., 2018).

RSPO gained little backing from the respondents in terms of both trustworthiness, familiarity and consideration (Fig. 6.1, 6.2, 6.3), which points towards consumers perceiving the RSPO label as less effective than e.g., the Ø-label. According to Nikoloyuk et al. (2010), the complexity of the RSPO certification system and RSPO's failure in communicating and inability to conduct effective marketing aiming towards a positive product attribute, hinders the full effectiveness of RSPO. Rather than creating shelter for the companies and producers in RSPO, they have become targets for media attacks due to the negative publicity of the certification (Nikoloyuk et al., 2010).

Furthermore, according to Hartington (Appendix 1), the process of transitioning the industry towards more sustainable practices is very slow. At times, the lack of speed is rather unsatisfactory, but through dialogue and continuous meetings the RSPO seeks to find ways to make the industry more sustainable,

without just moving the problem to another industry (Appendix 1). Correspondingly, Pedersen states that the RSPO is continuously trying to advance the standard which is better than doing nothing (Appendix 3). He agrees that many stakeholders consider the progress too slow, but that it is better to have one certification standard that many supports, than ten different certification schemes with differing standards, as it gives more momentum to just have one that is larger scale. RSPO is revising its P&C every five years and continuously trying to improve industry standards by setting minimum standards for producing palm oil (RSPO, 2021b), and by setting the issues into constructive dialogues with the stakeholders of the industry (Appendix 3). However, it can be argued whether the organization is doing enough to ensure the transition to a more sustainable industry. RSPO states that it agrees that there are still major challenges in the palm oil industry, yet it highlights that it is one of the world's strictest set of criteria regarding deforestation of any commodity (RSPO, 2021d). Furthermore, RSPO states that they cannot solve the palm oil problem alone; it requires collaboration and shared effort across industries and supply chains, including governments and NGOs, which Hartington, Chrintz and Pedersen (Appendix 1-3) all agree on.

Our data suggest that consumers do not perceive RSPO as particularly trustworthy, which is in accordance with the study from Hinkes & Christoph-Schulz (2019) who found that most consumers do not trust the RSPO certification. However, the survey respondents did not regard RSPO as untrustworthy either but had a predominantly neutral perception with the majority answering "Neither nor" (66%) (Fig. 6.3). Here it should be considered that the information asymmetry between companies and consumers make it extremely difficult for consumers to verify the labeling schemes available to them (Janssen & Hamm, 2014). If the RSPO certification is the best way for consumers to be certain of choosing the sustainable palm oil product alternative, then it is important that consumers actually consider the label when grocery shopping, however 73% never consider RSPO (Fig. 6.2). If there is no consumer support for the certification scheme through considering and trusting the label, then it gives companies less incentive to become certified, which makes the certification scheme less effective as it does not succeed in spreading sustainable practices. Accordingly, Pedersen says "*If you [a company] lose the order then it does not matter what you have done of initiatives, if the others get through without those initiatives*" (Appendix 3). Furthermore, the critical NGOs dominate the discussion about palm oil and challenges the legitimacy of the certification, which makes the effectiveness of the certification unclear, as producers who are not yet members may be hesitant to become one (Nikoloyuk et al., 2010). Consequently, the effectiveness of RSPO as a certification scheme depends on many factors, both in regard to requirements being complied with and the effect it has on consumers.

6.5. Sub-conclusion for Part 1

The following sub-conclusion seeks to answer the sub-questions: "*How is palm oil labeling perceived by consumers?"* and *"To what extent is RSPO actually improving sustainability in the palm oil industry?"*. Additionally, the findings in this part seek to contribute to answering the main research question, as the RSPO certification scheme and consumers' perception hereof plays a role in the transition to a more sustainable palm oil industry.

Certification schemes such as RSPO can be perceived as a legitimization of overconsumption, a maneuver around public concern and a superficial way to satisfy consumer demands for sustainable practices. However, palm oil labeling is not well known amongst the survey respondents, where the RSPO and unofficial POF labels were the least known and considered labels of the six labels presented to the survey respondents, indicating an indifferent perception. In addition, the majority of the respondents were neutral in regard to the trustworthiness of RSPO, which signifies that they have no particular opinion on the label and have not adopted it either. Moreover, RSPO is criticized by many industry actors for not being ambitious enough. The effectiveness of RSPO is also challenged by lack of consumer support for the certification scheme. The findings from the survey illustrated a slightly more positive perception of POF compared to RSPO, which correlates with other consumer studies that found preference for palm oil-free products over RSPO certified products. Therefore, companies' use of the RSPO label contradicts the purpose of the labeling as people shy away from it rather than perceiving it as a positive product attribute. The less consumer support there is for the labeling scheme, the less incentives companies have to adopt it. This may result in fewer companies joining the standard which then decreases the effectiveness. RSPO provides a low level of requirements on a broad scope of ethical issues, as it seeks to include as many palm oil supply chain actors as possible to improve the sustainability of the industry.

Part 2 - The Role of Consumers

6.6. Responsibilization of Consumers

Sustainability concerns of the palm oil industry have been increasing in accordance with the expansion of the palm oil sector. In the early 2000's, RSPO was founded, and the general public was made aware of the many problems associated with the heavy global use of palm oil through NGOs, such as Greenpeace, campaigning against the industry. Due to the extensive coverage of the consequences of the industry, it would be probable to expect that demand should have lessened since the focus on palm oil production practices first became a known problem. However, there is no evidence that indicates the awareness has resulted in more responsible buying behavior and decreasing demands, as the production of palm oil continues to grow (Statista, 2021). Accordingly, our survey found little familiarity with the RSPO label and the industry implications (Fig. 6.9). With the primary use of imported palm oil being in food products, 73% in 2017 (Gylling et al., 2018), it can be argued that the supermarket consumer has a significant say in the usage. However, it is uncertain to what degree the consumer feels responsible for the sustainable transition and is willing to contribute to changing current practices.

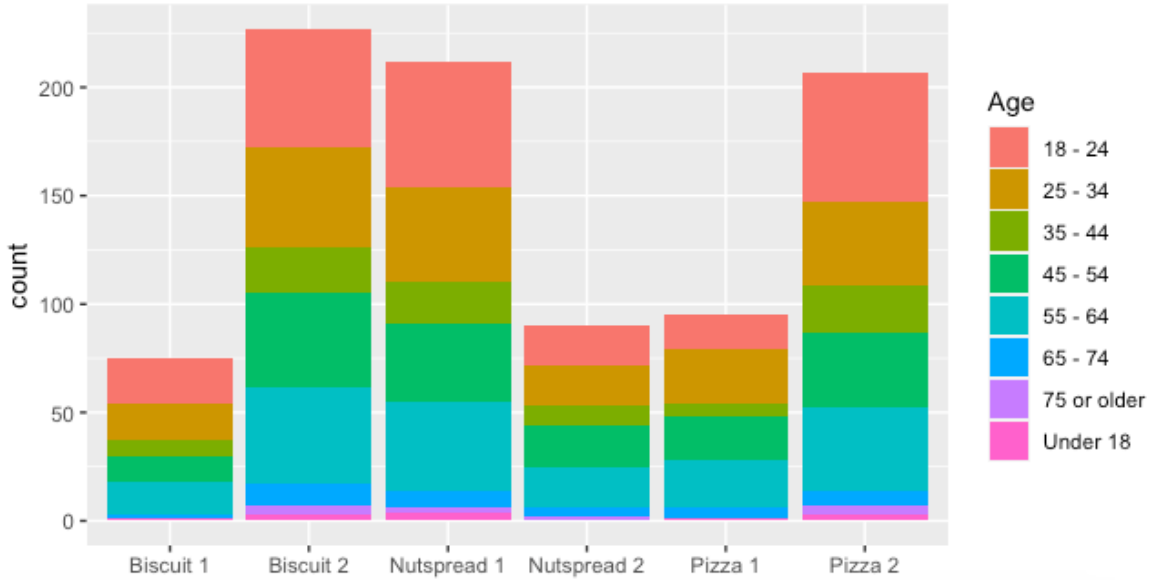
The study by Niva & Timonen (2001) found that consumers perceived environmental issues largely as the responsibility of other actors, as they did not view their own actions as having any significant influence on the market. This shows that considerable measures are necessary in order to educate consumers on the significance of their role in pushing for change. Our findings are similar to an extent, as 79% of respondents did not perceive themselves as the most responsible for enhancing sustainability in the palm oil industry. However, 48.5% of respondents somewhat agreed that they were responsible, yet our findings gave no clear indication as to what that entails for the consumer, e.g. if that merely concerns purchasing more labeled products or actively advocating for change. This indicates that some of the respondents do not believe that they have a high PCE to contribute to sustainable development of the palm oil industry. 267 respondents (89%) answered that the company from which they purchase their products, is most responsible for enhancing sustainability in the palm oil industry. 246 respondents (82%) highlighted the suppliers as most responsible, and 213 (71%) highlighted the government. These findings are accumulations of the "strongly agree" and "somewhat agree" answer options to the question "*In your opinion, who is most responsible for enhancing sustainability in the palm oil industry?*" (Appendix 5, Q18). These findings, whilst not indicative of the average Danish consumer, do however show that the

consumers in our survey do not consider themselves as the actor most responsible for change. As companies, suppliers and governments are deemed more responsible than consumers themselves, it indicates that consumers believe that these have more power to leverage sustainability, which will be more effective, than if consumers themselves try to do something about the matter. This is likely to be a trend in the wider population, yet this can only remain an educated guess. Our findings are to a certain extent supported by the Arla study which found that 37% of consumers asked believed that they are responsible for change (Skovlund, 2018). These findings are however in sharp contrast to the Futerra survey which found that 96% of individuals asked felt that their own actions can make a difference, with 51% of these believing that they personally can make a big difference (Townsend, 2018), signaling a high PCE. Therefore, it can be derived that palm oil as an ingredient is rather unrelatable for consumers and that they believe they cannot make a significant difference, which is why they do not feel particularly responsible for improving palm oil sustainability. Accordingly, Pedersen states that palm oil as an ingredient is too specific for consumers to move the industry, and that it is easier for consumers to relate to something more tangible such as replacing meat with plants (Appendix 3). The studies to which we compare our findings are however not entirely applicable as they research sustainable development as a whole whereas our study solely focuses on sustainable development of palm oil.

Other findings from our survey illustrate that consumers may be willing to make sustainable choices; 57% of respondents rated sustainably produced ingredients as an important factor in their choice when grocery shopping, and 61% rated organic as being an important factor, ranging only respectively 12% and 8% below price which was at 69% (Appendix 11). This implies that some of the respondents are willing to contribute to the transition to a more sustainable world through everyday actions. Yet, the majority does not believe that they are responsible for said change. Our data found that quality (94%) and taste (98%) are the most important factors (having answered very important or important) (Appendix 11), therefore buying behavior that emphasizes the sustainable choice may not be entirely accurate. However, it can be argued that quality is improved through sustainability as it ensures correct handling of products throughout the supply chain as well as better taste due to less preservatives and toxins, e.g. from organic products. We have reason to believe that consumers are indeed willing to contribute positively to changing palm oil utilization, as long as they believe that their actions actually have an impact or in other words that the consumers have a high PCE.

The findings of the choice experiments (Appendix 5, Q1-Q12) are indicative of how consumers assume they would choose in a supermarket. Yet, as stated in the validity section, some people have a tendency to lie about their buying behavior, if they deem their actual behavior socially unacceptable. This is supported by Madhusoodanan (2019) who argues that consumers tend to say that sustainability is very important to them, but studies of actual market behavior show that their purchasing of certified products is still very low. This indicates that consumers tend to not translate the preferences they express into actual buying decisions (Madhusoodanan, 2019). Fig. 6.5 below illustrates the accumulated results of the choice experiments from all four respondent groups divided into age groups.

Figure 6.5 - Choice Experiments: Accumulated Results from All Respondent Groups



*Biscuit 1: Karen Volf with palm oil; Biscuit 2: Madame Butterfly without palm oil; Nutspread 1: Levevis with palm oil; Nutspread 2: Madame Butterfly without palm oil; Pizza 1: Dej'li with palm oil; Pizza 2: Coop without palm oil

As evident in fig. 6.5, there is no obvious correlation between the consumers' choice of products with palm oil and the products without palm oil. The results show that in relation to the biscuits choice experiment, the vast majority of the respondents from all treatment groups chose biscuit 2, i.e. the option without palm oil, signifying that the labels may have had an effect on this particular product. However, in relation to the nutspreads, the opposite is true, as the majority of respondents chose nutspread 1, i.e. the option with palm oil. In relation to the pizza dough choice experiment, the majority chose pizza 2, being the one without palm oil. Our findings suggest that other factors than labels may have a bigger influence on purchasing decisions, such as price, organic or brand. These findings are however opposed by the

Edenbrandt et al. (2011) study, which concluded that labels on products had a noticeable effect and made the consumer's purchases more climate friendly, as a result of climate labeling. This notion was further investigated in our survey by comparing the responses of the control group and the three treatment groups through a Two-Proportion Z-test, whereby we can derive whether the labels had an impact on consumer choices. Thus, by comparing the responses (Appendix 6-9) and considering the p-values of the statistical tests (Table 6.2-6.3), it is evident that the labeling of RSPO and POF had little significance on subjects' choices in all three treatment groups as there were no significant differences in the group's choices (Table 6.2). Ultimately, our manipulation of the product attributes had no notable effect on consumers' decision-making in the hypothetical purchasing situation. This indicates that the palm oil labeling carries no prominent value nor influence on the consumers in our survey sample. This may be explained by considering the large number of labels available to the consumers which may be more misleading than actually helping the consumers make purchasing decisions (Grunert et al., 2014), alongside the notion that the RSPO label is not apparent in the Danish food industry (Appendix 1).

Quality and taste are ranked as the most important factors for the respondents when grocery shopping (Appendix 11). Thus, the results from the choice experiments may also indicate that the most chosen products were regarded as better quality or having a better taste compared to their counter product. These are very subjective parameters and thus difficult to account for. In regard to price, the findings from the survey does not show a definitive preference for the cheapest products, as the cheapest option was only chosen by the majority of the respondents in two out of three choice experiments, yet the difference between the two product options were not striking. The findings are to an extent counterintuitive when compared to Q13, where 57% of respondents rated sustainably produced ingredients as an important factor and 61% rated organic as being an important factor, as it could be assumed that when these factors were accumulated, they would weigh above price, considering the more expensive products were organic. However, one of the most chosen products (Levevis nutspread) was the cheaper option, but both options were organic. We can derive that in this particular choice experiment, price was more important than the organic attribute. Though in the biscuit experiment, the organic option was weighed higher than the cheaper option (Fig. 6.5). This highlights the complexity surrounding buying behavior, where it is difficult to establish one fixed pattern as decisions are most likely based on an abundance of attributes, not just price vs. organic. It is an easy statement to make in a non-binding survey that one is willing to choose the sustainable choice and weighs sustainability high, and sometimes above price, but this may differ in an actual supermarket setting. It is also important to note

that consumers' choices are based on many variables. Some may choose the product with palm oil because it is organic, and some may choose it because it is cheaper etc.

The insignificance of the labels in the choice experiments could also be attributed to the fact that palm oil labeling schemes are not particularly apparent in the Danish food industry; thus, these are simply not a part of the respondents' decision-making processes as a result of low familiarity or trustworthiness of the labels. The low familiarity and consideration of RSPO and POF in the respondent groups (Fig. 6.2), may contribute to understanding why the labels had no significance in the choice experiments. This correlates with Thøgersen's (2000) research on labeling as when consumers purposefully purchase products with sustainability labels, they do so as they believe the label helps them attain a personal goal (Thøgersen, 2000). We found that some of the respondents deemed themselves most responsible for enhancing palm oil sustainability (20.8%), which indicates that this might be a goal of theirs, yet not for the wider sample. According to Thøgersen (2000), a sustainability label will influence decision making if the consumers desire environmentally friendly products, but since 57% of respondents deemed SPI an important product attribute but were still rather unaffected by the labels in the choice experiment, we can reject Thøgersen's hypothesis of consumers being influenced by labels when desiring sustainable products in relation to palm oil. However, the Ø-label, whilst not integrated in the choice experiments, showed indications of influencing consumers' decision-making process, wherefore we cannot reject Thøgersen's hypothesis entirely, as it depends on the familiarity with a given label. It is evident that one of the problems with sustainability labels and thus the ability for consumers to make sustainable choices, is the sheer amount of labels available. It is notable that it can seem overwhelming for the individual consumer to not only navigate the vast amount of labels and information, but also to feel as though their choice actually makes a contribution to change. However, a quintessential part of enticing consumers to take action and become responsible, is to convince them that even a small effort such as choosing RSPO, or other sustainability labelled products have a noticeable impact.

6.6.1. P.A.C.T Routine for the Sustainable Consumer in the Palm Oil Industry

Through the assessment of the P.A.C.T routine i.e., personalization, authorization, capabilization and transformation are examined and related to the survey and interview findings. The extent to which the survey participants can be considered sustainable consumers is analyzed regarding their sustainable food choices and consequently the extent to which they impact the palm oil industry practices.

When a new sustainability label enters the market, the majority of people need social proof before adopting it in their buying patterns (Thøgersen et al., 2010). Hence the early adopters of sustainability labels are crucial for converting the social problem into a personalized problem for individuals, and an important asset for the promotion of sustainability labels to more reluctant groups e.g., through a positive word-of-mouth or opinion leaders (Thøgersen et al., 2010). With problems of such scale as the palm oil industry poses, it can often appear overwhelming to the consumer, and they might not believe that they are able to make an actual influence which indicates a low PCE for the 79% of respondents who did not perceive themselves as most responsible for changing the industry (Fig. 6.7). Our survey findings suggest that only 4% of consumers do not view themselves as responsible for change to any extent. In connection, the majority (63.2%) of the survey respondents strongly disagree that no one is responsible for enhancing sustainability in the palm oil industry with only 4.5% agreeing that no one is responsible. Consequently, it can be argued that the larger crowd is starting to believe that they might be able to have an impact on the sustainable transition but have not quite adopted it on a personal level yet. According to Hartington (Appendix 1), it is a particular observant type of consumer who takes sustainable palm oil into consideration, which signifies a low degree of personalization of consumers in terms of palm oil, as other sustainability agendas take up consumers' minds (Appendix 1).

Following the P.A.C.T routine, the implications of the palm oil industry and expert knowledge authorize the legitimization of adopting sustainable practices when purchasing products containing palm oil. Campaigns, media focus, social norms, etc. increase the authorization, and makes the adoption of the consumer's responsibility legitimate. There has been much focus on the detrimental effects of the palm oil industry for many years, for instance in the "Our Planet" documentary that showcases the impact of deforestation. Additionally, Greenpeace has called out Nestlé's use of palm oil in KitKat and other products in the campaign "Nestlé - Give Orangutans a Break" (YouTube, 2010). However, actions that speak against the adoption of sustainable labels, such as Greenpeace and NOAH's critical viewpoint on the RSPO label (NOAH, 2019b), lessens the authorization and delegitimizes the adoption of the sustainability label as it is deemed unsustainable on social measures. Mistrust in the certifying authority of the sustainability label, in this case the RSPO label, may increase consumers' perceived risk of being deceived, for instance through greenwashing, and thus might result in them choosing the unlabeled product. This may create reluctance to adopt the RSPO label and therefore is a hindrance in becoming a sustainable, responsible consumer, that is if the RSPO label is the actual sustainable solution to the palm oil industry implications.

Figure 6.6 - The Influence of Different Groups on Purchasing Decisions

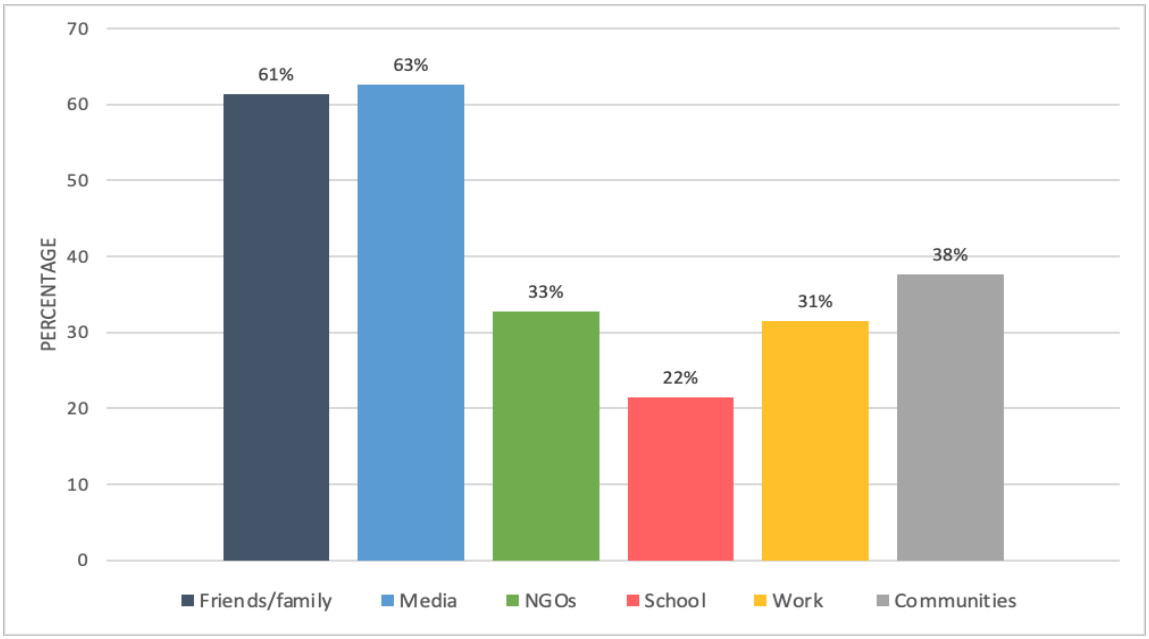


Fig. 6.6 shows the degree of influence a given group has on the respondents' purchasing decisions. The respondents were asked to rank "*What/who is influential when it comes to affecting your purchasing decisions?*" of the 6 given options (Appendix 5, Q19). The percentages shown are an accumulation of "influential" and "slightly influential" and thus the columns represent a broader array of opinions. However, it is evident from our data that friends/family and the media are most, and nearly equally, influential when it comes to purchasing decisions. This illustrates that the opinion of influential groups may authorize buying products with the RSPO label, or maybe products without palm oil. This is based on the fact that people are dependent on early adopters and recognition of others before they are likely to adopt the label themselves (Thøgersen et al., 2010). It is noticeable that NGOs are approximately only half as influential as media and friends/family when it comes to the purchasing decisions of consumers. This is in sharp contrast to the views of Coop, where NGOs have a lot of influence: "*We work a lot with NGOs both to get professional input, but also to get ideas for what we can do better*" (Appendix 1).

With the wealth of sustainability labels on the market competing for consumer attention, the risk of information overload can hinder capabilization of the responsible consumer's adoption of sustainability practices (Thøgersen et al., 2010). On the other hand, the availability of many different kinds of sustainability labels enables the consumers to "vote" through their purchases, and thus allows them to be more or less ethical. This however is dependent on their ability to get an overview and understanding

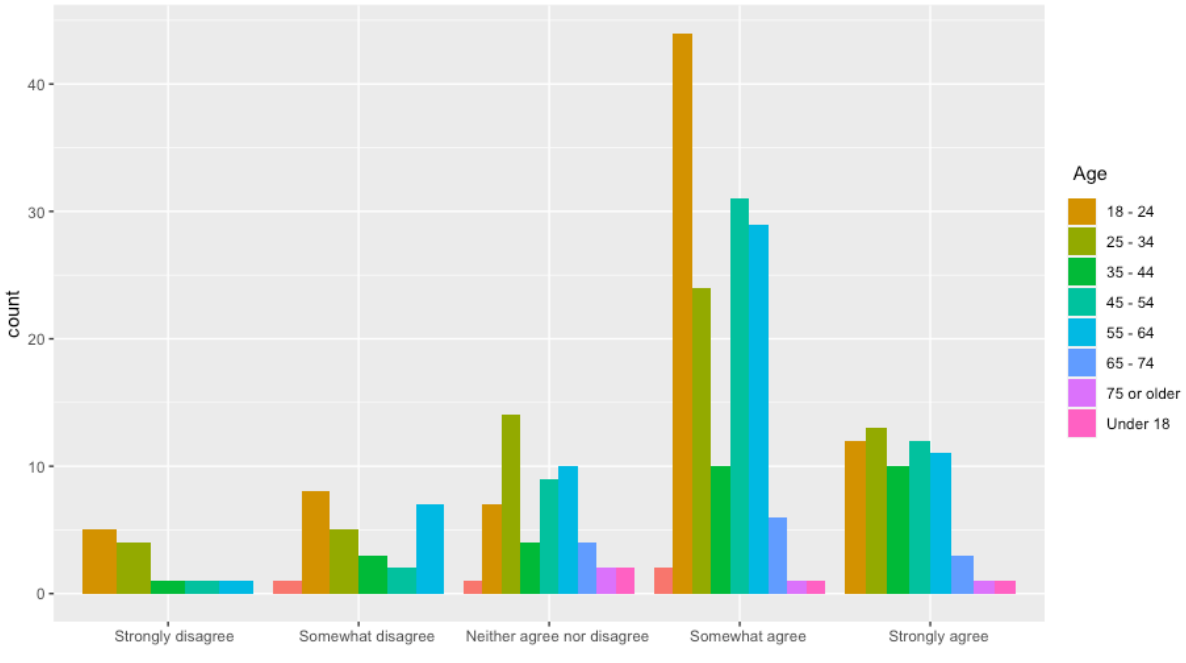
of the labels and filter away irrelevant information. This can in particular be difficult regarding palm oil, as there currently is little palm oil labeling in the Danish food industry (Appendix 1) and it is highly likely that most consumers are unfamiliar with the many names of palm oil (Yildiz, n.d.). This is backed by Aguiar et al. (2018) whose study found that consumers would not stop consuming products with palm oil, as they tended to be ignorant about the ingredients in the products they consume (Aguiar et al., 2018). Accordingly, the findings of Niva & Timonen (2001) argue that environmental issues will first take concrete shape on a product level when there are factual, tangible product features that are attached to a given issue. Thus, if products containing palm oil were more explicit to the consumer e.g., by having the RSPO label or one easily identifiable definition for palm oil, it might make consumers capable of active decision-making. However, as the findings from the choice experiments shows, the palm oil labels actually do not have a substantial influence on respondents' product choices. These results might be different, favoring palm oil labels, if more explicit identifiers become a common feature on all palm oil products in Danish supermarkets. Coop does not necessarily ease the process for consumers, as it has chosen not to label its private-label products with the RSPO label even though they are certified. According to Coop, the absence of RSPO labeling is due to a lack of consumer awareness of the label (Coop, 2019c). But when Coop is not displaying the RSPO label on its products, it hinders the possibility of creating more awareness for palm oil and the RSPO label, as consumers are simply left to figure it out on their own accord.

The RSPO label can enable consumers to purchase more sustainable palm oil products, instead of having to rely on the assumption that supermarkets take adequate measures to ensure sustainable palm oil practices. This argument is fallible as there is much debate regarding whether the RSPO certified palm oil is in fact more sustainable. The lack of labeling makes it increasingly difficult for the consumer to fulfill the needs reflected in the environmental concerns that they might have in relation to palm oil, or other sustainability topics, as portrayed in the survey where sustainability considerations weighed a great deal compared to e.g., brand or packaging (Appendix 11). Thus, it makes consumers less capable of ethical self-management, signifying that more effort is required on consumers' behalf in order to find their way in the vastness of factors when making purchasing decisions.

Even if the consumer becomes more knowledgeable on the issues surrounding palm oil cultivation, it does not necessarily entail adoption of sustainable consumption patterns. The final stage of the consumer's adoption of the sustainability label depends on the transformation of the consumer's interests, motivation and behavior for actually implementing sustainability into their life. As found in our survey,

there is no obvious correlation between palm oil labels and purchasing decisions (Fig. 6.5). Thus, the last factor in the P.A.C.T routine, regarding the new moralized self-understanding that the consumer attains, is most likely not achieved. Therefore, the self-governed identity project that may attempt to influence other people in the consumer's communities is probably minimal due to the low familiarity and consideration of palm oil labeling in the survey sample. In this context, it is interesting to look at the age groups of the survey respondents in order to investigate whether certain age groups are more prone to be transformed in the P.A.C.T routine. Young people are especially known to value products and companies with an ethical and sustainable profile (Jepsen, 2019). This raises the question as to whether young people are more transformed in the P.A.C.T routine and whether they have a higher moralized self-understanding than their older counterparts. It can be derived from the survey that the younger demographic has a slight tendency to feel more responsible as a consumer for improving sustainability in the palm oil industry compared to the older demographics. As portrayed in fig. 6.7, there is a significant spike in the "somewhat agree" category for the young age group, and a slight overweight in the "strongly agree" category for almost all age groups.

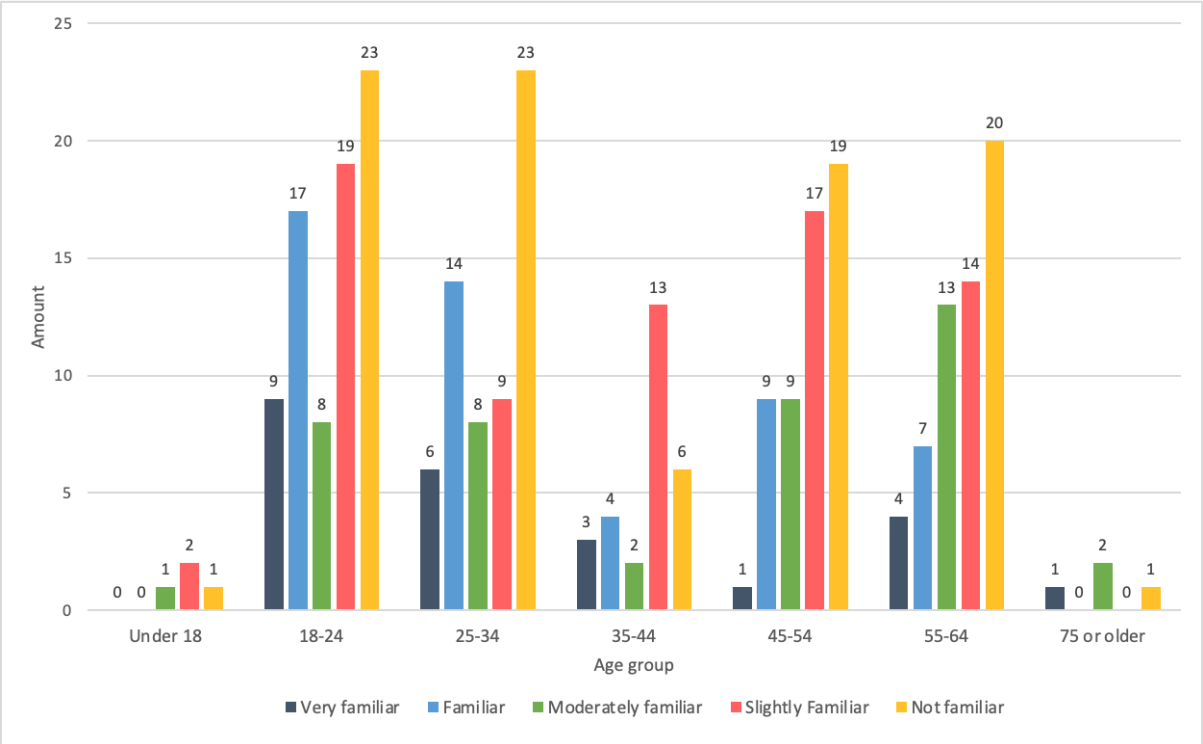
Figure 6.7 – Respondents' Perceived Responsibility for Enhancing Palm Oil Sustainability



This is an indication that there might be a correlation with the younger demographic having a higher level of familiarity with the implications of the palm oil industry. However, the familiarity levels found in our survey illustrate that generally, the familiarity level is quite low. It is not only with the older population

that there is a lack of familiarity with the implications of the palm oil industry, but equally so with the younger part of the population. It is evident from figure 6.8 that the younger demographic (18-34) is more aware of the implications of the palm oil industry than the population above 35. Yet, these are only separated by a mere 13.8% difference in regard to being either "familiar" or "very familiar", with the former being at 31.3% and the latter at 20%. This implies that in order for responsibilization of the consumer to take place, there needs to be a change throughout the population in regard to awareness. It can be derived that there is no apparent correlation between responsibilization and age, whereby it can be argued that more pressure on companies on behalf of the consumers will come if the demographics become progressively more informed. Our survey had predominantly highly educated respondents, 63.2% had at least a bachelor's degree (Table 6.1), which leads us to assume that there should be a higher degree of familiarity with the implications, yet merely 26% (Fig. 6.9) of respondents were either familiar or very familiar. This can possibly be explained by the lack of exposure to palm oil in the general sustainability debate and labeling options in the Danish food industry.

Figure 6.8 - Age Group Familiarity with Palm Oil Industry Implications



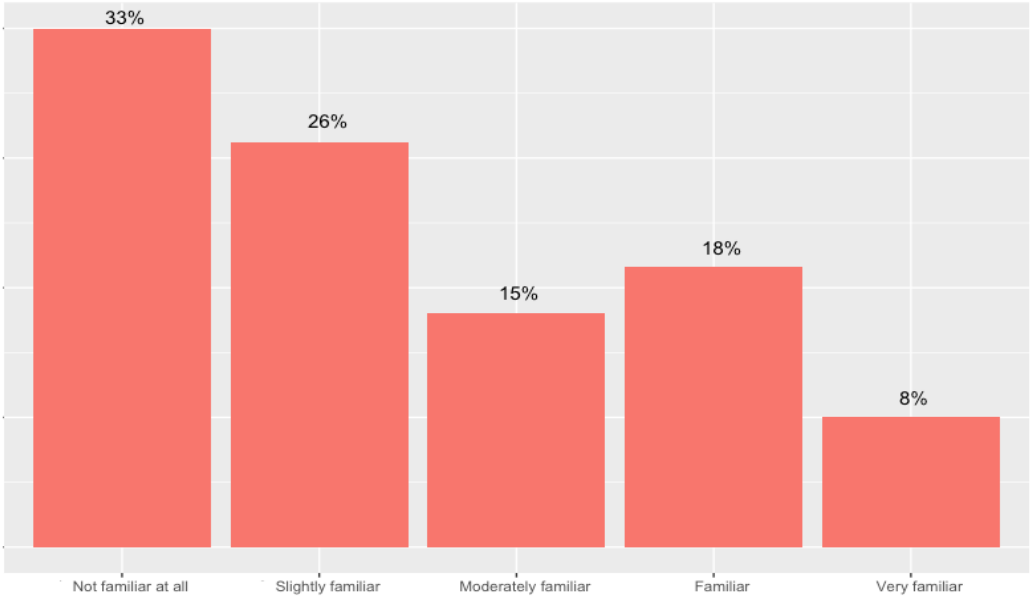
Through knowledge distribution and initiatives that make responsible consumption possible, the P.A.C.T routine theorizes irrational behavior of consumers, if they choose to not adhere to the social conforms of

responsibility. Though, if consumers are not aware of the issues and familiar with the options to make sustainable choices, then it is evident that knowledge of sustainable palm oil is not distributed well enough. Likewise, the interviewees all agree on the sustainable transition being mainly the industry actors' responsibility rather than individual consumers' (Appendix 1-4). So even though some consumers may take responsibility for their actions in terms of palm oil, the palm oil industry has not constituted an easy way for consumers to make self-governed decisions for sustainable palm oil.

6.7. Consumers' Role in Pushing Companies Towards Sustainable Palm Oil

Whilst consumers are considered one of the main driving forces for environmental improvement and are included as important market actors in the product supply chain (Niva & Timonen, 2001), our findings and interviews (Appendix 1-3) suggest that the pressure for change in the palm oil industry primarily comes from an industry level rather than consumer level. This is supported by the noticeably low familiarity with and consideration of RSPO and palm oil implications in our survey. It is evident that companies such as Coop are aware of their positions and responsibility to encourage change in its supply chains (Appendix 1). However, as analyzed in the P.A.C.T routine, companies can do more to make consumers capable of making responsible decisions for palm oil. Hartington states that it is common for Coop to not put certain sustainability labels on products and to not market their approach to palm oil even though it is positive and sustainable (Appendix 1). Hartington states that there are two reasons for this, the first being that the topic is touchy because of the whole "boycott palm oil" discussion, whereby it is easier to not communicate it at all (Appendix 1). Secondly, it is a topic that many consumers are unaware of or have very limited knowledge of, therefore Coop has chosen the sustainable palm oil initiative on its own accord and is making responsible choices for the consumers. Consumers are to an increasing degree becoming more aware of their role but might lack the knowledge and understanding necessary to create actual change, as analyzed through the P.A.C.T routine above. In figure 6.9, it is evident that our data suggests that these tendencies might be a result of a lack of knowledge on the subject rather than a disinterest in palm oil, as most were unfamiliar with the implications of palm oil.

Figure 6.9 - Familiarity Level of the Consequences of the Palm Oil Industry



A third of the people asked were not familiar at all with the implications of the palm oil production, and only 8% were very familiar, which signifies a lack of awareness surrounding the implications of the palm oil industry. It can be assumed that the respondents choosing the options "moderately" or "slightly familiar" are likely only aware of factors such as the harm of deforestation on Orangutans and other wildlife, as these are the consequences most often highlighted by the media. Ultimately, the existing research on modern consumer society illustrates that environmental issues are to an increasing extent becoming an integrated part of consumer behavior (Niva & Timonen, 2001; ITC, 2019). In connection, a study by Giam et al. (2016) found that by informing consumers on the sustainability of palm oil, it is plausible that more demand for sustainable practices in the palm oil industry will occur. Thus, in order for consumers to truly push for change in the palm oil industry, research suggests that it is quintessential that they become more informed. On the contrary, Pedersen (Appendix 3) argues: "*It's hard to get consumers' attention when there are other things that take up more space [in consumers' minds]*". In addition, he states: "*Not many people have time to get acquainted with sustainability labeling and palm oil labeling*" (Appendix 3). However, generating more information on the matter may initiate higher political attention on the subject which may cause a greater impact (Appendix 3).

The consumers' bargaining power which often takes the form of boycotting products is portrayed in the survey where 48% of the respondents state that they have boycotted a company due to its sustainability practices, or the lack thereof (Appendix 5, Q20). Of the respondents who had boycotted companies, 31%

of them had also expressed their disagreement of the practices directly to the company (Appendix 5, Q21). This signifies that the consumers are largely actively contributing to pressuring companies to achieve more sustainable business practices. Meanwhile, of the 52% who had never boycotted a company before, only 8% had expressed their disagreement directly to a company. Thus, it can be derived that there is a correlation between boycotting and confronting companies in our survey sample. Overall, 81% had never expressed their disagreement with a company directly, which showcases the silent discontent of the majority of the survey respondents. This correlates with the findings of Haller et al. (2020) who argue that if a given company is unable to provide the desired sustainable options, the consumer is likely to seek the products from other companies that meet their ethical standards. Rather than providing companies like Coop with wishes for improvement, consumers may take the simpler route of staying silent and, which also correlates with a low PCE of the respondents i.e., that their subjective estimates of making a difference are inferior. When consumers are less likely to take action and voice their disagreement with company practices, it lessens their role in pushing the sustainable transition. Correspondingly, a study by Heiskanen (2005) found that consumers are in great need of environmental information, and that is the consumers' main reason for not making more pro-environmental choices. This alongside other existing research is consistent with our survey results which show that there is a likely correlation between the lack of knowledge of the implications of palm oil and product choice preferences, where palm oil labeling had little effect and there was no obvious consistency in preference for CSPO or palm oil-free products. Therefore, we attribute the results of the choices experiments to other factors than the palm oil related factors (Table 6.3).

Increased information alone does not necessarily solve the problems at hand as there is a gap between consumers' intention and actual behavior when making sustainable choices (Heiskanen, 2005). Our survey findings suggest that consumers are not aware of the impact of palm oil nor are they particularly familiar with RSPO, however we derive that labels can have an effect, as reflected in the high consideration of the Ø-label when grocery shopping (71% consider Ø-label often or every time). The Giam et al. (2016) study found that consumers are much more likely to buy a sustainable alternative if it is readily available, and they are willing to pay a premium price for a sustainable, deforestation free, product (Giam et al., 2016). It is however debatable whether Danish consumers are willing to pay a premium, as 69% of respondents deem price important or very important. Furthermore, Chrintz (Appendix 2) argues that Danish consumers are bargain hunters, which signifies a lower willingness to pay a premium price. This is further supported by the notion that price ranks above SPI (57%) and organic (62%). These findings are supported

by the Weber et al. (2015) study which found that price was by far the most important factor affecting purchasing behavior, closely followed by ecological labeling and green packaging which demonstrated a positive influence on the purchase intention (Weber et al., 2015). The Weber study challenges our findings as we found packaging to be the second least favored product attribute (36%) and our choice tasks indicated that the labeling had very little effect, as seen in the p-values of the Two-Proportion Z-tests (Table 6.3)

6.7.1. Consumers' Stakeholder Salience in Coop

The consumers' role in pushing companies towards a sustainable transition in the palm oil industry can be analyzed through the typology of consumers as a stakeholder to the companies. In the context of Coop, consumers possess an important and vital role for the sustainable choices and practices which Coop implements (Appendix 1). However, consumers are not particularly urgent in pushing for a sustainable agenda when it comes to palm oil; Coop experiences that consumers prioritize other matters that call for more immediate attention at the moment, including food waste and the use of plastic packaging which occupy their minds at the moment (Appendix 1). Accordingly, Hartington says: "*There are many (consumers) who expect that palm oil is solved now, or that now it has been there for so long, so we have to start something new*" (Appendix 1). Hartington states that it is a specific segment of consumers, who are particularly sustainability-conscious that demand action in the area of sustainable palm oil.

Consumers are included in setting the agenda for Coop's sustainability work, as they are invited to panel debates, surveys and focus group interviews, where they can share personal agendas for sustainable focus areas (Appendix 1). Consumers possess some power in terms of providing Coop with ideas for sustainability areas that need to be evaluated in its business, but probably less so in terms of pushing for specific practices. Consumers' ideas for sustainability areas which Coop should focus on, is only considered if Coop grants them legitimacy; this legitimacy can fluctuate depending on whether Coop deem them desirable or appropriate. Coop states that customer inquiries are taken very seriously, and they are granted much legitimacy (Appendix 1). If Coop receives a customer inquiry about a problem with a supplier or something that Coop could improve, it is heavily considered and looked into by Coop (Appendix 1). Consequently, consumers have moderate salience if Coop deems their power and legitimacy to be present. In relation to the Stakeholder Typology model from Mitchell et al. (1997), consumers can thus be categorized as dominant stakeholders in terms of being listened to by Coop (Appendix 9). Nevertheless, their power to actually influence the firm is not a coercive threat, but rather

a utilitarian power of which consumers can decide to not purchase products from Coop anymore. This is a relatively low power move, as the withdrawal of one consumer's monetary support on Coop's business is very insignificant. If a group of consumers withdraws monetary support through boycotting Coop and gets media attention, it can have a more substantial influence on Coop and will thus gain more power. Thus, consumer pressure is only given consideration by Coop if it is deemed to be appropriate or relevant. As a result, if Coop perceives the legitimacy of the consumers' claim to be valid, but the claim does not have influence on Coop in terms of the consumer's power consumers' stakeholder salience may be low. Therefore, consumers can also be categorized as discretionary stakeholders in which they possess the attribute of legitimacy, but they have no power to influence Coop and no urgent claims (Appendix 9). Consequently, the stakeholder salience of consumers depends on the size of the consumer body that is demanding or claiming something from Coop. If there are only a few consumers boycotting Coop, there is no pressure on Coop to engage in an active relationship with a discretionary stakeholder. Though if it is a large body of consumers, they possess more legitimacy and power, and will thus have more salience. Nevertheless, consumers possess different levels of salience depending on the claim and the situation. Some consumers may have some urgency in terms of demanding change from the company, but who are not given the power nor legitimacy to influence the company, whilst others have little urgency but more power in their claims i.e., through larger consumer constellations.

6.8. Sub-conclusion for Part 2

The following seeks to answer the sub-question: "*How is palm oil labeling perceived by consumers?*" and contribute to the answer of the RQ: "*What role do consumers play in achieving sustainable palm oil practices in the Danish food industry?*".

Consumers are undoubtedly an important driver of change in regard to sustainability in general, but not so much in the case of palm oil in the Danish food industry. This may be due to the low familiarity of the industry implications and the incapabilization of making sustainable choices, whereto we found two potential causes. The first concerns the lack of RSPO labeling on the products in the Danish food industry as portrayed by Coop. Secondly, the abundance of labels contribute to the low familiarity of RSPO, as it has been overshadowed by other labels e.g., the Ø-label. Based on our findings of the RSPO and POF label, we derived the perception of palm oil labeling compared to the other labels as mostly indifferent. Correspondingly, the choice experiments showed no notable effect on consumers' choices, as no considerate difference between the treatment groups was visible. We found that a low PCE and personalization of the problem may be a hindrance and thus limits consumer action as they regard companies, suppliers and governments most responsible for sustainable development of the industry. However, more than half of the respondents value sustainably produced ingredients in their decision-making process, which indicates a general preference for sustainable products. Consumers have moderate salience as a stakeholder in Coop, as they are included in setting the sustainability agenda, but they are not particularly urgent in pushing for sustainable palm oil as they deem that there are more important areas to allocate effort to. Coop perceives consumers as legitimate but the power they hold changes depending on the amount of consumers pressuring Coop to pursue sustainable matters, illustrating that the role of the consumer is more significant when these are grouped.

Part 3 - Company Incentives and Sustainable Supply Chains

6.9. Coop's Work with Sustainable Palm Oil

For more than 150 years, the member-owned organization Coop has been conducting its business with consideration of the environment (Coop, 2019a). Coop's CSR strategy involves the vision of being at the forefront as a leader of responsibility which entails driving consumption towards a more sustainable path, informing consumers and minimizing risks (Coop, 2019a). Coop's palm oil ambition only includes using RSPO certified palm oil in products of its own brand, or at least having its private-label products be covered by RSPO credits. As of 2017, Coop managed to ensure that 100% of its own private-label products are covered by RSPO certificates (Coop, 2019a). Whilst this is a testament to Coop's willingness to contribute to better practices in the palm oil supply chain, it only encompasses Coop's private-label products and not the whole product range which leaves room for improvement. According to Hartington, 99.9% of the palm oil that Coop uses for its private-label products is RSPO certified (Appendix 1), through both the mass balance system and segregation meaning that Coop uses both conventional palm oil mixed with certified palm oil and purely certified palm oil (Coop, 2019c). Besides this, Coop has purchased Book and Claim RSPO certificates to cover for the last 0.1% of the products, which are not certified (Coop, n.d.). For these remaining percentages, it is difficult to ensure the use of certified palm oil, due to the small volumes in additives (Appendix 1). RSPO's approach to mixing palm oil can be misleading to consumers, as it is sold as certified mixed palm oil, without any indication of what mixed entails, but that it is under a sustainability certification (Greenpeace, 2021).

According to Hartington (Appendix 1), Coop was initially a bit skeptical of RSPO, due to the bureaucratic requirements. Later on, Coop joined RSPO in order to influence the palm oil industry and to satisfy customer expectations (Appendix 1). Being an RSPO member creates a level of commitment internally in terms of having a more overarching influential agenda towards e.g., procurement managers to comply with the RSPO criteria (Appendix 1). Coop is not solely engaged with sustainable transition of practices through RSPO but also as a member of Concito, DI and DIEH, which all seek to better enable companies to make more responsible choices in relation to how they approach and utilize palm oil in their supply chains. Coop has been awarded the most sustainable consumer goods company three years in a row by the Sustainability Brand Index (Hansen, 2020) until 2021 (SBI, 2021). It is important to note that the Sustainable Brand Index measures how brands are perceived on sustainability, and not the actual level of sustainability operations (SBI, 2021). Subsequently, Coop is perceived as a highly sustainable brand by

Danish consumers. In general, supermarkets are the most positively perceived sustainable brands, and supermarkets are also the industry in which Danish consumers are most aware of sustainability work (SBI, 2021).

According to a report by WWF, Coop's progress in implementing sustainable palm oil practices is evaluated to be "Middle of the pack" i.e., Coop's progress is average, and they do not score full points on the criteria by WWF (WWF, 2020). Coop gets points deducted as its palm oil commitment only applies to the company brand, not the entire corporate group and because it does not have a deforestation and conversion-free supplier policy, nor does Coop require its suppliers to trace palm oil back to palm oil producers (WWF, 2019). WWF states that Coop is lacking the most in terms of taking action outside its own supply chain, e.g. by joining action-oriented platforms such as POIG and by making on-the-ground investments (WWF, 2019). These are all indications of how, even though Coop is perceived to be sustainable by the consumers, it is quite evidently lacking from an NGO perspective. Accordingly, Hartington states that Coop works with NGOs both to get professional input, but also to get ideas for what it can do better: "*NGOs are such good watchdogs in relation to always being critical of what we do*" (Appendix 1). This illustrates that the lack of consumer familiarity with the palm oil implications as well as the RSPO label as illustrated in our findings, may have allowed Coop to engage less so with its palm oil issues than other sustainability concerns as there is no severe consumer pressure.

Coop states in its ACOP to RSPO that the company is experiencing obstacles in relation to the reputation of palm oil and simultaneously the reputation of RSPO in the market (Coop, 2019c). It can be derived from our survey that palm oil does in fact have a poor reputation as respondents deemed RSPO and POF significantly less trustworthy than the other labels and the respondents preferred the product without palm oil two out of three times in the choice experiments. Hartington says that there is simply not room for more sustainability labels on the packaging and that it will only overwhelm and confuse the consumer rather than aid them in making conscious, responsible decisions (Appendix 1). Accordingly, Thøgersen (2000) states that even if consumers know and trust a sustainability label, they will not use it in the decision-making process, if they do not notice it due to information overload. This indicates that Coop's approach benefits the consumer's ability to make sustainability related decisions in relation to other topics, e.g., organic production or Fairtrade, as these are not being overshadowed by too many other labels. Ultimately, this approach does not particularly benefit the palm oil industry, nor does it enable the

consumer to pressure companies in relation to improving palm oil practices, but it benefits other important areas of sustainability.

6.10. Implications of Sustainability Demands on Company Competitiveness

Ensuring that sustainability demands are actually adhered to is dependent on compliance throughout the supply chain, as SSCM becomes an increasingly more important strategic factor (Andersen & Skjoett-Larsen, 2009). For a company such as Coop, SSCM is an essential part of the strategy as it to a certain extent can be classified as competing on having the most efficient supply chains which are simultaneously deemed sustainable. This is based on the notion that prices in the Danish supermarkets are quite similar and product variations are insignificant, with only each individual supermarket's own label being the differentiating factor. Whilst supermarkets in Denmark can be categorized into different segments, the two primary competitors on the market are Coop and Salling Group, who both own several chains that target the same segments of the market. Thus, it can be argued that the company's ability to establish close and long-term relationships with suppliers and other strategic partners is a factor of great importance in creating a competitive advantage (Andersen & Skjoett-Larsen, 2009), especially when considering the lack of other parameters to compete on.

Hartington states that focusing on sustainable palm oil practices and implementing certified sustainable palm oil in Coop's business does not provide a competitive advantage in the Danish food industry (Appendix 1). It is not an act of differentiation in accordance with Michael Porter's competitive strategy framework, but rather a compliance to the industry standards that is necessary to stay relevant. If a given Danish supermarket chooses not to work towards implementing sustainable palm oil, it will fall behind and lose its competitiveness (Appendix 1). Therefore, sustainable palm oil practices will not grant a competitive advantage, because it is looked upon as the norm or a minimum requirement and establishes companies' license to operate in the market (Appendix 1). In fact, Hartington says: "*It [sustainable palm oil] is not a competitive parameter anymore, as the most of - we might as well say all supermarkets in Denmark - are roughly at the same level*" (Appendix 1). Nevertheless, Coop still includes its goals and objectives of the use of palm oil in its CSR report every year, which illustrates that it is still an important parameter in terms of its overall sustainability strategy (Appendix 1). Areas such as food waste and packaging are areas where Coop is better able to differentiate itself and gain competitive advantage in relation to its sustainability strategy (Appendix 1). Accordingly, Pedersen (Appendix 3) states that if minimum requirements are implemented for e.g., companies dealing with palm oil such as supermarkets,

it will elevate the bar for who can be part of the competitive environment for supermarkets' stance on palm oil. This will push companies to source more sustainable palm oil in order to keep up with their competitors (Appendix 3). This indicates that it is not directly possible to obtain a sustainable competitive advantage through implementing sustainable practices in the palm oil supply chain. However, it may add to the competitiveness that rests on a competitive advantage established on the base of a broader, sustainable business model where more far-reaching sustainable practices are integrated throughout, including palm oil. Ultimately, sustainable palm oil practices may have been an opportunity for companies to gain a competitive advantage through differentiation when the issues first came to the public's eye. Accordingly, as established in the literature review, there is an economic incentive to use CSPO, as the consumer price premium exceeds the average premium paid to growers of segregated certified sustainable palm oil (Giam et al., 2016). Consequently, using CSPO does not result in a competitive advantage based on a cost leadership advantage, as there is no proof nor current research that supports a cost leadership would be obtainable by implementing sustainable palm oil practices in the supply chain.

All Danish supermarkets have implemented the RSPO certification scheme (Kørner, 2019), which indicates that the RSPO certification scheme itself can only contribute to overall competitiveness. In terms of displaying the RSPO label on products, Chrintz (Appendix 2) argues that it is better for companies to not display it on products as consumers are likely to refrain from purchasing due to the palm oil content. Hence, stating the use of CSPO can create a disadvantage, wherefore it is better not to mention palm oil on the product (Appendix 2). This supports our survey findings, where only 3.7% of respondents considered the RSPO label often (2.4%), or every time (1.3%) they go grocery shopping, and only 5.6% deemed RSPO very trustworthy, and with the POF only 5.3% deemed it very trustworthy as compared to 80% of respondents deeming the Ø-label very trustworthy. So, whilst CSPO may be a valuable resource for companies, it is not a rare resource, thus it does not provide sustainable competitive advantage either. Nonetheless, CSPO is a contributing factor to companies' long-term success, as implementing sustainable practices into the supply chain may lead to economic viability (Yang et al., 2017; Beske-Janssen et al., 2015).

6.10.1. A Triple Bottom Line Approach to Enhance Sustainability

When assessing Coop's CSR and annual reports, a clear indication of the three bottom lines is visible, where Coop uses it as an accounting tool (Elkington, 2018). Coop's economic bottom line entails accounting for its profit and loss account, balance sheet and recognized losses and gains in the financial

state of the company (Coop, 2019b). The economic bottom line is influenced by the palm oil agenda, as compliance with RSPO P&C principle 1, 2 and 3 also contributes to a competitive, resilient and sustainable sector, as the principles build on economic prosperity (RSPO, 2018). In the latest annual report from 2019, it is evident that the economic bottom line is stable, as Coop states a surplus of DKK 262m (Coop, 2019b). For Coop to maintain a surplus on its economic bottom line, it is, according to Hartington (Appendix 1) reliant on the palm oil content in its products, as many foods require or benefit from palm oil due to its stability and versatility. As of now, palm oil is the only economically viable alternative for use in certain applications as many of the substitutes available to replace palm oil suffer from high price volatility, lower yields, require more fertilizer and are less available, which further incentivizes the continued use of palm oil (Gesteiro et al., 2019). Therefore, should Coop decide to ban palm oil from its products, assuming palm oil cultivation practices remain as they are at the time of writing, it would most likely have negative implications for its economic bottom line. Here Hartington (Appendix 1) states that Coop will never ban palm oil but is trying to find ways to decrease the amount of palm oil used. This emphasizes that palm oil is a necessary commodity in the Danish food industry and alternative solutions to banning palm oil must be found and implemented in order to uphold financial stability and secure sustainability in both ends of the palm oil supply chain.

In regard to the social bottom line, Coop has in the most recent CSR report listed the following areas: Social and employee conditions, equality and diversity, anti-corruption and bribery, human rights, protection of personal data, and health (Coop, 2019a). Within these areas, Coop has established goals for how they should be obtained. As an example in the human rights area, Coop has a goal of conducting responsible supplier management, and its objective is that a minimum of 95% of its suppliers for its private-label products live up to Coop's code of conduct; in 2019 the goal was 80% completed for food products, and 90% for non-food products (Coop, 2019a). This is implicitly tied to the palm oil industry where social impacts are of great concern and an important yet lacking part of conducting sustainable palm oil practices e.g., opposing land grabbing and child labor. Accounting for social aspects aims to assess the impact the company has on people inside and outside the company (Elkington, 1998). By complying with RSPO P&C, companies contribute to the principle 4, 5 and 6, which make a positive impact for people involved in palm oil production, including sustainable livelihood and poverty reduction. Consequently, if Coop complies with all the principles and seeks to spread the use of RSPO certified palm oil, it contributes to Coop's social bottom line which has positive implications for the company's image and public perception.

Coop's environmental bottom line includes reporting on environment and climate specific areas. The company's CSR report includes environmental aspects which focuses on improving e.g., food waste, packaging and use of palm oil. Thus, Coop is attempting to optimize its business procedures to inflict as little harm on the natural capital of the world as possible. However, in order to assess whether the natural capital is affected by Coop's operations, more actions are necessary to account for the impacts of their palm oil related activities. Coop only has internal policies on the use of palm oil for its own private-labeled products to be RSPO certified, and not on all products. Hence, there is potential to create an even larger surplus on the environmental bottom line by extending the palm oil policy to all products. On this matter, Hartington (Appendix 1) emphasizes that it is extremely difficult to monitor the process of all product suppliers and their use of palm oil due to the complexity of the Danish food industry's supply chains. The heightened requirements for the suppliers of Coop's private-label products often have an impact on the suppliers for other product labels, as the same suppliers are often utilized by several actors in the food industry (Appendix 1). Therefore, when companies like Coop challenge their supply chains through more demanding requirements, a new degree of pressure is introduced (Elkington, 1998). As a result of complying with RSPO P&C, companies can contribute to principle 7 of conserving, protecting and enhancing ecosystems and the environment (RSPO, 2018), which thus can have a positive impact on the environmental bottom line for companies.

The task of reporting the company progress on sustainability has been made easier with international standards (Elkington, 1998) such as RSPO by providing frameworks, guidelines and a comprehensive progress reporting tool. By complying with the internationally recognized RSPO standards Coop gains legitimacy on its triple bottom line. The three pillars of economic, social and environmental aspects all impact Coop's profit, as portrayed by Coop's reports where it is evident that the sale of sustainably produced products increased further in 2019, illustrating a trend towards consumer preference for sustainable products. This showcases how consumers move toward and in some cases demand ethical products and providers. Furthermore, the importance of Coop's consideration to all three bottom lines is highlighted, alongside the notion that solely focusing on creating a profit without considering the means, i.e. social and environmental concerns, is no longer a viable strategy in the Danish food industry. This is opposed by traditional neoclassical thoughts and profit maximization theory which disagrees and instead believes that all resources spent on legal, ethical and philanthropic purposes detracts from profitability (Carroll, 2016). Similar findings were derived in a study conducted by Baden et al. (2008) who found it plausible that economic interest will always prevail over environmental interest. On the other hand,

Carroll (2016) states that this is not necessarily true. In recent times, it has been the emergent view that CSR activities can and do provide businesses with a favorable market position and economic rewards (Carroll, 2016), as evident in the case of Coop. This can be derived from the observation that incorporating sustainability into business practices has become the primary interests of many stakeholders. These views are supported by our findings where respondents stated that organic (62%) and sustainably sourced ingredients (57%) were important or very important criteria in their food purchases. The lowest ranking criteria, brand (32%) and package design (36.5%), further emphasizes that consumers are valuing sustainable factors above more aesthetically oriented product attributes. This illustrates that the consumers expect the Danish food industry to carry out sustainable conducts. It can be stipulated that the consumers demand sustainability throughout the supply chain as the value lies not only with taste (98%) and price (69%) but also with factors further down the supply chain i.e., SPI. Correspondingly, the majority of the respondents in the survey stated that companies are most responsible for enhancing sustainability in the palm oil industry (89% of respondents answered strongly agree or somewhat agree) and suppliers were deemed second-most responsible (82%) (Appendix 5, Q18). Therefore, in line with stakeholder theory, staying competitive in the Danish food industry can be argued to be less simplistic than previously, as corporate sustainability has become an integral requirement for survival in many industries, particularly in the Western society.

Most SSCM models have the TBL as the common denominator as it proposes that a company's success and long-term viability must be measured by its social and environmental performance alongside its financial performance (Schulz et al., 2016). The consumer preference for ethical, sustainable businesses illustrates a significant incentive for companies such as Coop to invest and truly engage in ambitious CSR practices through measures such as further elaborating on the TBL and integrating SSCM. One of the more considerable risks and thus incentives for engaging in CSR and sustainability practices is that of either expulsion from supply chains or being deselected by consumers (Baden et al., 2008). As the findings from the survey show, 48% of the respondents have boycotted companies due to poor sustainability performance, which indicates that consumers are willing to take a stand against unethical or conservative companies and potentially boycott these, if they deem sustainability practices to be incompatible with the individual's standards. According to Seuring & Müller (2008), consumers boycotting and reporting on environmental and social problems in companies' supply chains is a big threat to companies, as it can result in bad publicity and a poor reputation. Correspondingly, research suggests that stakeholder approval is a catalyst for firms to address sustainability, which in combination with customer preferences

and the long-term orientation of the firm and supply chain rationalization illustrates that the positive outcomes of sustainability integration is manifold (Schulz et al., 2016). However, there are a vast range of inhibitors, such as pricing pressure, product nature, labor intensity, supply chain complexity and power distribution across the supply chain that are likely to restrict sustainability consideration and integration (Schulz et al., 2016).

6.11. Approach to a More Sustainable Supply Chain

With all tiers of the supply chain being pressured by regulators, consumers, NGOs, and other stakeholders to provide evidence of sustainable business practices, it is inevitable that a more sustainable approach to SCM is quintessential (Foerstl et al., 2015). Consumers are of great importance as their verdict on the management of the supply chain sustainability operations will justify their acceptance and purchase of the products (Seuring & Müller, 2008). We have no evidence suggesting that the consumers consider the sustainability of the supply chain for each product they purchase. However, our survey findings suggest that the consumer does so indirectly by valuing and basing decisions on criteria such as organic or SPI, by considering e.g., the Ø-label (Fig. 6.2) or by boycotting brands that i.e., contributes to land grabbing or child labor.

The complexity of supply chain management increases as sustainability requirements are incorporated. As elaborated earlier, critics argue that supply chain standards in the palm oil industry are too low which can be attributed to the difficulties involved in managing global supply chains to agreeable standards (Appendix 3), whilst navigating the tiers of the supply chain where transparency is lacking (Meixell et al., 2014). Many stakeholders (Appendix 1-4) advocate for more regulation as a way of engaging sustainability, as it often induces compliance and results in a level playing field, however it is also widely recognized that it entails more bureaucracy which inevitably involves heavy costs (Baden et al., 2008). According to survey respondents, 71% deem the government responsible for enhancing sustainability in the palm oil industry. This signifies that more action and perhaps also regulation is preferred, at least by the survey respondents. For a company with resources like those of Coop, adapting to more and stricter regulation is more manageable than less resourceful SMEs. So, whilst there from certain stakeholders is a wish for more regulation (Appendix 1-4), the European Commission has stated that regulation would compromise the voluntary basis of CSR and thus risk stifling innovation and creativity (Baden et al., 2008). This is also indicated by Chrintz who says, "*You also have the problem that there is not super much innovation in the food industry*" (Appendix 2). An important part of enhancing sustainability is often that

of innovation and entrepreneurship, where it can be argued that a cornerstone to much entrepreneurship has become that of sustainability, where the sustainable entrepreneur seeks to manage the TBL and thus bring positive potential for both society and environment (Kuckertz, et al., 2009).

Consumers do not have particularly high salience in the palm oil industry nor are they particularly active (Fig. 6.2), thus the reliance on a proactive and stringent certification scheme is necessary. Certifications work as consumers' beacon for navigating the jungle of sustainability labels. Therefore, sustainability labels can contribute to higher PCE as it provides consumers with a tool that increases the transparency of the process of purchasing from the company with a more proactive sustainability strategy. The use of third-party certification schemes such as RSPO contributes to sustainable management practices within the palm oil supply chain - that is if the current RSPO requirements are proactive enough. Therefore, downstream suppliers must ensure compliance within the upstream part of the supply chain through monitoring and safeguarding of CSR practices. Shortening the supply chain would relieve some of the sustainability related challenges (Alghababsheh et al., 2018), but it simply is not a profitable nor sensible approach to take to SCM for a company such as Coop whose entire profitability and competitiveness rests on its many global supply chains. A noticeable incentive for companies to integrate sustainable palm oil practices is to avoid the very real risk of ending up with stranded assets as a result of stakeholder pressure. Retailers such as those in the Danish food industry rely heavily on palm oil in a majority of their products and will thus be affected by changes throughout the supply chain i.e., environmental and economic risks which can be of both internal and external nature. This is further indicative of the notion that a comprehensive sustainability approach to palm oil is a prerequisite for ensuring long-term viability as pressure on the companies to change their ways increases.

6.11.1. Consumer and Industry Pressure Effects on Due Diligence

The process of implementing SSCM and thus integrating sustainability into palm oil supply chains is complex due to the dispersed geography, many uses of palm oil and the involvement of various global actors in the production and consumption of palm oil (Kasim et al., 2020). Accordingly, Coop emphasizes the difficulty of managing the entire palm oil supply chain (Appendix 1). The task of tracing palm oil back to the specific mill, which is a new criterion from RSPO, is a nearly impossible job for Coop, as it has many different both national and global brands in its stores and not just private labels. This plays into ensuring SPI in products which we found to be a particularly important criterion for our survey respondents. It is never Coop itself that is responsible for the production, as it uses suppliers to manufacture its products

(Appendix 1). Thus, the work with integrating sustainability standards lies at the suppliers' disposal, and Coop merely receives status updates (Appendix 1). Therefore, it is difficult to ensure that consumer demands are integrated into the supply chain, as the upstream suppliers do not have significant interest in the retailer's business nor reputation (Villena & Gioia, 2020). The palm oil producers are smallholder farmers and mills who are often not in the visual range of the public; therefore, their reputation and dependence on first-tier suppliers is very limited (Foerstl et al., 2015). It is the retailer's drive to develop strategies that changes the behavior of the suppliers, as the retailer is the one facing public criticism (Nikoloyuk et al., 2010). Ensuring compliance is a challenge for Coop, and most likely the majority of other companies partaking in the industry, as there are a lot of reputational risks associated herewith which can arise from the unsustainable practices of suppliers throughout the supply chain (Alghababsheh et al., 2018). Because consumers are valuing sustainability and overall ethical behavior (Appendix 5, Q13), it is quintessential that Coop can provide insurance of sustainability. Coop states that it is experiencing a slight increase in inquiries concerning the company's use of palm oil and involvement in the industry (Appendix 1), which indicates a potential shift in consumer awareness that could lead to consumers further pushing companies to improve their business practices throughout their supply chains. Accordingly, the consumers are notably distanced from the production and palm oil acts as just one of many components in food products, which might explain why there is not much pressure from the consumers as compared to other sustainability initiatives, such as organic sourcing or food waste. Our survey findings further support this with 89% of respondents strongly (59%) or somewhat agreeing (30%) to the statement that it is the responsibility of the company from which they purchase their products to enhance the sustainability in the palm oil industry.

By monitoring suppliers and conducting due diligence, it is possible to lessen the likelihood of sustainability breaches and initiate cooperation with the suppliers. However, in many cases the regulatory requirements are absent or indirect (Nikoloyuk et al., 2010), or perhaps not enforced at all in the country in which the supplier is located (Villena & Gioia, 2020). Therefore, it is often up to companies to self-regulate and enter institutionalised third-party governance structures. This is also the case with RSPO, as it is a voluntary partnered governance structure, in which companies and industry actors establish a license to operate by self-regulating within the palm oil supply chain, and receiving endorsement from stakeholders (Nikoloyuk et al., 2010). One way Coop conducts due diligence is by practicing supply chain pressure, however it only does so on the suppliers of its own branded products, (Appendix 1). Some research suggests that enforcing CSR through supply chain pressure e.g., RSPO criteria may be

counterproductive, and that regulation should come from a more supranational level (Baden et al., 2008; Appendix 4). Thus, specifying criteria through the RSPO framework is one way of trying to ensure that suppliers live up to the expectations of Coop, however, there is little evidence that such an approach is successful in the long term (Baden et al., 2008).

SSCM can be utilized to address shifting consumer behavior in terms of demanding sustainably and ethically sourced goods. The purpose of increasing sustainability in supply chains is to start a cascade of compliance to standards and sustainable practices that flows throughout the supply chain (Villena & Gioia, 2020). To counteract suppliers' lack of incentive to comply with requirements, Coop could include both first tier and lower-tier suppliers in its sustainability programs. By being part of RSPO and many other sustainability initiatives, Coop adopts a collective approach of developing industry-wide sustainability standards. Due to the extensive supply chain network and the many tiers, it is necessary that companies like Coop engage in larger collective systems like RSPO, which can create cascading effects in the palm oil supply chain network. By emphasizing the importance of all three bottom lines throughout the supply chain, and by creating incentives for the supplier networks to pursue sustainability goals, companies can do more to secure a sustainable supply chain (Villena & Gioia, 2020). Additionally, it is important to consider suppliers' capacity, monitor indicators of the sustainability performance and engage with the suppliers in projects that ensure continuous improvement (Villena & Gioia, 2020).

6.11.2. Influence and Integration of Consumer Demands in SCM

According to Foerstl et al. (2015), regulation and stakeholder demands on sustainability issues often leads to companies pursuing sustainability standards and certifications. By achieving certification on business practices, companies gain credibility which works as an enabler for consumers to trust that the company's operations are ethical and sustainable. As analyzed in section 6.2, there is a general tendency for the survey respondents to trust or be neutral to the trustworthiness of certification schemes rather than distrust them. However, as previously established, the amount of standards and certifications aimed at governing the environmental and social practices of companies today is steadily rising, putting pressure on the supply chain management in terms of requirements for compliance. The pressure on companies to address and implement more ethical and sustainable business practices comes both from a consumer perspective and from NGOs and other industry actors. Coop's supply chain is an obvious example of the pressure for companies to engage with NGOs and certification schemes, as they are part of UNGC, DIEH and Amfori, is Baltic Control Certified, have made all its stores energy certified under the ISO 50001

standard and commits to 14 different certifications e.g., Ø-label, EU Ecolabel, UTZ, FSC etc. (Coop, 2019a). This is a testament to the importance of certifications schemes in today's supply chains.

Existing research indicates that many supply chains are currently based solely on a compliance approach to sustainability rather than commitment (Foerstl et al., 2015). Whether these certifications are actually improving standards in the supply chains is uncertain, especially when considering that the mean of respondents stating that they never consider any of the sustainability labels presented in the survey is 48%. Ultimately, these certifications, regardless of their actual impact, is a way for consumers to contribute to change by voicing their opinions. Yet, our findings showed that only 19% of respondents had ever directly expressed their disagreements to a given company on specific, disagreeable behavior. This aids in verifying Pedersen's (Appendix 3) argument that consumers are not demanding more sustainable palm oil directly, as they rarely voice their opinions so explicitly. This is also visible in the results of the choice experiments, as the palm oil labeling had no obvious effect on consumers' decisions which can entail that there is no significant demand for sustainable palm oil (Table 6.2). Hereto, Hartington states (Appendix 1) "*My impression is that it is a rather specific [customer] segment that is both sustainably conscious and that is interested in it [sustainable palm oil]*", and that sustainable palm oil is not a topic that captures the average consumer's attention (Appendix 1).

As of now, supermarkets are making decisions regarding palm oil on behalf of the consumers by creating policies for the use of palm oil in their private-label products (Appendix 1 and 3). According to Hartington (Appendix 1), consumers expect supermarkets to behave ethically and source sustainably and thus they can relinquish some of their own responsibility. Though in terms of the non-private label products, Coop is currently not setting any requirements to the suppliers to use CSPO (Appendix 1). According to Pedersen (Appendix 3), either more private-label products or more requirements for the rest of the product line is necessary in order to push the sustainable transition for palm oil. Every step companies take are helping raise the bar for the rest of the market (Appendix 3). On the other hand, Pedersen states that in order to really push the industry towards more sustainable business practices, action is needed from a supranational, European level rather than the micro-level that Danish consumers in the food industry may push (Appendix 3). Our survey found that the media (63%) was the most influential actor in terms of affecting purchasing decisions next to friends/family (61%). Thus, the use of information campaigns may influence the consumers towards an agenda on sustainability for palm oil, but as a single ingredient, it is rather unlikely that consumers will influence sustainability in the palm oil industry (Appendix 3). Here it is

easier to advocate for replacing meat with plants in relation to the impact on the environment, as it is more concrete and not as complicated as palm oil (Appendix 3). Correspondingly, Chrintz (Appendix 2) states that supermarkets have a responsibility in terms of not promoting unsustainable products. Danish consumers are bargain hunters and are enticed by a good offer (Appendix 2). Therefore, if supermarkets increasingly promote more sustainable food products, it can potentially have a positive impact on consumers' purchases and consumption patterns. In comparison with the cosmetics and feed industry, the food industry has progressed most in terms of implementing CSPO (Appendix 3). An important consideration to be made in regard to the increasing sustainability standards and certifications schemes is that whilst they may satisfy the consumer, they can represent barriers for poorer producers in the global supply chains as these are likely not able to upgrade their business practices to meet the demanding requirements (Perez-Aleman et al., 2008). Particularly within the palm oil industry, which is concentrated in the poorer regions of the world such as Indonesia, Malaysia and South American countries, it might be a challenge for the small-scale farmers to comply, who make up a significant amount of suppliers in the industry (Euromonitor, 2018).

6.13. Sub-conclusion for Part 3

The following sub-conclusion seeks to answer the sub-question "What incentives do companies have in regard to changing to sustainable palm oil practices in the Danish food industry?"

The Danish food industry is undeniably subject to the pressure of sustainable development from both industry actors and consumers alike, which has created both incentives and challenges for the companies. We can derive from our survey findings that the vast majority of consumers agree it is the responsibility of companies to enhance the sustainability in the palm oil industry rather than consumers. Incentivizing sustainable palm oil practices is based on a demand for more ethical business behavior and sustainable sourcing from consumers, NGOs and industry actors alike. Whilst the consumer demand for sustainable palm oil is not particularly pressing, most likely due to a lack of awareness, there is still a general demand for sustainably produced ingredients, which combined with NGOs acting as watchdogs, creates incentives for companies in the Danish food industry to act. This has resulted in it being necessary for companies like Coop to include sustainable palm oil practices in the supply chain in order to stay competitive in the Danish food industry. Yet, conducting sustainable palm oil practices does not provide a competitive advantage, but is rather seen as a minimum requirement for gaining a license to operate. We found that integrating sustainable palm oil practices has a positive influence on Coop's TBL. Furthermore, findings suggest that integrating SSCM is a beneficial tool to ensure long-term viability by considering both economic, social and environmental performance. Ultimately, this illustrates a significant incentive for companies such as Coop to invest and truly engage in ambitious CSR practices through measures such as integrating SSCM.

7. Discussion

The three components of the findings chapter all have the consumer as the common denominator and are tied together by seeking to uncover what role the consumer plays in regard to transitioning towards more sustainable palm oil practices in the Danish food industry. Furthermore, the components are tied together through the recurring focus on certification schemes and labels, and the effects that these have both on sustainability, consumers and companies. The three parts contribute to answering the RQ with different perspectives, yet they also complement each other, as in order to understand company incentives and the effects of labeling, a deeper analysis of the consumer and buying behavior is necessary. Hence, part 1 acts as a bridge for part 2 by establishing the playing field of palm oil certifications, particularly RSPO, as well as the consumer perception of labeling. By understanding how RSPO works and is perceived in the Danish food industry, part 2 focuses on whether consumers can drive the sustainable palm oil agenda by using labeling as tools and what their role in ensuring a sustainable transition is. Part 1 and 2 then acts as a bridge to part 3 by creating the necessary background research and analysis to establish an understanding of the motives and reasoning behind the companies' work with sustainable palm oil practices. In order to uncover the incentives for companies to implement sustainable palm oil practices, a pre-existing understanding of the consumer's role as well as the functioning of the palm oil industry is a prerequisite. Thus, the answering of the RQ would be significantly less nuanced if one of the three components were to be discarded. However, additional perspectives on achieving sustainable palm oil practices are manifold, and the apparent lack of consumer demand and pressure on companies is not the sole problem of the palm oil industry; many different aspects are necessary to consider to achieve a sustainable transition within the industry.

7.1. Can Palm Oil Ever Be Truly Sustainable?

First and foremost, it should be contemplated what characterizes sustainable palm oil practices. Some will argue that these entail certification schemes and an active ownership approach, such as the one presented by Coop (Appendix 1), however these can also be argued to entail more rigid measures such as sanctions and complete bans. Due to the poor reputation of palm oil and massive critique of the RSPO certification scheme, the option of excluding palm oil entirely seems increasingly attractive. Albertsen (Appendix 4) suggests that it is not plausible that palm oil practices can in fact become sustainable, therefore one could argue that by boycotting palm oil one is being as sustainable as possible considering the circumstances. However, according to Hinkes & Christoph-Schulz (2019), the strategic decision to bet

on palm oil-free products might also prove to be problematic, when considering the high efficiency and yield of palm oil. As mentioned by all interviewees (Appendix 1-4), the solution to the sustainability challenges in the palm oil industry is not to substitute palm oil with alternative oils. One of the most prominent challenges we identified is that of potentially substituting palm oil entirely, which is some companies' solutions to the poor perception of palm oil. Here Chrintz especially emphasizes that alternative oils will only worsen the problems, as palm oil is simply the most efficient oil production as of now (Appendix 2). Likewise, life cycle analysis studies show that substituting palm for e.g. peanut oil, rapeseed oil or, even worse, animal fats, is significantly more environmentally destructive in terms of land use (Schmidt, 2014). Though in terms of global warming, rapeseed oil and sunflower oil are the best performing oils (Schmidt, 2014). Schmidt's study (2014) on LCA of vegetable oils was commissioned by RSPO which questions its credibility as the outcome is most likely construed to benefit the industry. This is not to say that the study holds no truth but rather that solutions may have been sought in a scenario where palm oil remains.

Therefore, transforming the industry and plantations through sustainability programs or innovating an entirely new substitute may be the best possible alternative to current practices (Schmidt, 2010). Sustainable plantations should promote economic growth, respect for human rights and workers, and conserve the natural resources whilst avoiding overexploitation to ensure responsible production now and in the future (Gesteiro et al., 2019). This however is unlikely to be achieved with the current practices and governing bodies, where the certification schemes simply are not ambitious nor stringent enough combined with an overarching lack of involvement from governments (Appendix 1-4). To make progress towards more sustainable palm oil practices, companies need reliable data coupled with sustainability targets and goals as well as incentives from not only the consumers but also governing bodies.

There is no obvious indication that banning palm oil altogether is a sustainable business practice, as it is highly likely that a less lucrative and more ineffective yielding alternative will take its place or simply the quality of the product will deteriorate. Coop experienced this when it tried to replace palm oil in tortillas, and this failed in terms of maintaining the product quality (Appendix 1). It should be noted that there is no obvious indication that sustainable business practices are fostered and upheld by following certification schemes such as RSPO. Thus, neither approach can be categorized as truly sustainable as both entail spillover effects that will only result in worsening of other factors along the supply chains, which disables sustainable palm oil conduct. It is however possible to transition to more sustainable

practices which could reduce the negative impacts, although this is likely not to the extent necessary. It should still be stipulated that perhaps the solution for the food industry lies with an overall removal of palm oil from a majority of the products where it is not an essential component e.g., in peanut butter. Whilst our interviews point to the necessity of palm oil, our survey findings, particularly the choice experiments, suggest that consumers prefer the product without palm oil, indicating a partial preference for banning or at least removing the majority of palm oil. However, the consumers' familiarity with the complexity of palm oil production and utilization is not extensive which takes away some of the nuance of the "keep or ban" discussion. In addition, we do not have detailed data on the reasoning behind the consumers' choices in the experiments, and thus we have to assume that perhaps the palm oil component had no or little influence on their product choices. The sheer amount of products in which palm oil is an ingredient makes it rather difficult for the consumer to actively ban palm oil on their own accord, as Albertsen (Appendix 4) states: "*I have tried to live palm oil-free and I have given up, so it's just like...yes, you try to do it for 3 months, but then you are just like: alright, okay*". We postulate that the lack of transparency in ingredients lists and labeling acts as a prominent hindrance in enabling consumers in the Danish food industry to utilize their role in the palm oil debate.

Ultimately, we found no indication that boycotting is a truly sustainable solution as our interviewees point out that the products that ban palm oil are likely to use other sources of fat (Appendix 1-3). The majority of the studies concerning palm oil practices and SCM of palm oil included, support the views of our interviewees and thus point out that banning palm oil is not the solution. Moreover, according to Albertsen (Appendix 4), there is no such thing as sustainable palm oil and Chrintz adds that regarding RSPO certified palm oil as sustainable is wrongful (Appendix 2). According to Albertsen (Appendix 4), the only way to have sustainable palm oil is if a food retailer like Coop, visits the smallholder palm oil producer itself and ensures that production is done under responsible circumstances (Appendix 4). It is easy to conclude that this is not a possibility in any case as the resources needed to ensure that type of compliance with the amount of palm oil needed is far too costly for any given company.

Whilst it is plausible that banning palm oil altogether is a poor decision in the long term, many of the studies that support this claim have been funded by large palm oil industry actors. Being aware of who funds the research stating that palm oil is the most sustainable choice is important as the research is likely biased. Interestingly, the founding members of RSPO are also major industry actors. This includes Unilever, MPOA, etc. (RSPO, n.d.-a). Naturally, these companies have an interest in keeping prices stable

and production going rather than having to resort to alternatives that require extensive remodeling of the business operations and investments in new production mechanisms. It is obvious that the involved industry actors want to advocate the industry in order to keep the business frugal and avoid ending up with stranded assets. According to Albertsen (Appendix 4), the certification of sustainable palm oil is just for show. There is no hard evidence that this is true, but the hypothesis also cannot be rejected, therefore it should be kept in mind that the RSPO certification scheme is to a certain extent, potentially just another case of greenwashing in a world that demands sustainability but lacks transparency.

Coop has evidently chosen the certification path to sustainability, whereas the English supermarket Iceland decided to boycott palm oil on its private-label products whereto they made a political commercial with Greenpeace which appealed highly to people's emotions. However, as Hartington (Appendix 1) states, this is an easy way for companies to create goodwill for their brand to counteract the reputation of palm oil. Iceland has since been accused of not following through, as palm oil has been found in some of its private-label products (Mackay, 2019). Not being able to follow through on promises that have been marketed, as in the case of Iceland, has a backlashing effect on the company's reputation, which indicates that perhaps the safer approach is Coop's where they keep the consumers out of the equation to avoid reputational risks. This again raises the question as to whether it is even possible to conduct sustainable palm oil practices. It is not far reaching to postulate that there will likely always be some negative implications of the cultivation of palm oil, particularly if the demand remains at its current level and consumer awareness remains low. Certification schemes such as RSPO are contributing to, if nothing else, raising awareness of the issues related to palm oil. Yet, we found little awareness of either RSPO or the implications of the palm oil industry in our survey. This however can be attributed to Danish food industry not utilizing the RSPO label on their products even if they are certified (Appendix 1). Some argue that it does not make sense for the consumer to buy sustainably certified palm oil, as it is the amount of palm oil produced that is the actual problem (Forbrugerrådet Tænk, 2018; Appendix 2). This remark adds another layer to the discussion and further questions the legitimacy of certifications, as they do not promote less usage, only better cultivation.

Ultimately, the current approaches to transitioning towards sustainable palm oil do not appear to be particularly sustainable nor lucrative in the long-term, which thus leads us to believe that innovation in the field is necessary. Innovation has time and time again proven to be the solution to environmental and other sustainability issues e.g., renewable energy and biodegradable alternatives to plastic. However, by

introducing new innovative approaches and practices that can potentially remove the need for palm oil or any other type of oil in most products, the effects on the local economies of especially Indonesia and Malaysia could prove detrimental. These countries are to a certain extent reliant on the global demands of palm oil and thus in a humanitarian perspective it can be argued that it is unsustainable to remove palm oil from the global supply chains. This risk can be mitigated by aiding the countries in fostering other more sustainable and lucrative industries to which their economy can rely on whilst phasing out palm oil cultivation.

7.2. Compliance and Commitment to Sustainable Palm Oil Practices

Evidently, many companies along the palm oil supply chain commit to certification requirements in order to satisfy stakeholder demands of sustainability. The idea of sustainability and profitability being interlinked is not foreign and lies at the heart of many strategies such as Nestlé's 'Creating Shared Value' and Coop's 'Frontrunner for Responsibility' (Stoffer & Kappa, n.d.; Coop, 2019a). It is evident that businesses work towards global sustainability where many believe it opens up new, lucrative opportunities and drives innovation. Even though actors along the supply chain agree to adopt sustainable management practices such as retailers' codes of conducts, third-party certifications as the RSPO certification, and participate in supplier training and development, they can be caught in acts that are compromising their sustainability commitment and its effects (Grosvold et al., 2014). This is where safeguarding of compliance and auditing of company practices enters the playing field as a tool to mitigate such incidents.

If the current regimes are not credible nor impactful to the extent necessary and companies are to not rely on certification schemes, then perhaps resorting to organic palm oil is the answer. Our findings have pointed to the fact that certified palm oil, or at least RSPO, has not had a significant impact on consumers in the Danish food industry as our survey revealed surprisingly poor familiarity with palm oil implications and an indifferent perception of RSPO. Nor did we find evidence that certified palm oil contributes significantly to environmental protection and upheaval of the industry. This stagnation-like state relates to both actual tangible change throughout the supply chain, how the label is perceived by consumers and the extent to which the RSPO label is being used in the Danish food industry. However, regarding all certification schemes as unimpactful and untrustworthy on the basis of the RSPO findings is ignorant. As we saw in our survey findings, the consideration and perceived trustworthiness of the Ø-label is significant, which correlates with Pedersen (Appendix 3) who highlights the Ø-label as the only

certification that actually works and has an impact, precisely because it is very stringent, has notable requirements, and is governmentally controlled. This leads us to believe that perhaps organic palm oil or something third is a more efficient approach. Compliance of organic palm oil however is most likely prone to similar challenges as certified sustainable palm oil, wherefore the complexity of the dilemma intensifies.

Through our interview with Coop and secondary sources (e.g. Euromonitor, 2018; WWF, 2020), we postulate that one of the challenges with achieving sustainable palm oil practices is not only that sustainability across a supply chain at such a large scale as in the Danish food industry entails complexity, but also that transparency is lacking profusely. Transparency is demanded at every level of the supply chain if one is to declare that their conducts are truly sustainable. It is highly likely that more transparency and reporting will foster better shareholder, employee and stakeholder relations which in a highly competitive environment can be a key differentiator for building trust (Stoffer & Kappa, n.d.). Transparency gaps are apparent across the palm oil supply chain but also between the retailer and consumer relating to the very nature of palm oil. The amount of consumers who buy a bottle of palm oil is most likely intensely scarce, as it is usually one of many ingredients wherefore it is difficult for the consumer to identify if it is certified (Madhusoodanan, 2019) as a credence attribute. This leads to consumers putting less direct pressure on companies for them to improve their standards. A possible solution could be to use blockchain technology to trace and map the entire supply chain with digital records of all material transactions (Euromonitor, 2018). This could provide early adopters with strong sustainability commitments to a huge market opportunity, as the number of sustainable consumers is steadily rising. Better yet, if blockchain technology is spread further throughout the industry, it could increase transparency to a much higher extent and provide justification for companies to market their business practices as sustainable. In this connection, it can be stipulated that more campaigns that emphasize the negative implications of current palm oil practices are necessary for the consumer to put pressure on the industry and advocate for change, as seen in the “Don’t Palm Us Off” campaign, which resulted in the support for palm oil labeling increasing from 70% to 90% with the respondents reporting they would like mandatory labeling after 6 months of running the campaign in the Zoo (Pearson et al., 2014).

7.3. Approaches to Sustainability and Labeling in the Danish Food Industry

Certification labels are one of many approaches to ensuring sustainability within industries which further enables the consumer to actively choose how, when and where they want to contribute to a given matter. However, as we found in our survey and supported by literature, the familiarity level with the palm oil related labels is not significant, which can partly be attributed to the manifold of labels. As of 2021, the independent global directory of ecolabels and environmental certification schemes, Ecolabel Index, counts 455 eco-labels across 25 industry categories (Ecolabel Index, 2021) of which 129 are food related sustainability labels within the EU (European Commission, 2012). With the consumers becoming more aware and demanding, and more sustainability issues being uncovered, additional standards and certifications inevitably emerge to counteract the negative implications, or at least the negative publicity. Most recently, a CO2 footprint label in the Danish food industry across different product groups and industries has been initiated (Nielsen, 2021).

The sheer number of labels only adds to the complexity of navigating supermarkets. The question is thus if these labels give the consumer any meaningful guidance in choosing the environmentally superior product or if they merely confuse or discourage the consumer. At the forefront, the labels provide a quick, visual cue that enables consumers to purchase sustainably. Since the practice of labeling has become popular, a lack of transparency and clearly defined standards is likely to diminish trust and even erode progress (Arnett, 2019). It can be derived from our survey that the respondents either have a positive or indifferent perception of labels as supported by figure 6.3, where it is evident that the difference in frequency of respondents choosing “untrustworthy” as compared to “very trustworthy” is noticeable with a significant overweight of respondents deeming labels “very” or “a bit trustworthy” as compared to the untrustworthy counterparts. This indicates that consumers in the Danish food industry trust and value labels as they likely provide a sense of direction and a stamp of approval.

It should be questioned whether it is necessary to keep the number of labels currently available, as it is highly unlikely that any consumer is familiar with all 455 existing labels, or even desire to be. As of now, there is no overarching scheme that satisfactorily addresses sustainability performance across the whole supply chain in any industry (Arnett, 2019), which leads us to believe that despite the proliferation of initiatives, the future needs to entail some sort of streamlining and more user-friendly approach to reduce

information asymmetry between the consumer and the retailer. With the vast number of labels and different approaches to certifications and standards circulating not just across industries, but also within, it only becomes further complicated to decipher who and what to trust. Labeling is a tool used for breaking down the information asymmetry between consumers and companies by making product information available (Teisl & Roe, 1998), and often acts as a credence attribute where consumers are, realistically, entirely unable to evaluate and ensure that the label is truthful. The consumers cannot visit the palm oil plantations, they just have to accept and trust that the RSPO and other labels are legitimate. However, instead of simplifying the purchasing process for consumers by making the sustainability of products more transparent through labels, the abundance of labels may rather create information overload for consumers and thus disabling a removal of information asymmetry. We postulate that this is one of the reasons why RSPO gained so little backing in our survey findings. On the basis hereof, it can be argued that too many labels offer weak or unsubstantiated claims and some amount only to self-declarations made by companies (Atkinson, 2014). For instance, we found that the MSC label was perceived as trustworthy in our survey (66% stated a bit trustworthy or very trustworthy) whilst only 4% deemed the label "a bit" or entirely "untrustworthy", the remaining were indifferent. Had we conducted the survey after the recently published "Seaspiracy" Netflix documentary about the major issues within the fishing industry, we would likely have seen some very different statistics as this documentary has gained a lot of attention and caused intense debates surrounding the MSC label's impact and legitimacy. This again circles back to our argument that perhaps industry-initiated labels are not as good as they first appear, as they are oftentimes controlled by industry actors who have a high interest in profitability over sustainability, such as perhaps the case of RSPO which is initiated and run by actors in the palm oil industry.

Pedersen believes that creating a label for deforestation will counter for a wider sustainability impact than only palm oil cultivation (Appendix 3). Additionally, he mentions the work on a joint label for climate impact, which would facilitate transparency for consumers even further (Appendix 3). This would create even more momentum, as it would cover a wider impact in terms of several types of crops like soy, rice, wheat and palm oil, whereby more parties would be involved to push for change. Perhaps this would also make it easier to create a more prominent political agenda. However, it would also result in more stakeholders having to agree upon the set criteria and goals, which would likely be quite difficult. There is potentially more momentum in piling the issues and labeling them under the same umbrella term such as "deforestation" or "biodiversity" as this might be more easily comprehensible for consumers. It can be

argued that having to take a stand on soy, palm oil, rapeseed etc., can be quite overwhelming for the individual and thus removes incentive for the consumer to actively pressure companies to implement more sustainable practices. A recent study by Nielsen (2021) offered a similar take on labeling with the proposed "climate label" whose applicability ranges across different industries and could therefore have an effect on consumers' purchasing decisions, as it would be simpler for consumers to make climate-friendly decisions. Our findings suggest that the current problem is that consumers need more explicit guidance in making sustainable purchasing decisions. According to Thøgersen (Nielsen, 2021), a simple system could for instance be a red, yellow, green indication of the climate impact which simplifies labeling for the consumer. Nevertheless, this is yet another sustainability label on the market, wherefore a significant reduction in labels should occur before this model enters the market, to make it simpler for consumers rather than adding to the list of labels. RSPO is nearly 20 years old and still the survey respondents had very little familiarity and trust associated with RSPO, which signifies the difficulty of getting a label adopted by consumers. Additionally, a climate label would only focus on certain aspects of different product groups, where in the palm oil industry more requirements are needed to encompass issues regarding e.g., social impacts, biodiversity etc. A broad labeling scheme also diminishes the consumer's ability to "vote" on topics that matter to them individually, and thus lessens their role in pushing companies in different directions.

The solution to the lack of trustworthiness or at least transparency, might be introducing governments to the equation acting as a third-party verifier or supporter to existing schemes or the instigator. Our survey suggested that the consumers agree with this as 71% stated that the government was responsible for ensuring sustainable transition, and the most trustworthy label, the Ø-label, is overseen by the government. We found similar tendencies in all our interviews as they all mentioned that governmental interference is necessary (Appendix 1-4). It is likely that government supported, or owned labels are more transparent and will be able to avoid the risk of a conflict of interest, as the federal government is not selling its own products but merely overseeing production processes and compliance, thus they have no actual stake as e.g., Unilever and Coop have in the palm oil industry, inevitably affecting the functioning of RSPO. The government however has less incentive to promote and drive change as they are not being pressured by stakeholders i.e., consumers, in the same way that companies are. Governments are able to aid by introducing supportive policies to the certification systems and by upscaling voluntary certification. Government intervention is necessary and potentially able to improve the labeling that currently exists,

however, insisting that the government takes full responsibility instead of industries may not be ideal either.

This leads us to further contemplate the future role of labeling and certifications, particularly relating to the palm oil industry and how it ensures sustainability. Forecasting the future of labels is difficult, especially considering that our accumulated data does not provide any clear picture of whether labels in general truly have an effect on purchasing behavior; we found that only certain labels appear to be adopted by consumers in both consideration when grocery shopping and in terms of whether they find them trustworthy. This discredit labeling to an extent as it cannot be argued that labeling as a general concept will benefit. Because if consumers are indifferent towards certain labels, then what is the point of insisting on placing them on products?

7.4. Ensuring Sustainable Transition

Ensuring a sustainable transition is quintessential for many reasons, one of them being to avoid palm oil becoming stranded assets as we have seen with the coal industry who is unable to sell its assets (Morison, 2021). As of now, there is still a tremendous demand for palm oil in several industries hereunder the Danish food industry, and thus the likelihood of palm oil undergoing the same dire destiny as the fossil fuels is not a short-term issue. However, it can be postulated that in the long run, the same tendencies will appear and those in the industry who are unable to meet the sustainability requirements and thus are unable to partake in a sustainable transition, will end up with stranded assets which will have significant negative consequences, likely throughout the supply chain. This is also backed by the fact that many investors are now pursuing an ESG agenda and putting pressure on companies to rethink their business model and increase transparency (Morison, 2021). The sustainable transition entails reallocating capital towards investments that are aligned with global environmental and social sustainability. Bearing this in mind, it is quite evident that the current palm oil practices are not aligned with global environmental and social sustainability.

Even with many organizations trying to counteract the lack of sustainable behavior in the palm oil industry, few changes are evident. RSPO has been working for nearly two decades to improve sustainability and transparency in the palm oil industry, but the efficiency of the certification scheme is questionable. An indication that RSPO is incapable of contributing massively to positive change is when the more ambitious version, RSPO Next, was discontinued after only a few years of existence. However,

this does not signify that RSPO is not progressing. Several changes have been made to RSPO's requirements over the years including a total ban on deforestation, minimizing greenhouse gasses and satellite maps to track forest areas for land clearance and fires (RSPO, 2021d). RSPO states that it cannot solve the problems alone and that the organization is continuously working together with stakeholders to commit to a shared effort towards a sustainable transition. Correspondingly, as Coop states, it is better to conduct active ownership and thus be included in the dialogue on improving the circumstances as opposed to running away from the problems by banning palm oil (Appendix 1).

7.4.1. Who Is Responsible for the Sustainable Transition?

Besides the growing recognition of the global challenges from the international organizational community, consumers have played an important role in driving up stronger sustainability standards through purchasing behavior which is largely reflected in a willingness to pay more for sustainable products from ethical companies (Stoffer & Kappa, n.d.). Our survey findings, interviews and secondary data indicate that consumers allocate significant value to sustainability factors and ethical business behavior (e.g. ITC, 2019; Weber et al., 2015; Euromonitor, 2018). Yet, there is a significant lack of focus on the palm oil industry implications with familiarity being low in the survey results and interviewees arguing that the consumers are unaware. This is a challenge in that the lack of awareness potentially inhibits the consumer from utilizing their bargaining power in relation to pressuring companies and institutions alike to implement or innovate better palm oil practices. Our survey findings suggest that consumers are willing to contribute to change and perceive sustainability as important but lack the necessary knowledge of palm oil. However, our interviews suggest that the intricacy of palm oil is far too complex for the average consumer and that involving them will only lead to confusion.

Nonetheless, the responsibility of ensuring a sustainable transition should not lie with the individual, as our findings as well as supporting literature suggests, the consumer does not inhabit the power nor resources to do so. For the consumers to be able to constantly stay on top of the ever-expanding global sustainability agenda and allocating enough time and effort to understand the labels and complexity of all the sustainability concerns is simply too big of a task. Accordingly, Albertsen (Appendix 4) says: "*I think it's quite difficult that we put it down on the individual's level and say that you as an individual can make a difference with palm oil (...). Instead of going in and seeing what we can do with legislation, and how we can actually look at those who produce it [palm oil] and who offer it [palm oil products] to us - because it is really difficult as an individual to do so*". Companies often try to push the sustainable agenda over to

consumers and remove some of their own responsibility, when in fact 100 of the biggest companies in the world are responsible for 71% of global emissions (Riley, 2017). This is not to say that all companies are bad or lazy, but that companies in general can have a greater impact in changing their business practices. Furthermore, as our survey suggested, some consumers feel most responsible for changing the palm oil industry circumstances (20.8%) but agree (somewhat or strongly agree) that the actors most responsible for change are companies (89%), suppliers (82%), and governments (71%). But as Albertsen (Appendix 4) says: "*Of course, we all have to make an effort, it's not like we have to wait for the companies to do something, because they are not going to do anything, or the state*". However, one could also argue that it is the responsibility of the consumers, as companies are only producing what consumers are demanding. However, making sustainable decisions requires much more effort by consumers than for companies to conduct ethical practices and live up to their responsibility of taking care of their surroundings. Of course, the consumers should continue to value and demand sustainable alternatives, but it is the private sector that has the power to change the practices of the palm oil industry (Kuckertz et al., 2009). This is applicable for sectors as a whole, but it is difficult for the individual company to make significant contributions, especially in the Danish food industry, which in a global perspective is insignificant, and a company like Coop does not have any monumental power due to its size. According to Hartington: "*If I have to be honest, then Coop is big in Denmark, but we are not that big in the world*" (Appendix 1).

The vast majority of the farmers in the palm oil supply chain are smallholders in remote areas with few resources (Euromonitor, 2018). Those resources will only become fewer if they are forced to comply with all the different criteria from a range of palm oil certification schemes and standards that entail being audited several times a year; one single agreeable standard would alleviate a lot of pressure on these. So shouldn't the responsibility lie with the wealthy West who is responsible for a large part of the palm oil consumption? It merely requires that the consumer ensures that the given product is certified and then pay a minor mark up on the price. This notion illustrates that the opinions on who is responsible is manifold and complex and likely it is impossible to derive one clear answer. However, an ongoing trend in our survey findings, supporting literature and interviews, was that more institutional or governmental intervention is needed.

7.4.2. Pushing For a Political Agenda

The global political agenda is filled with sustainability concerns and a manifold of initiatives and coalitions such as the Paris Climate Accord and the SDGs exists trying to rectify this. The bigger players such as the SDGs, do not directly include palm oil considerations in their goals but concentrate more on the overall sustainability attainment. The government is important to consider as an enforcing actor, but it does not necessarily need to be the only answer to environmental and societal challenges. Bigger supranational coalitions can be an effective measure that alongside governments can help to level the playing field (Arnett, 2019). According to Hartington (Appendix 1), Coop as a Danish retail company has little effect on the accumulated sustainability of the palm oil industry. Correspondingly, Pedersen (Appendix 3) states: "*Much of this [driving sustainable development] has to take place at European level in order for it to really have an effect, as Denmark is such a small country. If something is to be moved, then there has to be minimum requirements across the EU*". Accordingly, the EU is a powerful force to drive forward sustainability transitions (EEA-EPSC, 2019), and therefore, it is important to keep the political debate going and to create pressure for the EU to conform to sustainability requirements for all companies operating within the EU, and to their suppliers. Correspondingly, Hartington, Chrintz and Pedersen (Appendix 1-3), agree that it is necessary to come together in the industry and find common ground to drive the sustainable transition for palm oil. Moreover, Chrintz argues: "*It's the big arm movements that are needed, right? But in order for the politicians to make these arm movements, there must be pressure from consumers and citizens*" (Appendix 2). Accordingly, Villena & Gioia (2020) argues that through a collective approach towards creating a more sustainable supply chain, the palm oil industry actors can commit to developing and complying to industry-wide sustainability standards together (Villena & Gioia, 2020). Pedersen says: "*It is about trying to agree on a set of industry standards, so we are talking the same language and moving forward together at the same speed*" (Appendix 3). This will create a shared commitment and will avoid some industry actors going against the other stakeholders e.g., by choosing the "free-from" perspective and thus cutting corners and signaling that palm oil is a bad thing. According to Hartington (Appendix 1), businesses' stance against palm oil just keeps them out of the dialogue and moves the problem to another crop which is more unsustainable. Madhusoodanan (2019) states that recent work has found sustainability standards to become increasingly successful and transformative when they are supported by or integrated into public policy. So instead of pursuing sustainable palm oil voluntarily, it should perhaps be integrated as the new business normal and imposed on companies. Few large companies hold a large market share of the global trade in palm oil, subsequently if they transition

their business practices and only use CSPO it has an actual impact on the entire palm oil industry (Madhusoodanan, 2019).

7.5. Limitations

One of the more prominent limitations of the thesis concerns the ability to generalize upon a wider population. Due to the scope of the thesis, a convenience sample was collected as we did not possess the means to obtain a representative collection of data. This has resulted in limitations in terms of the amount of completed surveys, geographical range and gender distribution of the respondents. The amount of survey questions was limited which has naturally led to obstacles in regard to gaining a deeper understanding of consumer purchasing behavior. More parameters to measure consumers' chain of reasoning, as well as more choice experiments would have enabled a clearer and more exact answer to why consumers behave and perceive palm oil as they do.

We further encountered limitations regarding data availability as there is a lack of previous research within our specific focus of Danish consumers' knowledge and perception of palm oil. Little research highlights the correlation between the buying behavior of consumers and their perception of palm oil and labeling schemes. The amount of detailed information on the supply chains in the Danish food industry which is publicly available is limited, wherefore our ability to gain a comprehensive understanding of the supply chain and thus evaluate the role of RSPO throughout the linkages has been compromised. Lastly, the pandemic has posed limitations in regard to data collection methods; consequently, we chose to focus on collection methods which could be conducted online rather than in person.

8. Conclusion

The objective of the thesis has been to answer the research question: "*What role do consumers play in achieving sustainable palm oil practices in the Danish food industry?*". The findings indicate that consumers play an important role in pushing companies towards achieving more sustainable business practices, but with regards to palm oil, this role is less apparent, where we found the primary pressure comes from NGOs and industry actors.

We found that RSPO does contribute to improving sustainability in the palm oil industry, but its current functioning is not ambitious nor stringent enough to ensure truly sustainable supply chains. RSPO is challenged by criticism from stakeholders and by a lack of consumer support, which makes the certification scheme less effective in the Danish food industry as companies refrain from utilizing the label on product packaging, even though these are certified. More prominent labels are given the available space on products due to the higher level of awareness of these combined with a more positive perception. Consumers can utilize labeling to gain a more impactful role by supporting topics that matter to them through their purchases. We found that consumers are predominantly indifferent towards considering and trusting palm oil labeling in their purchases, likely due to the lack of familiarity with both industry implications and the labeling schemes. Moreover, consumers' relatively low PCE of their role in pushing for change can be attributed to them regarding companies, suppliers and the government as responsible for change.

The criticism of RSPO combined with the generally indifferent perception of palm oil as well as low familiarity of industry implications, has resulted in a lack of incentive for Danish food companies to display any palm oil related information on their products. The influence and integration of consumer demands remain an important incentive for companies to pursue sustainability and conduct SSCM, which acts as a prerequisite for achieving sustainable palm oil practices. There is no prominent consumer demand pressuring companies to implement more sustainable palm oil practices, it is rather looked upon as an expectation from consumers overall sustainability requirements which must be complied with in order to maintain competitiveness in the Danish food industry.

Palm oil remains a highly debated topic which is in dire need of the implementation of more sustainable business practices throughout the supply chain to mitigate organizational risks and lessen the negative

environmental and social impact. The consumer is not a direct catalyst for change but still they play an important role in achieving sustainable palm oil practices in the Danish food industry through their sustainability values and subsequent purchasing behavior.

8.1. Implications for Further Research

The thesis has provided preliminary research into the role of consumers in pushing for change in the Danish food industry's palm oil practices with a particular emphasis on labeling. More in-depth research is required to establish the full extent to which consumers do in fact impact the industry and its practices. We deem a more comprehensive study in consumer perception and behavior necessary in order to establish more in-depth parameters which influence consumers' purchasing decisions regarding products with or without palm oil. Therefore, extensive research into the factors is necessary to determine the complexity of consumers' decision-making process, and, for instance, different choice experiment scenarios should be set up to identify the importance of product attributes for consumers.

The Danish population generally has a decent awareness of sustainability, and many Danish companies are introducing more sustainable options in their product range. Yet, in other countries such as China and India with drastically growing economies, more effort is needed to push the sustainable agenda and palm oil practices. As India is the largest importer of palm oil (Statista, 2020a), it would be beneficial to conduct a similar study on the Indian food industry to better establish how to transition to sustainable palm oil practices. A solution rooted in the Indian activities would have a more significant impact on the palm oil industry, compared to the Danish industry which represents a very small percentage of palm oil consumption.

The stakeholder theory could be further expanded and used to identify and discuss the influence and salience of different stakeholders on companies' incentives and reputation in relation to how they approach palm oil. Dividing stakeholders into categories of salience would be useful to assess to what extent stakeholders influence companies in the Danish food industry to consider more sustainable palm oil utilization in their supply chain activities.

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