

Bachelor's Programme in International Business

Transparent Supply Chains in Coffee Industry and Their Impact on B2B Buyer Behaviour in Finnish Coffee Roasters

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Bachelor's thesis
2024

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Title of thesis Transparent Supply Chains in Coffee Industry and Their Impact on B2B Buyer Behaviour in Finnish Coffee Roasters

Programme Bachelor's Programme in International Business

Major International Business

Thesis supervisor Prof. Pasi Rikkonen

Date 15 April 2024 **Number of pages** 56+1 **Language** English

Abstract

Coffee is one of the most consumed beverages in the world with complex supply chains that require transparency and traceability actions from both farmers and roasters in order to be sustainable. Thus, this thesis research focuses on the transparency and traceability challenges that Finnish coffee roasters face, as well as how these challenges are answered in the operations of Finnish coffee roasters. The research was conducted with qualitative data gathered from interviews with six Finnish coffee roasters of varying sizes and supported by applicable secondary data. The research reveals that transparency is an area of focus in the operations of Finnish coffee roasters, mainly as of increasing consumer awareness, interest in ethical sourcing behavior and the quality assurance these values provide. According to the research, transparency and traceability practices implemented by roasters can make them more appealing to the consumers as well as give them an advantage against competitors. These transparency and traceability-focused practices were found out to be implemented by methods varying across the roasters. The implementations include relationships with the farmers, coffee certificates and regulations. There was also found to be a difference in transparency actions between different sized roasters mostly due to scalability of operations.

Keywords

Sustainability, transparency, traceability, coffee supply chain, coffee certificates

Tekijä Otava Tuomi

Työn nimi Läpinäkyvät toimitusketjut kahviteollisuudessa ja niiden vaikutus B2B-ostokäyttäytymiseen suomalaisissa kahvipahtimoissa

Koulutusohjelma International Business -kandidaattiohjelma

Pääaine International Business

Työn ohjaaja Prof. Pasi Rikkonen

Päivämäärä 15.4.2024 **Sivumäärä** 56+1 **Kieli** englanti

Tiivistelmä

Kahvi on yksi maailman eniten kulutetuista juomista, jonka monimutkaisten toimitusketjujen kestävyys saavuttaminen vaatii läpinäkyvyyden ja jäljitettävyyden liittyviä toimia sekä viljelijöiltä että pahtimoilta. Tämä tutkimus keskittyy suomalaisten kahvipahtimoiden kohtaamiin haasteisiin kahvin toimitusketjujen läpinäkyvyyden ja jäljitettävyyden liittyen, sekä siihen, kuinka näihin haasteisiin on vastattu suomalaisissa kahvipahtimoissa. Tutkimus suoritettiin haastatteleamalla kuutta eri kokoluokkaa olevaa suomalaista pahtimoa, sekä käyttämällä asiaan liittyvää olemassa olevaa dataa. Tutkimus osoittaa, että kestävyys on tärkeä osa suomalaisten kahvipahtimoiden toimintaa, pääasiassa kuluttajien lisääntyneen mielenkiinnon, eettisen kahvinhankinnan tukemisen, sekä laadun tasaisuuden takia. Tutkimuksen mukaan läpinäkyvyyden ja jäljitettävyyden liittyvät toimenpiteet voivat tehdä pahtimoista houkuttelevampia kuluttajille, sekä antaa edun kilpailijoihin verrattuna. Läpinäkyvyyden ja jäljitettävyyden liittyviä toimenpiteitä toteutettiin pahtimoissa vaihtelevilla menetelmillä, kuten suhteilla viljelijöiden kanssa, kahvisertifikaateilla sekä kahvialaa koskevilla säädöksillä. Tutkimus löysi lisäksi eroja läpinäkyvyyden liittyvissä toimissa eri kokoisten kahvipahtimoiden välillä johtuen pääasiassa toimintojen skaalautumisesta.

Avainsanat

kestävyys, läpinäkyvyys, jäljitettävyys, kahvin toimitusketju, kahvisertifikaatit.

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Glossary

Transparency:

The practice of openly sharing information throughout the supply chain, including for example sourcing, production, and distribution processes.

Traceability:

The ability to track where transactions of the product take place in the supply chain, and where the products originate to.

Green coffee

Ripe coffee beans of coffee cherries, which have been processed but are not yet roasted.

Certificate

A document or label stating that a product has met a set of standards considering quality, sustainability, or ethical values required by the certificate in question.

Direct Trade

A coffee sourcing method where rosters buy green coffee directly from the coffee farms.

1 Introduction

1.1 Background

Coffee is among the most consumed beverages in the world, and the consumption of it is currently increasing. However, the production of coffee is forecasted to decrease in the future as climate change will reduce the coffee yield and decrease suitable land for coffee growth by 2050 (Bilen, et al., 2023). Thus, sustainability actions are vital to be implemented in the coffee industry in order for supply to meet demand. At the same time, it is a general trend for consumers to be more aware of sustainability issues, which also applies to coffee roasters (Bowie, 2021).

Coffee roasters choose their own criteria for what kind of values and attributes they value in the coffee they roast and sell to both consumers and retailers. Thus, they play a major part in whether they support sustainable or unsustainable coffee production. The coffee supply chain is a complex process consisting of several parties which makes it prone several possible sustainability risks (Bashiri et al. 2021).

To narrow down the research, coffee transparency was chosen as a focus to evaluate the importance of sustainability actions implemented in coffee supply chains. This research aims to present a picture of how Finnish coffee roasters implement and value transparency and traceability in their supply chains.

1.2 Research Problem

The existing research done on the sustainability actions in coffee supply chains, especially among Finnish coffee roasters is limited, despite Finland's significant coffee consumption and an increasing trend of coffee roasters. Addressing this gap in research is essential for tackling and understanding the current trends related to coffee traceability and transparent supply chains.

The thesis will focus on the transparency in the supply chains of Finnish coffee roasters, aiming to figure out its perceived importance and the actions done to implement it. The research will focus on how different-sized Finnish coffee roasters have faced the current transparency-related problems, at the same time looking for the practices that are necessary to implement for the supply chains to be transparent. The thesis aims to figure out the technologies used as well as the importance of certifications in the supply chain.

1.3 Research Questions

This thesis addresses and answers the following questions:

1. How Finnish coffee roasters have implemented transparent supply chain practices in their operations?
2. How big of importance do transparency and traceability have in the process of choosing green coffee suppliers for Finnish coffee roasters?
3. How does the importance of transparency and traceability vary in different-sized coffee roasters in Finland?

1.4 Research Objectives

The key aims of this research are connected to the research questions and include:

1. To what extent do Finnish coffee roasters value transparency and traceability in their operations?
2. Which transparency-related factors are taken into account in the green coffee purchasing processes of Finnish coffee roasters?
3. How other transparency-related factors such as knowledge of the origin and tracking of the product are considered in the supply chains of Finnish coffee roasters?
4. How are transparency and traceability of coffee communicated to consumers of Finnish coffee roasters?
5. Is there a difference in transparency, traceability, and importance of them between different-sized coffee roasters in Finland?

2 Literature review

2.1 Introduction

The scope of this literature review is to build a theoretical framework based on literature to analyse transparency in coffee supply chains and the value that coffee roasters give to it. The literature review aims to find out the extent to which coffee roasters value sustainability-related values in their supply chains, most notably transparency and traceability. The scope will also be in figuring out the importance of the existence of the values of transparency and traceability when coffee roasters are making their green coffee purchase decisions. The literature review will further narrow to the context of Finnish coffee roasters. Still, as the research on Finnish roasters is limited, the global perspectives of the coffee industry will be taken into account to build a framework that is also somewhat applicable to Finnish roasters.

The transparency in coffee industry is getting more popular, and especially consumers are becoming increasingly aware of the sustainability issues related to coffee (Bowie, 2021). To support this, Buerke, et al. (2016) found out that sustainability-focused values and beliefs to have influence in society and the environment guide consumers' behaviour. Thus, the research on the implementation of transparency in coffee supply chains is an increasingly important topic that affects the whole industry.

This literature review can be divided into two main themes, those being promoting transparency in supply chains and the factors that affect the buying decisions made by the coffee roasters. The literature review will begin with a comprehensive look at different transparency-related aspects of supply chains in general, and later narrow down to the context of coffee supply chains. A wide range of aspects related to transparent supply chains such as their importance, implementation, and past use cases will be covered in the review. Furthermore, barriers and drivers will be researched from the past literature to give a comprehensive look at what affects if the roasters and farmers promote transparent supply chains.

The other main theme, factors affecting buying decisions made by the roasters will address topics such as factors influencing the buying decisions and how these decisions will affect the brand image of the roasters in the eyes of consumers and partnering companies. To the extent that past research allows, the difference between the values impacting buyer decisions made by micro and macro roasters will be examined to give a starting point to the thesis research. Furthermore, topics such as standards and corporate responsibility will be covered in order to show other factors that might affect the coffee roasters.

The structure of the literature review is narrative, and it will analyse the main themes related to the thesis topics while connecting the appearing

themes. This will lay a groundwork for the thesis and reveal research gaps that will be further investigated in the thesis.

2.2 Transparency in coffee supply chains

The first section of the literature review will focus on the coffee supply chains in general with a further focus on different transparency factors that are part of them. The coffee supply chain is a complex process that includes multiple parties. A simplified version of the coffee supply chain is presented in Figure 1. The supply chain starts from the farmers who grow the coffee beans after which they are stored for processing. After processing, the coffee is handled by various distributors. The most notable ways of distributing coffee are direct trade, intermediaries, cooperatives, and exporters. (Kim & Kim, 2016; Diaz et al., 2016). From distributors, the coffee is exported to the roasters who then roast the product and sell it either to the customers or retailers (Bashiri et al. 2021).

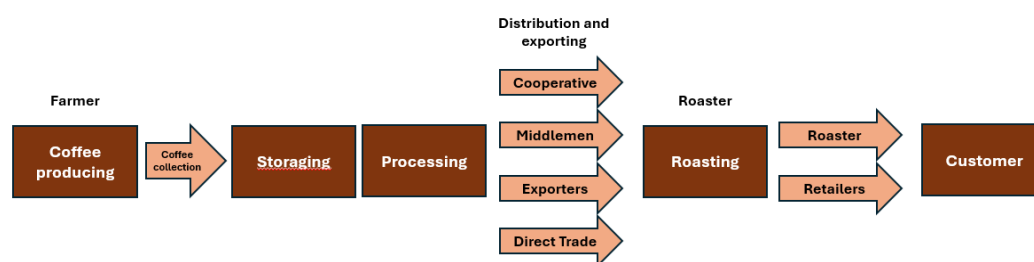


Figure 1: Simplified coffee supply chain.

Transparency and traceability-related sustainability aspects are becoming more crucial factors for the coffee industry. The importance of sustainability actions made by the parties in coffee supply chains is often demanded and perceived as important by the consumers. Thus, coffee producers and roasters should try to make their supply chains as transparent and traceable as possible to meet the needs of consumers. (Bowie, 2021)

For the supply chain to be transparent, the effort needs to start from the first level which is coffee farmers. Price transparency is one of the most notable ways that affects the green coffee buying decisions made by the roasters. Fair Trade certification is a coffee certification which among other requirements specifies the minimum price per pound of coffee (Cole & Brown, 2014). This minimum price is set to guarantee that the coffee can be produced in a sustainable manner with reduced risk. In addition to the minimum price, a Fair Trade-certification requires, that a price premium should be paid for the coffee. The price premium should be invested in improving the lives of the producers and communities around them (Dragusanu et al., 2022).

However, the legitimacy of Fair Trade certification can be debatable, as it was found out that only about 20 per cent of Fair Trade-certified coffee was sold at the Fair Trade minimum price, which results from the supply overpassing demand. This is especially harmful to the farmers who put in the effort to meet the certification requirements (Cole & Brown, 2014).

The barriers hindering coffee sustainability and transparency are researched in Guimaraes (2022). The paper claims, that knowing the barriers and drivers creates awareness and promotes more transparent coffee production. The paper found out that the biggest barriers to sustainable coffee production are the lack of government policies, complexity of processes, and unclear sustainability principles. A case study on implementing blockchain in coffee supply chains in Burundi, 2018, found that coffee producers in Burundi are aware of the concepts related to traceable and sustainable supply chains. Notable is, that the same producers thought that the sustainability of their coffee distribution was not on optimal level. The reason behind this could be that the farm does not either have the required resources or does not see transparency as important in the supply chain.

2.2.1 Coffee traceability

Traceability can be defined as “The ability to access any or all information relating to that which is under consideration, throughout its entire life cycle, by means of recorded identifications” (Olsen & Borit, 2013). Heyder, et al. (2012) explain that European food law obligates the traceability of food at all stages of production, processing, and distribution. While traceability is achieved as a result of company operations and transparency in the supply chain, it can also be perceived as a concept of its own. Olsen & Borit note, that record-keeping is an essential way to promote traceability of products such as coffee beans.

While transparency serves as the main focus of the literature review, traceability is often achieved through similar processes further presented in the review.

2.3 Importance of transparency for roasters

Among the supply chain transparency, this paper focuses on the green coffee buying decision processes of coffee roasters. To understand the factors and the impact of consumers that affect buying decisions, it is essential to have a look at what role transparency and traceability play for coffee roasters.

Unroasted coffee beans are known as green coffee (Masek, et al., 2020). The quality of green coffee has a big impact on the overall taste of the coffee, and its quality can vary from several factors, including low knowledge of the coffee producer, inefficient processes, and diseases in coffee plants

(Kuswardhani & Yulian, 2018). Thus, quality control is important in the coffee supply chain, especially for the roasters who pay for the green coffee.

A smart farm is a coffee plant that benefits from science and technology in its operations. Coffee produced by smart farms is potentially of higher and more stable quality, which interests roasters who want to have a consistent product (Kittichotsatsawat et al., 2021). Direct trade is a way of distributing coffee, in which the coffee roaster negotiates the price of green coffee and directly buys the coffee from the farmers without intermediaries (Gerald et al., 2019). The main benefits of direct trade for the roasters include knowing the production practices and better transparency achieved with shorter supply chains (Guimaraes et al., 2020).

The needs and wants of customers play a key role in the buying decisions made by the roasters. Sustainability-aware consumers are in increasing amounts buying coffee that has sustainability standards included in the product label. However, according to a survey conducted by Bowie (2021) most coffee consumers still choose their coffee based on taste, brand familiarity and if they have previously enjoyed it. However, 80,7% of respondents said that they would like to consume environmentally friendly coffee, but do not already (Bowie, 2021). While environmentally friendly coffee does not mean that it is produced transparently, it is possible that these consumers also value transparency. For roasters and customers, transparency can offer a look at the conditions at the farm and what happens in the supply chain. As the lack of information available is perceived as one of the barriers to consumers' coffee-buying behaviour, roasters are able to solve this issue by providing information to the consumers (Vasilov, 2020).

2.4 Past implementation of transparency in coffee supply chains

This section of the literature review focuses on the ways that transparency and traceability have earlier been promoted and implemented in coffee supply chains. The section will focus on different methods to make supply chains more transparent. These methods include direct trade, blockchain, coffee certificates, and visits to coffee farms.

2.4.1 Blockchain technology

Blockchain technology allows the parties of the coffee supply chain to securely track the movements of coffee beans, allowing better transparency and traceability. Blockchain is used in increasing amounts in coffee supply chains, all the way from farmers to roasters. The goal of the technology is to enable farmers to know where their coffee beans have been and to make sure that a fair price is paid for them (Alamsyah et al., 2023). The main challenge of blockchain is, that compared to regular databases, it is costly and difficult

to implement due to resources and knowledge required (Jabbar et al., 2021). The same challenges are most likely current in the coffee industry, especially as the farms that are producing smaller amounts of coffee might still write their transactions on paper.

2.4.2 Coffee certificates

Coffee certificates are standards that coffee farms can use to show customers that they are committed to the values and standards that are required for the certificates. Some of the most used third-party coffee certificates include Certified Organic, UTZ, Rainforest Alliance, and the previously discussed Fair Trade certificate (Bray & Neilson, 2017). Organic certification is primarily used so roasters can know that the coffee has been grown organically, providing transparency to the purchase decision (Thomas, 2023). Rainforest Alliance certification requires similar transparency and traceability-related actions to organic certification. These actions include tracking the amount of certified coffee, segregating it from non-certified, and tracking all the sale transactions of the certified product, including the premium price defined by the certificate (Rainforest Alliance, 2018).

UTZ certification is part of Rainforest Alliance, and its main goal is to be a standard for responsible coffee production and sourcing. UTZ has transparency-related recommendations similar to Rainforest Alliance, including documenting payments to the producers, and knowledge on how the price premium is distributed among the coffee farms. UTZ certification also requires, that the coffee must be traceable throughout the production chain and that the farm producing the coffee must have a person responsible for the authenticity of the certified coffee (UTZ CERTIFIED, 2007)

A case study on the impact of Coffee Certification on Farmer's Welfare in Kenya compares the effects of two widely used coffee certificates, UTZ, and Fair Trade. The similarities found in the study found, that farms that use corresponding certificates are often quite experienced in coffee production and are growing smaller amounts of coffee compared to non-certified farms. Farmers with certifications also tended to have a better financial situation due to better prices for processed coffee. The differences found out were rather small, and mostly revealed that the living conditions on Fair Trade-certificated farms were slightly better, possibly because of Fair Trade premium prices (Van Rijsbergen et al., 2016).

2.4.3 Roaster visits to coffee farms

One way for roasters to promote traceability and sustainability when buying green coffee is to visit coffee farms. Such actions have been practised by the Finnish coffee roastery, Kaffa Roastery, which visits some of the coffee farms that they have long buyer relationships with (Atkins, 2023). However, not

much research has been done on the topic and its benefits. Therefore, it will be researched later in the thesis.

2.5 Sustainable development goals and corporate social responsibility

United Nations Sustainable Development Goals (SDG) were revealed in 2015 to promote important actions for humanity and the planet (Maciejewski & Lesznik, 2022). This section of the literature review focuses on how United Nations Sustainable Development goals are visible in coffee supply chains, and which steps parties in the supply chain take to promote them. The section aims to create a groundwork for the thesis research from the viewpoint of the relations that transparency and traceability implementations done in Finnish coffee roasters have to SDGs. In addition, the section will help to understand the importance of corporate social responsibility (CSR) for Finnish coffee roasters.

2.5.1 UN Sustainable Development Goals

Coffee growing and supply chain directly relate to several of the SDGs, including no poverty (SDG 1), decent work and economic growth (SDG 8), and responsible consumption and production (SDG 12) (United Nations, n.d.). Sustainable Development Goal 1, no poverty is related to the coffee farms, as most coffee producers live in poverty (Bacon, 2004). Poverty at coffee farms can lead to smaller coffee yields, and lower-quality coffee by the absence of fertilizers. As discussed before, in Fair Trade-certified farms small income increases can occur while still keeping farmers slightly over the poverty line (Valkila, 2009). The occurrence of poverty at the coffee farms might slow down economic growth and create worse working conditions, thus relating to Sustainable Development Goal 8.

Murindahabi et al. (2019) found that coffee exports have an impact on the economic growth of the countries of origin. It was found, that in the long run, a 1% increase in the amount of coffee exported leads to a 0,0217% increase in the GDP of the country of origin. However, some other studies contradict this. Ferreira et al. (2012) state that growth in exports does not necessarily promote economic growth in the case country of Costa Rica. A case study by Gizaw et al. (2022) focused on the impact of coffee exports on economic growth in Ethiopia partly supporting both of these statements. In the case study, it was found that the time period affects whether the economy grows or does not. The conclusion was that in the short run, there is no significant effect on economic growth, while in the long run increase in coffee exports can contribute to economic growth. Therefore, it can be concluded that growth in coffee exports can but does not automatically create economic growth.

2.5.2 Corporate social responsibility in coffee roasters

Campbell (2007) offers multiple definitions for corporate social Responsibility. However, he mentions that often it is defined as “actions taken by a firm that are intended to further social welfare beyond the direct economic, technical, and legal interests of the firm.” This is also how coffee roasters should define it. As the coffee supply chain consists of several parties, a socially responsible roaster should take into account everyone working in the supply chain. Particularly this means people working at the coffee farms, who often live in poverty and bad living conditions (Bacon, 2004).

Environmental, social, and corporate governance (ESG) are currently included as some of the key factors for firms to include sustainability-related values in their operations. The same applies to the coffee industry with the increasing concern about these values. With the complex supply chains of coffee, the transparency and traceability aspects of sustainability can be linked to all aspects of ESG, including the farm’s perceived impact on its environment, the well-being of the farm workers and the success and stability of the farm. (Wong, 2023)

I did not find past research on the corporate social responsibility practices implemented by coffee roasters. However, Cha & Jo (2019) studied the effects of corporate social responsibility in franchise coffee shops. While not directly comparable, it can be helpful in understanding how coffee roasters implement corporate social responsibility in their actions. As found out by Cha & Jon, one of the main drivers for implementing corporate social responsibility is the effect that it has on the corporate image which leads to positive feedback from the customers. Corporate social responsibility goes hand in hand with transparency as one of the obstacles that coffee roasters is the lack of information available (Vasilov, 2020). Therefore, one way that roasters can implement corporate social responsibility is to enhance the visibility of responsibility actions. This could be done for example on the roaster’s website, or on the side of the product, coffee bags in this case.

While corporate social responsibility is not required or regulated strictly, certain standards can function as guides for companies. One of these standards is the ISO 26000 standard developed by the International Organization of Standardization. Among others, ISO 26000 provides guidance related to concepts, backgrounds, and principles of social responsibility (International Organization of Standardization, 2018).

The main benefit of implementing corporate social responsibility in coffee roasters includes the economic growth from more loyal customers brought by the positive corporate image (Cha & Jon, 2019).

2.6 Challenges and opportunities of transparency and traceability in supply chains

This section of the literature review goes through some of the main challenges and drivers of why transparency and traceability in supply chains are beneficial for farms and roasters. The section will look at the opportunities that transparency in the supply chain offers to farms and roasters including how transparency possibility affects consumer behaviour and refreshes the brand image of the roasters.

2.6.1 Challenges and barriers

Data openness in supply chains allows different parties to see the steps of the supply chain, including the movements of the coffee beans, to ensure that a fair price is paid for them (Alamsyah et al.2023). According to Sayogo et al. (2014), the main challenges related to supply chain transparency include insufficient technical capacity, data accuracy and credibility, and the lack of policies about confidentiality and privacy. These challenges create uncertainty about data security and increase the difficulty of implementing transparency. Guimaraes et al. (2020) support the challenges found by Sayogo et al. Based on Guimaraes, the biggest barriers to implementing transparency and sustainability in the supply chains include government policies and complex processes.

2.6.2 Motivations and drivers

Concerning data openness, the biggest motivating factors include growth-related drivers. The growing intensity of competition leads to increasing social pressure from sustainability-aware consumers. Thus, motivating farms and roasters to increase transparency and traceability can work as a competition strategy (Sayogo et al., 2014). The growth of competition can potentially lead to more consumer-targeted products that better meet the needs of consumers. However, it has been found out that competition might not always be good for companies, as it can also promote unethical behaviour from the competitors in order for them to survive in the competition (Stucke, 2013). In contrast to challenges brought by the lack of policy papers, the existing papers can be a motivational factor to increase transparency with data openness (Sayogo et al., 2014).

Guimaraes et al. (2020) found that the main drivers towards sustainable practices include social responsibility, performance improvements, and access to technology infrastructure that promotes better transparency. While the lack of resources such as infrastructure can be a barrier to transparency, a well-established technology and infrastructure can help with data transparency.

2.6.3 Impact from consumers

Eggert & Helm (2001) describe relationship transparency as an “individual’s subjective perception of being informed about the relevant actions and properties of the other party in the interaction”. The study found that there is a correlation between relationship transparency and customer-perceived value and satisfaction. This can then lead to increasing repurchasing. Relationship transparency can also be applied to coffee roasters. Coffee consumers tend to repurchase coffee that they have previously enjoyed (Bowie, 2021). Thus, transparency can potentially affect customer loyalty leading to more steady income for roasters coming from regular customers.

Lovemarks theory about customers’ brand love and emotional attachment tries to explain customer loyalty, meaning the bonds that form between the product and customer. The most impactful factor leading to customer loyalty is customer satisfaction (Song, 2019). According to Alipour et al. (2016) the sustainability of the company can be a significant factor towards better customer satisfaction, brand loyalty, and brand image.

2.7 B2B buyer behaviour in the coffee industry

This section of the literature review looks into the past research on the second main topic of the thesis, the B2B buyer behaviour of coffee roasters. The section tries to figure out the current trends that affect the buying decisions made by the roasters. As the research is limited, especially on Finnish roasters, the section will focus on the research made on roasters from other countries as well as other general principles that play a part in coffee-buying decisions.

In the process of creating the final product, roasting has an impact on the taste of coffee. However, the aroma of the coffee is also notably affected by green coffee (Bhumiratana & Adhikari, 2011). Generally, B2B buying processes are more complicated than those including customers. Often B2B buying process focuses on looking for specific products, such as green coffee, that meet the expectations of the buyer, a roaster in this case (Hall, 2022).

While the past research on B2B buying decisions is fairly limited, the research on coffee sourcing can give a perception of where different-sized roasters buy their green coffee from, also giving an idea of what is important. In a case study “Sourcing strategies in the Italian coffee industry,” Borzoni & Nigel (2011) seeks to find out based on what criteria different-sized roasters in Italy source their coffee. The research states, that large roasters tend to import directly as it provides them with knowledge of the coffee. For example, Starbucks Coffee Company collaborates directly with the producers in order to affect the quality, production, and processing of the coffee (Benzaken, 2007). On the other hand, in Italy, the smaller roasters rely on dealers, who then import the coffee. The use of dealers is more cost-efficient for smaller roasters who are not able to benefit from economies of scale in the same way as large roasters can. However, it is important to notice that

the criteria that Italian roasters have is not necessarily applicable to Finnish ones but can give a sense of direction.

2.8 Past studies on the Finnish coffee industry

This section of the literature review focuses on past studies and research done on Finnish coffee roasters. As stated before, there is not much research done on the transparency or traceability practices concerning Finnish roasters. Thus, this section will evaluate what has been studied and explore the possible research gaps that can be further researched in the thesis.

Only a few past research somehow focusing on coffee in Finland were found. Valkila, et al. (2010) studied how the use of Fair Trade certification affected consumer behaviour in Finland. The main findings of the study were, that Finnish customers paid more for Fair Trade certified coffee. However, the reason for this was not studied. The research also found that Finnish retailers and roasters took higher margins for Fair Trade-certified coffee compared to conventional coffee.

Hoand (2023) researched attributes that contributed to Finnish coffee enthusiasts' coffee-buying decisions. Based on the research, the most influential attributes for enthusiasts generally were the knowledge of the roastery/brand and recommendations from other people. From those who bought coffee that cost under 8 euros per 250g package, the most influential aspects among the abovementioned were dark roast, chocolaty flavour notes, and sustainability labels. Those preferring coffee costing over 8 euros, aspects such as light roast, and fruity and funky flavour notes affected the purchase decision. As generally Finnish people buy cheaper coffee, it can be concluded, that consumers who are willing to pay more for their coffee generally want to have a different and more innovative coffee experience.

The final study relating to Finnish coffee culture was Risthonka (2020) which studied the aspects that contributed to the coffee buying of cafés located in Helsinki. The study found that the most important aspects were taste, quality, and availability of the coffee. A notable finding from the research was, that the majority of the cafés did not see certifications as a necessity for the coffee that they offer. All the cafés interviewed in the paper still stated that sustainability including the living and working conditions of the farmers were some of their key values. Thus, the cafés were focused on sustainability practices other than certifications, including recycling, use of biodegradable materials, and favouring local suppliers. While this research clearly implicates some of the major factors behind coffee buying in Finland, none of them reportedly roasted their own coffee. Thus, the situation with roasters can differ from the findings of the study.

2.9 Gaps in the existing literature

In the other sections of the literature review the existing literature has been examined from various aspects of transparency and traceability in supply chains. While the past sections offer a wide range of insights to the topic, some areas specific to the thesis are researched narrowly, or not at all. Thus, this section of the literature review identifies the gaps in the existing literature and analyses their impact on the thesis work.

As the main focus of the thesis is to research the transparency in supply chains and their importance for the green coffee buying processes in Finnish roasters, the most visible research gap is in the country-specific research about Finland. While some country-specific research on parts of the Finnish coffee industry exists, they only offer a limited amount of help in answering the research questions of the thesis. Some of the literature examined in this paper gives small views into what values coffee roasters and cafés outside of Finland deem as important. However, there is only little research done on the factors affecting green coffee buying processes, and to what extent transparency and traceability affect them. More research should be done especially about the aspects that Finnish roasters value when they consider buying green coffee.

Current technologies such as Artificial Intelligence are already implemented in the roasting phase of the coffee supply chain to reach high precision and consistent roasting (Wibowo et al., 2022). However, no remarkable past research on the use of artificial intelligence at coffee farms or in other parts of the supply chain exists. This research could be useful for the thesis work.

Some of these research gaps, especially the role of Finnish coffee roasters will be further researched in the thesis.

2.10 Conclusion and conceptual framework

2.10.1 Conceptual framework

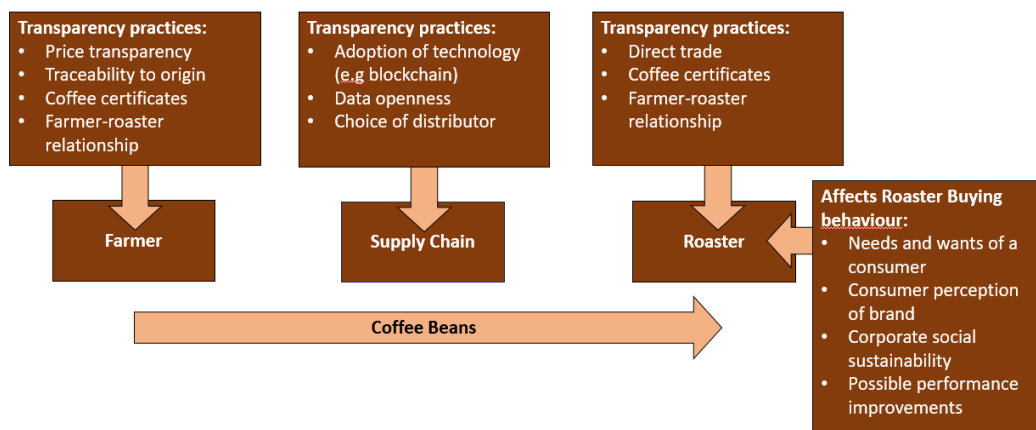


Figure 2: Conceptual framework

The conceptual framework above is based on the literature review and research gaps identified in it. The framework gives a comprehensive look at the aspects of transparency in different phases of the coffee supply chains with a main focus on the practices that farmers and roasters can implement on their own ends. For a supply chain to be truly transparent, actions need to be taken in every phase of it (Proenca et al.2022).

Transparency in supply chains starts from the roaster, who should promote traceability of the coffee origin as well as price transparency. Coffee certificates such as Fair Trade can help other parties in the supply chains to know, that an adequate price is paid for the coffee (Dragusanu et al., 2022). This also relates to the farmer-roaster relationship and in best cases, direct trade that promotes transparent knowledge from the coffee farms. In the middle of the supply chain technologies such as blockchain can be used to offer more productivity and transparency while also promoting data openness. Overall, the choice of coffee distributor also affects the transparency of coffee buying, as different distributors have various levels of traceability and transparency.

While the study on factors affecting roaster's B2B buying behaviour, especially in Finland is limited, some main factors have been researched. Most importantly the needs and wants of consumers drive the purchasing decision as well as the perception of the roaster's brand. As consumers are becoming increasingly aware of sustainability issues, transparency and traceability of coffee have an increasing importance among consumers. Apart from the influence of consumers, the roaster's perception of sustainability as well as the possibility of performance improvements can be driving factors that affect the green coffee buying process.

2.10.2 Conclusion

This literature review has diversely examined the existing literature on the thesis topic. While the scope of the thesis research questions is in the context of Finnish roasters, the literature review is mainly from other countries. The absence of literature from Finnish roasters is a major gap, and the topic should be researched more.

The main findings of the literature review include the drivers and barriers to implementing sustainability in coffee supply chains, as well as methods that different parties in supply chains can use to promote transparency and traceability. These methods include but are not limited to the use of blockchain, certifications, and enhancement of roaster-farmer relationships. In addition, the past literature otherwise related to the topic has been researched. The findings from the literature review help in creating the groundwork for answering the research questions and building the methodology section of the thesis.

3 Methodology

3.1 Choice of research method

Quantitative and qualitative research methods are the two data gathering methods used for works such as thesis. Quantitative data is often used for testing hypotheses or theories and relies more on numbers rather than words. The sample size of quantitative data is larger than of the sample of qualitative data considering the nature of the research methods. Qualitative data on the other hand has more of an open-ended approach to questions and exploring ideas or opinions (Bryman, 2006).

This study was conducted using quantitative data supported by already existing secondary research on related topics. The quantitative research method was deemed more applicable for the research, as it is more open to descriptive answers that are useful for answering the research questions. Another reason for choosing qualitative over quantitative data was to dive more deeply into the actions of the coffee roasters. Considering the nature of the research, quantitative data could have also been useful, but with its limitations in answering the core reasons, it was not decided to conduct quantitative research. Finally, qualitative data provides a more in-depth view that dives into the roots of the answers rather than giving only the answer without description.

According to Alsaawi (2014), the three most regularly used interview types include structured, semi-structured, and unstructured interviews. Out of these, structured interviews are the most straightforward and controlled type of interview that focuses on the core topic without flexibility. Unstructured interviews are the opposite of structured ones, providing participants with an opportunity to elaborate without interruptions. The semi-structured approach is a mix of the abovementioned, providing the participant with a predetermined list of questions while also giving a chance to elaborate and explain their answers more in-depth.

Considering the research, semi-structured interviews were decided to be the most applicable. This data-gathering method was used in order to have a clear guideline for the topic while also accepting answers and opinions outside of the interview questions. To create a comprehensive picture of the topics in discussions, the participants of the interviews were encouraged to comment and elaborate their answers, if deemed necessary.

The interviews lasted for about 30-40 minutes each and were conducted majorly online on conference platforms such as Google Meet and Microsoft Teams. In addition, one interview was held in person and one with email. In order for the participants to better prepare for the interviews and ensure the quality and depth of the answers, the question list was sent in advance. Due to the semi-structured approach of the interviews, the participants were

allowed to suggest additional questions based on the question list. Each participant was also asked at the end of the interview if they had any additional information that they saw as useful for the research.

The interviews were conducted either in Finnish or English depending on the needs of participants. Transcripts from the interviews were made using built-in software on Microsoft Teams, or by recording the interview and transferring them afterwards. The transcriptions were made to allow a more efficient data analysis process.

3.2 Data collection process

As discussed in the literature review, only a limited amount of research has been done on the transparency in coffee supply chains, and especially from the perspective of Finnish coffee roasters. Thus, the data collection relied heavily on the interviews. To support the findings, secondary data highlighted in the literature review will be applied to the discussion when it supports or disagrees with the data gathered from the interviews.

3.2.1 Interview participants

In order to get trustworthy and comparable results, a total of six interviews were conducted in a period of about two weeks. More companies were also contacted about interviews. However, a couple of them rejected the interview and several did not answer, which served as the main selection criteria for the participants. The aim of the interviews was to get answers from roasters of varying sizes with different goals and strategies. Thus, the intention was to get a comprehensive picture of the industry without considering past actions or known implementations of transparency in supply chains.

The participating companies were contacted through email mainly using public email addresses. Some of the participants were also referred by other interviewees, or people who worked or had in the past worked in the coffee industry.

The participants for the interviews were mainly recruited on the basis of the company they represent, targeting the multitude of different Finnish coffee roasters. The inquiries for the interviews were sent to employees of these companies based on their job titles, and length of career in the coffee industry. Table 1 below illustrates the different interviewees and roasters they represent.

Table 1: interview participants

Roaster	Interview conducted	Roasting amount (annual)	Type of roaster	Market Focus
Roaster A	Online	1000 kg	Micro	Local
Roaster B	In-person	7000 kg	Micro	Regional
Roaster C	Online	50 000 kg	Macro	International
Roaster D	Email	65 000 kg	Macro	International
Roaster E	Online	146 000 kg	Macro	International
Roaster F	Online	35 000 000 kg	Macro	International

The identity of the participants is kept anonymous as it was requested by some of the participating roasters. Furthermore, the company or name of the participant does not play a part in the data analysis process. This is also a way to keep the answers honest and trustworthy. The participants of the interviews were working in different roles, including sourcing, sales, and management. Each participant was to some extent participating or otherwise had knowledge on the sourcing practices of the companies they represent.

As for the anonymity of the participants, the annual roasting amounts of the companies were asked to make the comparison possible. In the table above, roasters are categorized into micro and macro roasters based on the definition of Deyn (2022), who states that according to some definitions, a micro-roaster is a coffee roaster, that roasts less than 100 000 pounds (45 340 Kg) of coffee annually. Everything above that is considered a macro roastery. However, it was found to be more significant to look at the annual roasting amounts, than if the roaster is considered a micro or macro roaster. Market focus has been added to the table in order to understand what kind of reach they have, also affecting their business model. The market focus of the roasters was not asked in the interviews but is rather an assumption based on the interview answers and secondary data available from the roasters, such as their websites and reports. The knowledge of where the interview was conducted can influence the broadness of answers and thus play a part in the findings and analysis of the data.

3.3 Interview design

The interviews conducted ten questions, which were divided into five themes, those being general, transparency, certificates, supply chain, and traceability.

In addition to these questions, the semi-structured nature enabled both participants and the interviewer to ask additional questions if deemed necessary.

While there is only a limited number of questions per theme, questions were developed in a way that they support and contribute to each other. Therefore, the list of questions should be handled in a way, that each question answers to distinct aspects, but also helps to recognize the connection between these aspects to create a comprehensive understanding of the topic of transparency in supply chains.

3.3.1 General questions

One general question was asked of each participant. The purpose of the first question was to create a background for the answers provided by the participants.

1. How much coffee does the roaster you represent roast annually (approximately, in kilograms)?

Knowing the annual roasting amount helps to answer research questions and objectives. The question creates a foundation for researching how the roasting amount affects the transparency aspects and communication of the company in question.

3.3.2 Transparency questions

Following the general question, three transparency-related questions were asked in order to understand the importance of transparency, current transparency actions, and how they are followed and pursued in the roaster.

1. How important transparency is for the company you represent?
2. What steps does the roaster you represent take to ensure transparency in its operations (from farmer to roaster)?
3. Does the roaster you represent use any specific technology to promote transparency in the supply chain?

The second question creates a view of how the roasters value transparency. Evaluating this, the third question seeks to find what kind of actions the roaster takes to ensure transparency during the supply chain. Finally, the fourth question delves deeper into the specific technologies that the roaster uses to achieve transparency. The question was created with technologies such as accounting practices or blockchain in mind.

3.3.3 Certification question

The literature review reveals that certifications are seen as one important way for roasters to ensure transparency throughout the supply chain all the way from farmers to consumers. Certification questions aim to find out if Finnish coffee roasters value certifications.

4. Does the roaster you represent buy coffee with sustainability-related certificates (including for example: Certified Organic, UTZ, Rainforest Alliance, and Fair Trade)?
5. Do you think the use of certificates is essential for coffee roasters to enhance transparency in their supply chains?

The purpose of the fifth question was to see if the roasters buy certified coffee. Furthermore, the fifth and sixth questions reveal the participant's thoughts about certifications, and if they are a successful way for roasters to promote transparency.

3.3.4 Questions related to supply chains

The next questions do not fall directly under any of the other themes. However, they contribute to the overall supply chain transparency and play an important part in understanding the transparency practices of the roasters.

6. What kind of relationship do you keep with the farms and farmers you buy coffee from (do you for example visit the farms)?
7. How do you communicate transparency and traceability to the consumers? To what extent can they find information about the coffee (for example: origin, variety, and processing)?

These questions help to understand the communicational practices between the two ends of the supply chain: suppliers and consumers. The seventh question is focused on the supplier end to understand the relationships between roasters and farms, which can again be beneficial when figuring transparency from farmer to roaster. The eighth question focuses on the consumer end with the aim of figuring out how the roaster communicates information to them.

3.3.5 Traceability questions

The final question asked in the interview focused on traceability, focusing on the importance of it and how far roasters can track their coffee.

8. How important the information about the origin of the coffee is to the roaster you represent?
9. How precisely can the roaster you represent track where the coffee beans you buy originate from (country level, farmer level, etc.)?

The ninth question aims to find how important traceability is to the roasters. Closely related to this, the tenth and final question tries to figure out to which extent roasters can track the green coffee beans.

3.4 Secondary data from the roasters

In addition to the interviews, secondary data was gathered to support what the participants said. This secondary data mainly originated from the different reports that the roasters had made, including sustainability reports and annual reports. The

3.4.1 Sustainability reports and websites

The representation of the commitment to the sustainability values, mainly focused on transparency and traceability of the roasters in participants was varying. Out of the roasters interviewed, three out of six had some sort of sustainability report available on their websites, all of these companies were among the bigger ones interviewed. The broadness and representation of these reports varied. Some of them focused more on corporate responsibility, while others emphasized the sustainability initiatives of the roasters. However, all of them included knowledge of the transparency and traceability actions of the roasters. In addition to the sustainability report, one of these roasters publicly released the prices they had paid for the green coffee.

Two of the companies publishing sustainability reports said, that they have code of conduct agreements that are binding to the coffee farmers and the roaster, ensuring mutual practices, and understanding. However, only one of these companies had the document publicly available.

Half of the companies had information available on their websites about the traceability of their coffees. This information varied across the roasters but mostly included specifications about where and in which altitude the coffee was grown, what variety it was and how it was processed. However, while the traceability information was not visible on all of the company websites, every company had at least some information available about their transparency, and traceability of sourcing practices.

3.5 Data analysis process

The data analysis conducted in the findings, discussion, and analysis sections is based on the interviews and the secondary data from the roasters. The

interviews conducted serve as the major source of data, answering the research questions and objectives, while the secondary data supports the findings from the interviews.

Interviews were analysed based on the transcripts, recordings, and notes from the interviews. In order to efficiently analyse the information, transcripts were colour-coded and separated into themes based on similarities, differences, and unique aspects of one roaster. Before analysing the transcripts, themes were decided based on the themes the questions were divided into as well as what the research questions were aiming to figure out. This is an example of a deductive approach to analysis, in which the themes and aims of the analysis are decided beforehand (Azungah, 2018). However, the opportunity for an inductive approach was not ruled out, as the possible new occurring themes were also included when found out.

The transcripts and notes were used in their original languages depending on the languages of the interviews, but the findings were translated into English to match the language of the thesis.

4 Findings

The purpose of the findings section is to find occurring trends and themes from the interviews supported by secondary data. The section is divided into the same themes as the interviews, excluding the general question which is used in the comparison of different-sized roasters. In each section, trends, differences, and controversies are highlighted to provide a comprehensive understanding of the findings. In addition, the most notable differences between different-sized roasters are introduced.

4.1 Transparency

Each of the six roasters interviewed said that transparency and other sustainability actions are important to them. To highlight the importance of transparency, one roaster said that on a scale from zero to ten, the importance of transparency lies between nine and ten. While none of the other roasters used scale to determine importance, equivalent results can be seen from the answers.

However, there were different reasons why transparency was deemed an important part of the supply chain and operations. One of the companies mentioned that implementing transparency practices gives especially larger roasters a competitive edge in the industry. Generally, the roasters mentioned that the importance of transparency stems from the currently increasing importance and knowledge of sustainability-related values such as human rights. Two of the companies mentioned regulations as an increasing trend among coffee roasters. Most notably, both of these companies mentioned that the European Union deforestation regulation pressures roasters to implement transparency values at the centre of their operations.

While all the roasters said that transparency is an important part of their operations, it is notable that only one of the roasters stated that their current transparency actions are not enough.

4.1.1 Implementation of transparency practices

From the interviews can be concluded that there was not one transparency action that was the most important and frequent one. The roasters introduced several ways that they use to implement transparency in their operations. Two of the companies had their own code of conduct practices that bind farms they buy green coffee from. One of these documents is public information, and it includes a wide amount of information about sustainability practices and other requirements that the coffee farms must obey.

While not asked in the questions, three companies mentioned transportation of the coffee beans as important. These roasters stated that transportation is usually handled by coffee cooperatives in case of direct trade, or

exporters if some sort of intermediaries are used in the coffee buying processes. Furthermore, accounting practices were deemed important by nearly all of the roasters, enabling transparency and enhancing cooperation. One company also mentioned the use of artificial intelligence as a possible driver for more transparent supply chains. None of the companies said that they used blockchain technology in their supply chains, but it is possible that at least the bigger companies have implemented something similar with their accounting practices. One of the smaller roasters stated, that the utilization of blockchain does not increase value enough considering the cost of it.

As stated before, the roasters also had their own ways of implementing transparency, and not one general one was found. One of the roasters' emphasized continuity is important, especially for bigger roasters who do not have the same level of relationships with the farmers as smaller roasters might have. Continuity was also stated to be a way of knowing the situation at the coffee farms in the situation that coffee is bought from thousands of different farms.

One of the companies stated as an important practice that they own the coffee farms they buy coffee from in co-operation with the farmer, ensuring better living conditions and an adequate wage for their work. The company states in their sustainability impact report that the close cooperation helps them to tackle sustainability issues in line with the UN Sustainable development goals. From the company's sustainability report can be seen, that the roaster has a wide focus on tackling the challenges brought by the SDGs. However, it states that their main focus is on SDGs 1, 5, 8, 12 and 15, those being no poverty, gender equality, decent work and economic growth, responsible consumption and production, and life on land, respectively. The company mentions that the framework that the SDGs provide gives them a comprehensive way of approaching problems related to sustainability, and furthermore transparency and traceability.

The same company highlighted both in the interview and in their sustainability report their cooperation with Enveritas Inc. Enveritas is a company that provides sustainability assurance in the coffee industry by visiting coffee farms in order to understand their sustainability practices (Enveritas, n.d). As told in both the website of Enveritas and in the sustainability report of the roaster, Enveritates helps the roasters to understand the sustainability issues and points of improvement in the coffee supply chain.

The roasters interviewed used two different ways of buying coffee, those being direct trade and different sorts of middlemen such as exporters and green coffee buyers. The next two parts of the findings focus on the distinct features of both ways, highlighting the differences and similarities.

4.1.2 Direct Trade

Two of the roasters stated that they buy coffee with direct trade. Both of these roasters were on the smaller side of the roasters participating in the interviews. One of these roasters is a relatively new roaster, which had purchased coffee directly since the beginning of the operations. The other one on the other hand stated that they started buying direct trade coffee in 2005, being one of the first roasters in the world to do so.

Both of the companies mentioned similar advantages that buying directly from the farms has. As stated by the roasters, the prominent levels of relationship with the farmers increase the trust between roasters and farmers, also enabling the roaster to get coffee beans of stable and better quality. One roaster also said that direct trade is respected by the farmers, leading to better prices for the roasters. Speaking of supply chains, one roaster highlighted, that direct trade helps them to achieve noticeably short supply chains which increases transparency due to the missing of some parties. The same company also said, that implementing fair trade brings some extra costs, but also saves in long-term costs by bringing more transparency to the supply chains.

4.1.3 Intermediaries

The rest of the companies stated that they use green coffee buyers, traders, or other similar institutions and companies to purchase their coffee. The notable difference between direct trade and intermediaries was, that often the companies are not in direct contact with the farms. Rather than this, most of the companies had dedicated contact persons in these intermediaries organizations, who then knew more about the farms and farmers. These intermediaries serve as a link between the farmer and the roaster, knowing the roaster's preference for the coffee, and making sure that farmers are following the requirements from the roasters.

One of the roasters also said, that they have auditors for the farms, who make sure that the code of conduct of the company is followed. Another roaster also emphasized that the contact person they have knows the coffee preferences of the roaster and can propose new coffees based on this knowledge. Considering costs, the same company commented that the cost of using intermediaries is reasonable considering the amount of work that it saves from the roaster itself.

Some potential challenges with the use of intermediaries based on the interviews include the uncertainty it brings, affecting transparency. One company stated that they are not completely sure on what basis the intermediaries source the coffee. The lack of relationships with the farmers also was figured out to lead to similar consequences.

4.1.4 Impact of transparency on the roasters

A couple of the roasters said that they were established with transparency and sustainability as the main focus. This helped these roasters to implement the practices straight from the start comparing to the roasters who had existed for a longer time. Two of the older roasters said, that they have focused more on transparency aspects of coffee in the past ten years. One of the roasters said that another factor affecting the transparency actions of smaller roasters is the expectations. According to the company, micro-roasters are expected to have more focus on sustainability and transparency practices, which also differentiates them from the bigger roasters.

The impact of the transparency for the roasters can be seen in how they planned to develop their actions. The sustainability reports of the companies supported this by introducing the next steps towards more sustainable coffee production and supply chains. Two of the companies had clear future initiatives, that they would like to include in their operations in the future. Depending on the roaster, these goals were either short- or long-term. One of the roasters also highlighted the current process of the goals in their sustainability report by using key performance indicators to track the success of these goals.

Several of the roasters emphasized the importance of fair prices paid for the coffee beans. These roasters saw the well-being of the coffee farmers and farm workers as a priority. The well-being of these parties was mostly implemented by paying adequate prices for the coffee leading to more human wages for the workers. One of the companies also said that their aim is to provide the farm workers with possibilities to develop the community of farmers in origin.

The price paid for the coffee depended on several factors including the minimum price and price premium provided by the certifications. One of the companies said, that they communicate with the farmers what would be an adequate and sustainable price for the coffee. In the companies that used intermediaries, similar actions were not possible, as they did not decide the price that was paid to the farmers.

Some controversies were also found in the interviews. Especially the companies who had focused on transparency for a long time or since the beginning of their operations thought, that the transparency practices in Finnish roasters are not enough, and to some extent fooling consumers. While all of the roasters say that transparency is important, there seems to be some confusion among the roasters on what is actually considered important and effective practices to maintain it.

4.2 Certificates

4.2.1 Use of coffee certifications in the roasters

Based on the interviews, roasters have different views on the importance and use of coffee certifications. The use of coffee certifications varied especially between different-sized coffee roasters. It was perceived, that for bigger companies certifications serve as an important way to make the transparency actions more credible, as relationships and communications are not possible to be on the same level as they can be with smaller roasters.

Most of the roasters told, that they buy certified coffee to some extent. Mostly this coffee was Certified Organic or Fair Trade certified. However, only two of the roasters stated, that their products are certified, both of these roasters were on the larger end of the roasters interviewed. For smaller roasters, there were several reasons for not selling certified products. Some of the most frequent reasons included the cost of selling certified products and the lack of actual impact from the certificates.

One of the smaller roasters said, that certifying their products could cost thousands of euros. Considering the impact of certificates this was not considered beneficial. While roasters who did not certify their coffee saw some upsides in the use of certifications, there was more uncertainty and a lack of knowledge. Firstly, these roasters were sceptical about the actual impact on how the farms operate. It was a general understanding, that smaller roasters can achieve better and more reliable outcomes with relationships with the farms when they can also follow the actions made at the farms. It was also perceived that some of the consumers recognize the certificates, but do not often know what is behind them.

Generally, certificates were still seen as a good start, even by the smaller roasters. One of the roasters stated, that certificates create credibility for the roasters, and implies that they are interested in transparency and sustainability values. It was also noted, that as the roasters might not pay for the use of certifications, the coffee beans can be certified even if it does not say so in the package.

To tackle the problems with traditional certificates, one of the roasters had implemented their own certification. They said that the use of their own certification enabled them to figure out processes and transparency aspects that they would not have been aware of without. The certificate was designed to serve as a showcase of relationships with the farms, ensuring that an adequate minimum price is paid, and all work made at the farms is ethical and sustainable. Also, the clear and transparent price paid for the products was highlighted. The impact of the certification was also highlighted in the sustainability report of the company in question.

However, opposing this, another roaster stated that roasters who have developed their own certificates do not necessarily know what is happening at the farms, and that even more and better transparency actions are required.

4.2.2 The importance of certificates for the coffee industry

Additionally, to their own use of certificates, the roasters were asked if coffee certifications are generally essential for coffee roasters to ensure transparency. Similarly, to the own use of certificates, the results were varying. Out of six participating roasters, half thought that they were, and the other half thought they were not. However, most of the participants also saw the reasons for the other side.

Out of the three roasters who thought that the use of certifications is essential, one said that they have nothing against certifications, and another one said that the importance depends on the business model and can be useful in some cases. There were several reasons behind certificates not being useful. Most of these reasons were related to the uncertain and limited nature of the certifications, such as lack of knowledge and action, and effect on the quality of coffee.

One of the arguments made against certificates was whether the extra money paid to the farmers was actually sufficient. One roaster was wondering, if the extra money is adequate compared to the extra work that achieving the requirements of the certificate brings to the farmers. It was also questioned if the certificates have an effect on the quality of coffee when the resources of the farmers go into the fulfilment of the requirements.

The other big contradiction with the certifications appears to be what information it actually guarantees to the roasters. One roaster questioned, that if roasters do not have any developed relationships with the farmers, how can they be sure that the transparency and sustainability actions are actually on the required level? Two of the roasters agreed, that a better way than certificates is to know where the coffee comes from and how it is farmed. It was also mentioned that consumers are often not aware of what actions certifications promise.

As stated, the roasters who were not in favour of certificates were typically on the smaller end of roasters. Two of these roasters still identified, that the business model and size of the roaster have an effect on the significance of certificates. One of the roasters said that certifications bring credibility to roasters, especially in a situation when there is a longer supply chain. Another one said, that for bigger roasters the use of certificates is essential to some extent, and at least a beginning point.

Two out of three of the roasters who said that certificates are essential also saw limitations on them, similar to the ones mentioned above. One of these roasters said, that certificates should be a standard for every roaster, even though the effect of them is limited. The same roaster stated that the limitations make certifications not significant for speciality coffee roasters, as they focus more on quantity over quality. Agreeing with this, another roaster said, that the upcoming regulations such as the deforestation regulation discussed earlier, are a step towards the right direction.

Similarly, to other roasters, it was said that bigger roasters could benefit from the certificates. To address this, one of the bigger roasters interviewed

said, that certifications are an essential way for them to track transparency actions, as they do not buy coffee directly nor visit the farms. Most of the other roasters agreed, that certifications are on the side of other actions a crucial step towards transparency.

4.3 Supply Chains

4.3.1 Relationship with the farmers

All of the roasters participating in the interviews had either a direct relationship with the farms they purchase coffee from or a relationship with the intermediaries who then again have a relationship with the farmers.

Three of the roasters claimed to visit the farms at least occasionally. One of the roasters said, that the visiting was more frequent when the roaster was younger but has decreased since. It was mentioned that when the roaster buys coffee from an increasing number of farms, it is not possible to visit everyone. The same roaster also stated that the COVID-19 pandemic had an effect on the relationship with the farms, cutting down some of the farms they had previously bought coffee from. After the pandemic, these relationships are now growing back.

The roaster who owned the farms with the local producers emphasized the impact that these sustainability-focused farms can have on other farms. It was said that once one farm in a cooperative or area serves as an example, other farms nearby are more likely to implement similar actions. The same roaster said that the relationship with the farms is and should be in a direction that helps the farmers to develop their communities. The impact that the roaster has had and wishes to have on the farmers and their local communities is established in their sustainability report, which concentrates individually on each of the origins that the roaster owns the coffee farms in.

Another roaster who bought coffee directly from the farms mentioned the importance of the relationship with the farms. This relationship was said to be focused both on business and the actual relationship developed with the farms. This roaster used various levels of staying in touch with the farms, such as communicating with online texting platforms. Similarly, one of the roasters who used intermediaries said, that there is a possibility to have video calls with the farmers even though they are not buying coffee directly from them. The same roaster said that they had a possibility to visit farms but did not think it was necessary.

Instead, this roaster said that they have a trusted contact person in the company where they buy green coffee from. This contact person then communicates with the farms, reporting and confirming their actions back to the roaster. The same roaster emphasized the importance of a long-term relationship with the green coffee buying companies, as it can lead to more orders from specific farms, also leading to cheaper prices.

Also, another roaster emphasized the importance of continuity within the farms their cooperation companies buy coffee from. This roaster said that their exporters and suppliers have been stable and stayed the same for a long time, enabling the farms to always have a buyer for their coffee.

4.3.2 Communicating transparency and traceability to consumers

The level of communication about transparency and traceability of coffee had variation between all the roasters. Most of the roasters said that they have at least some information about the origin and process of coffee as well as the supply chain available either on their website or in the coffee packages. One of the bigger roasters said that currently, they do not communicate these practices directly to the consumers. However, from this company's website was still found little information about their general sustainability practices including use certificates. This company also revealed some origins they used but lacked more in-depth information about their coffee.

Another one of the biggest roasters said, that they mainly focus on communicating where their coffee comes from. This was mainly done by blog posts focusing on the farms and farmers to highlight the transparency of operations. The company also had some single-origin coffees presented on their website.

Generally, the middle-sized roasters on the smaller end of macro-roasters had the most visible communicational practices towards their consumers, which were also visible on their websites. One of these companies said, that they try to be direct yet simple in their communications. This company did not highlight coffee-specific information on their websites but rather focused on sustainable processes in sourcing and business.

Two of the companies highlighted that they show information about coffee on the labels of the packages. One of these roasters highlighted the importance of stories about the people behind the coffee, and especially price transparency. This roaster's website also shows a varying amount of information about the coffees on their website, especially their origin. Variety and processing as well as growing altitude were also shown on some coffees.

A similar trend was followed by another micro roaster, which gave clear information about their coffees on the website. However, while the coffee sold by this company seemed to be quite easily traceable, they still noted that there is a place for development in consumer communications. They stated that their focus has shifted towards transparent communications in the past years, and thus there is more information available about their newer coffees. This and another company said, that using QR codes in the coffee packages could help to make information about transparency and sustainability practices more easily available.

In contrast to the generally quite open information from some of the smaller roasters, one roaster said that communication is harder without

certificates, as they could clearly imply transparency implementations. This company said that its reach has been in mostly business-to-business markets but have recently started cooperation with a large retail company. The same company had also focused on brand differentiation in order to get the interest of the consumers.

To conclude the communications towards consumers, information about coffee seems to be quite easily available on some roasters. All of the websites of the interviewed companies had to some extent information about their transparency or sourcing-related aspects. As mentioned before, half of the companies had information about where the coffee has grown, and how it has been processed. However, while information is often available either on the websites or in the coffee packages, the harder part is to communicate how transparency in operations and supply chain is achieved, as this part of the supply chain is usually the least visible to the consumers.

One of the roasters questioned, if the communication about transparency and traceability is important to the consumers. While it might be important for some, it does not mean that everyone is interested. The roaster mentioned that approximately twenty per cent of their consumers want to know more about the coffee and its process, and the rest are “just happy to have a good coffee.”

4.4 Traceability

4.4.1 Importance of traceability

Generally, all the roasters thought traceability is an important part of transparency. One of the roasters said, that they see traceability as one of the responsibilities of micro-roasters to promote more transparent supply chains. In addition, a couple of roasters thought, that bigger companies should take more responsibility and improve the traceability of their coffee. One of the roasters also states, that traceability should be seen as an important part of traceability, which is usually the easiest part to communicate to the consumers.

One of the bigger roasters responded, that the knowledge of country or origin is the main priority, and knowledge of the specific farm is not as important as it. It was perceived that the implementation of traceability becomes harder once the roasting amount increases. While the coffee may in that case be traceable to some extent, knowing for example the exact farms and washing stations might become harder. The same roaster also stated that they would want to work more towards traceability. Similarly, to this, one of the smaller roasters also said, that while more efficient, the use of intermediaries makes the coffee less traceable, which was also figured out from the supply chain questions.

4.4.2 Implementation of traceability

The ableness to track the coffee varied between roasters, but generally, every roaster was able to track the coffee to some extent. Again, differences were able to be seen between those who buy direct trade, and those who use intermediaries. The farms with direct trade were able to track the coffee furthest, but also some exporters used provided specific farm-specific information.

Among those roasters who bought coffee directly, one said that they are able to track the coffee all the way to the specific washing stations. The other roaster did not specify to which extent they can track, but similar accuracy can be expected as they own the farms. There were also two roasters who used intermediaries who were able to track the coffee to the washing stations. One of these roasters said that there are differences on the farms, as some of them might not have the newest technology available, resulting in a lack of traceability information. Thus, the roaster said that they would still want to be able to track coffee with better accuracy.

Another one of the roasters that were able to track washing stations said, that they could also get information from the intermediaries about where the coffee was processed and by whom. They were also able to see pictures from the farms and get specific information about the quality of coffee beans perceived at the farm. However, they said that they still always taste the coffee beforehand and make the purchase decision based on their own preferences.

Two of the roasters said, that they are able to track to the farm level with the use of exporters. One of these companies said, that there are differences between countries. They said that the ease of tracking varies on country and government-specific regulations, policies, and requirements.

5 Discussion and analysis

This section aims to discuss and analyse the findings from the interviews conducted and reflect them compared to the literature review. The discussion and analysis are divided into three main themes, those being transparency and traceability, supply chains, and buyer behaviour. The aim of the discussion and analysis is to build a solid foundation for answering the research questions using both the literature review and the interviews.

5.1 Transparency and Traceability

Transparency and traceability are furthermore divided into four key themes or concepts that were reoccurring in both the literature review as well as the interviews. Firstly, transparency aspects are highlighted especially from the point of roasters, building a foundation for understanding buyer behaviour. Secondly, related concepts such as SDGs, corporate social responsibility, ESG and certifications are discussed. Lastly, concepts focusing more on traceability are discussed.

5.1.1 Transparency

Based on both the interviews and the literature review, transparency-related values are becoming increasingly important for both roasters and consumers (Bowie, 2021). As stated in the literature review, in order for roasters to achieve transparent supply chains, it is needed to consider all parties of the supply chains. The interviews found out, that especially in the past ten years have started to consider transparency aspects all the way from the farmers to the consumers, including intermediaries in between, and roasters' own actions. As found out by Buerke, et al. (2016), the reasons stem partly from the consumers, who are more willing to pay more when they believe that impact can be made by buying decisions. However, the interviews found out that roasters also genuinely care about the products that they sell and are willing to invest in transparency-related implementations.

As stated by Bowie (2021), sustainability practices need to start from the farmer level. It was found out by the interviews, that roasters have an impact on the farmer's willingness and recourses to implement transparency in their operations. This willingness was often achieved the best through developing relationships with the farmers. Supported by Cole & Brown (2014), another way to improve transparency is transparency with green coffee purchase prices. Several of the interviewed roasters agreed, that this is an important part of not only transparency but of the wellbeing and development of the coffee farms. The same can furthermore be seen from the sustainability reports that some companies publish; most of the transparency actions stem from the farms, rather than from the roasters. As the coffee farms are often

located in more developing countries, the SDGs highlighted in one of the sustainability reports are more focused on the farms.

Gerald et al. (2019) stated that direct trade is a way for roasters to achieve more transparent supply chains by negotiating coffee prices directly from the farmers. This is supported by the interviews, which also stated that knowing the farmers well can result in more high-quality and consistent green coffee from the farms. Gerald et al. agreed with the abovementioned, and also stated, that direct trade can achieve better relationships and communication with the farms, which was agreed by several roasters in the interviews. As stated by both Gerald et al. and one interviewee, direct trade leads to smaller supply chains. What was not visible from the literature review, the use of direct trade can potentially also lead to better green coffee prices for the coffee roasters.

Vasilov (2020), stated that transparency can help roasters to better understand what is happening at the coffee farms. Several interviews agreed with this, saying that transparency helps the communication with the farms, and understanding the situation of their communities. However, as there were variations in the transparency practices between the roasters, it cannot be said that every roaster takes full advantage of this. As stated in one interview, especially bigger roasters should have more focus on the transparency aspects, which was also supported by Bowie (2021), in the literature review.

In contrast to the findings of the literature review (Alamsyah, et al, 2023), none of the roasters interviewed did not state that they used blockchain in their operations. However, as accounting methods were deemed important in the supply chains and the roasters said that they would like to implement blockchain in the future, it could still be an increasing trend in the industry. It is important to notice, that the roasters interviewed might not be aware of the technologies used in their supply chains. Thus, it is possible that in some parts of the supply chains blockchain is still implemented. Roasters also stated that the main reason for not implementing blockchain is the costs, which was supported by Jabbar et al. (2021) in the literature review.

Related to the technologies used in supply chains, artificial intelligence has been already implemented in the roasting processes of coffee roasters (Wibowo et al. 2022). However, there was a research gap in the use of AI to manage supply chains. To briefly answer this research gap, none of the roasters in the interviews said that they use artificial intelligence in supply chains, but it was seen as an opportunity for the future.

The barriers to sustainability in supply chains introduced in the literature review included government policies, the complexity of processes, and unclear sustainability principles (Guimaraes et al, 2020). Out of these only government policies were supported in the interviews. However, it was stated that the policies can be either a driver or a barrier depending on the country. It is important to notice, that there was no specific question asked about the barriers and drivers, thus the results could have been different otherwise.

However, the interviews revealed that there is a variation in accounting practices between coffee farms. Similarly in the literature review, it was found, that smaller farms can still write their transactions on paper, which was supported by the interviews (Jabbar et al. 2021). This finding possibly contributes to the complexity of processes, when every transaction cannot be tracked, emphasizing the importance of blockchain or similar technology.

5.1.2 UN Sustainable Development Goals

The literature review found that coffee growing, and the industry as a whole relate directly to several SDGs, including especially SDGs 1, 8, and 12. However, the findings support that the actions implemented throughout the coffee supply chain have an effect on several more of the SDGs. As discussed before, one of the roasters who published sustainability guidelines tracked their progress at the coffee farms by measuring their effect on the SDGs, with a focus on SDGs 1, 5, 8, 12 and 15. By analysing the findings from the interviews combined with the abovementioned sustainability report, the coffee industry has an effect on the SDGs.

SDG 1, No poverty was seen as important in several interviews. Nearly all of the roasters thought to some extent that farm workers should be paid adequate prices, which could result for example from the use of certifications or discussions between the farms and roasters. Related to this, a literature review found that coffee producers often live in poverty (Bacon, 2004). Thus, the transparency on the price paid for green coffee can have an effect on SDG 1 from the viewpoint of the coffee industry.

Actions made by coffee roasters, such as the use of Fair Trade certificates or sourcing the coffee directly from the farmers can ensure more adequate wages for the farm workers. Consumers can also make their own coffee-buying decisions based on the prices paid for the coffee. While the quality of coffee also contributes to the higher price of coffee from smaller roasters, these roasters also more often pay for example price premiums to the farms. Another visible action towards better prices paid is the price transparency that is highlighted by especially the one coffee roaster, which publishes their prices paid for green coffee on their website.

Related to SDG8, decent work, and economic growth, the interviews revealed that some of the roasters were committed to improving the lives of coffee farmers and cooperations. The improvement was achieved with adequate prices as mentioned above, as well as with support provided for the communities of farmers. Related to SDG 8, Gizaw et al. (2022) stated, that in the long run, the growth in coffee exports can lead to economic growth in the country. While this was not a focus point of the research, there is a contradiction between sustainability at the farms and economic growth, as the interviews found out that an increase in production does not necessarily

correlate with an increase in transparency or other sustainability-related values in the supply chains or at the farms.

SDGs 1 and 8 can also help to create a groundwork towards other SDGs such as 12, responsible consumption and production as well as 17, partnerships for the goals. When roasters are committed to transparency at all stages of the supply chain, they can provide consumers with more traceable information about their coffee. However, as only half of the roasters interviewed had an emphasis on communicating traceability towards consumers, it is the responsibility of the roasters if they want to support responsible consumption. Relating to SDG 17, all of the roasters had some sort of collaboration either with the farmers directly, or with trusted intermediaries. As illustrated in the conceptual framework, the farmer-roaster relationship is one of the key actions towards more transparent supply chains in the coffee industry.

As a conclusion for the UN Sustainable Development Goals and their relation to the coffee industry, it can be said that while not many roasters highlight them directly in their sustainability actions or reports, they still can be connected to the implications related to transparency and traceability. Furthermore, the realization of SDGs plays a part in the research of their importance in the overall sustainability goals followed by companies.

5.1.3 Corporate social responsibility

While questions about corporate social responsibility were not specifically asked in the interviews, the findings indicate that the definition made by Campbell (2007), is applicable to some extent when it comes to Finnish coffee roasters. It was found out from the interviews, that often the roasters are genuinely interested in the wellbeing of the farm workers and their communities, which also can look good in the eyes of the coffee consumers.

Sustainability reports can be seen as one voluntary action towards better social responsibility. While all of the companies interviewed communicated their sustainability actions towards consumers to some extent, especially the three companies that had made sustainability reports showed a clear commitment to informing their customers and other stakeholders about their sustainability impact.

Similarly to corporate social responsibility, environmental, social, and corporate governance factors can be listed as part of the bigger view of the sustainability actions implemented by the roasters. As stated in the literature review, ESG factors can be linked to the transparency and traceability of the coffee supply chain (Wong, 2023). This can be especially seen from the roaster's focus on the relationships with the coffee farms.

5.1.4 Certificates

The literature review states that certificates are “standards that coffee farms can use to show consumers that they are committed to the values and standards that are required for the certificates” (Bray & Neilson, 2017). However, some roasters noted, that it can be hard to guarantee that the requirements are actually filled. It was also mentioned, that while consumers might see and recognize the certifications, they probably do not actually know what the certifications promise.

While the use of certificates can show the commitment to transparency-related values, they were generally seen as questionable by the roasters, and to some extent also by the literature review (Cole & Brown, 2014). It was found out, that certifications themselves are not the optimal way to promote transparency actions, but on the side of other actions, they can build credibility. In the interviews, especially bigger roasters said, that certifications are one of the only ways to follow transparency actions at the farms. To tackle the challenges of general certifications, coffee roasters have developed their own certifications, which received varying opinions in the interviews.

In the interviews, the certifications were also stated to be quite expensive to implement. In the literature review, it was found that certified farms generally have better financial situations than non-certified farms (Van Rijsbergen, 2016). While this was not completely confirmed in the interviews, it was stated that price premiums paid as required by the certifications can have an impact on the working conditions at the farms. The interviews also stated that certifications bring extra work to the farms.

Past studies introduced in the literature review also suggest that consumers are willing to pay more for certified coffee (Valkila, et al. 2020). However, there was no mention of this in the interviews. The same research stated that cafes in Finland did not see certifications as necessary, and the same can partly be applied from the interviews.

Certifications are also widely covered in all three sustainability reports in one way or another. One of the reports highlights roasters’ own certificate, while another one states that especially for a large roaster, certifications can be a way of supporting sustainable and transparent sourcing, which was also discussed in the interview with the company in question. The third company highlights in their report, that they think that certifications are a step towards right, but a combination of different certifications does not necessarily prove roasters sustainability actions. In contrast, the roaster stated, that the coffee origins are different and that the same certifications are not necessarily optimal or applicable to each origin.

Finally, supporting the interview’s statements on the questionable impact of certifications, the literature review critiques Fair Trade certification on how it does not necessarily result in a better price paid for the coffee (Cole & Brown, 2014). Considering the contradictions, further study on the impact of certifications on coffee prices as well as farmers’ and cooperation’s wellbeing and development should be done.

5.1.5 Traceability

The literature review defined traceability as the ability to access information on every phase of the life cycle of the product. Olsen & Borit (2013) stated, that record-keeping is an essential way to promote traceability of the products. The technologies that roasters used, or did not use are discussed above, but generally, the interviewed roasters saw traceability as an important aspect, which could be on a better level than it currently is.

It was found out from the interviews, that roasters who use direct trade saw it as an effective way of improving traceability, considering its abilities that allow them to better see how coffee is farmed and processed. This was also supported by Guimaraes et al. (2020). Direct trade also supports roaster's visits to coffee farms, which is a way to promote traceability (Atkins, 2023). The visits were seen as important by several of the roasters.

5.2 Supply chain

The supply chain analysis focuses on other supply chain transparency-related findings and contradictions, which are not focused on other parts of the section. The literature review found out, that over 80% of coffee consumers wanted to consume environmentally friendly coffee, but did not yet (Bowie, 2021). This opens a possibility for roasters to promote transparency-related values in order to gain consumers who value them. Generally, it was found out from the interviews that transparency is an important tool for providing information to consumers, but it should be implemented better into the marketing of the products.

As seen from the interviews, actions related to corporate social responsibility are becoming increasingly important for the roasters. Bacon (2004) noted that roasters should take the whole supply chain into account in order to be sustainable. The literature review also found that promoting the corporate image affects consumer's buying decisions (Vasilov, 2020). From the interviews, corporate social responsibility can be divided into actions made by the company, and how they show these actions. While all the companies valued values related to it, the marketing and openness towards consumers could be on a better level.

The literature review found that insufficient technological capacity related to data openness can be a challenge related to supply chain transparency (Alamsyah et al. 2023). The same was supported in the interviews, stating that these technologies are expensive and complex to implement. However, considering the different resources that both farms and roasters have, a mutual transaction-tracking system such as blockchain would be useful. Complexity of the processes was also mentioned in the literature review, supporting the findings from the interviews (Sayogo, 2014).

While generally, the growth of roasters is good for their business, the increasing amount of roasting can make supply chains and processes more complex. Sayogo (2014) stated in the literature review that growth in competition can lead to better products targeted towards consumers, but also promote unethical behaviour to survive in the competition. Generally, the larger companies interviewed stated, that growth makes transparency in supply chains harder, as there are often more parties and relationships with the farmers and the importance of decreases.

Considering the consumer's importance in the supply chain, Song (2019) introduced the Lovemarks theory, which tries to explain customer loyalty and the relationship between product and customer. Customer satisfaction consists of several factors, and the roasters had multiple ways of achieving that, such as the quality of coffee and sustainability actions. The implementation of Lovemarks theory could be seen in one roaster, which tried to differentiate itself from the competition with clear and distinguishable packaging.

5.3 Buyer behaviour

Buyer behaviour was mostly researched from the interviews based on the transparency and traceability aspects of coffee. Generally, the roasters stated that transparency is important. However, the actions were varying, and it is difficult to say what works and what does not.

The roasters had often quite good relationships either with the farms or exporters and had a tendency to buy transparent coffee. While the importance of certifications was not as significant as it seemed in the literature review, roasters used the relationships to determine if the coffee they bought was transparent. One of the roasters stated, that they look for specific products that both match their sustainability and quality requirements, also considering the recommendations from the exporters.

What was notable about buyer behaviour, was that roasters also had an emphasis on the development of the transparency actions at the farms. By educating and supporting, some of the roasters aimed to help the farmers and their communities implement better transparency actions. As stated by one roaster, continuity and long relationships were essential for trusting the transparency actions of the farms.

There was a contradiction in the sourcing practices between interviews and literature review. The literature review stated that large roasters tend to import coffee directly from the farms (Borzoni & Nigel, 2011 and Benzaken 2007). While the smaller roasters use dealers as it is more cost-efficient. However, this study was conducted in the Italian coffee industry, and the results from the interview stated the opposite. In fact, the larger roasters said, that the scale of the operations does not make direct trade possible, as it would require a substantial number of recourses as the roasting amounts are far bigger.

6 Conclusion

6.1 Main Findings

The main findings section focuses on addressing and answering the research questions based on the literature review, interviews, and discussion and analysis concerning the results. Overall, the findings were quite broad and gave a perception of the importance of transparency actions and implementations among Finnish coffee roasters.

6.1.1 Implementation of transparent supply chains in Finnish coffee roasters

The first research question aimed to find out “How Finnish coffee roasters have implemented transparent supply chain practices in their operations?” Reflecting on the conceptual framework presented in the literature review, transparency-related actions and implementation can be made in three steps of the supply chains, including farms, roasters, and everything in between. Most of the Finnish coffee roasters that were interviewed had an emphasis on the roaster and farmer-end of supply chains.

Concluding the main findings of the research question, there is not one single way that is mutual to all roasters. While there are a number of similarities, Finnish roasters have implemented their own actions that are the most suitable for their goals and business models. Generally, all the roasters value the importance of these transparency implementations to at least some extent.

The most frequent findings included the relationships with the farmers, especially achieved by the use of direct trade. The importance of a code of conduct for farmers was also emphasized to bind the farmers to follow the requirements of the roasters. Some more roaster-specific findings included owning the coffee farms in cooperation with the locals and emphasizing the importance of the farmer community.

Some of the roasters also saw price negotiations, the use of auditors, and certifications helpful in implementing transparency. However, there were found to be contradictions and problems with certifications, making them the most suitable for larger companies and on the side of other transparency actions.

6.1.2 Importance of transparency and traceability in choosing green coffee supplier in Finnish coffee roasters

The second research question “How big of an importance do transparency and traceability have in the process of choosing green coffee suppliers in the

Finnish coffee industry?” aimed to find out if Finnish roasters value transparency and traceability values in their buying decisions.

Generally, the roasters stated that transparency and traceability values are very important, providing a competitive edge for the roasters. Mostly the roasters did think that these values affect their buying decisions, especially among those roasters who bought coffee directly from the farms. Especially important for the majority of the roasters was the relationships with the roasters that can help to achieve better transparency and traceability.

The interviews clearly emphasize the importance of transparency in supply chains, in which the actions made at the farm play a big part. In order for the roaster to be transparent, they, therefore, need to emphasize their sourcing practices and the farms that they cooperate with. It is furthermore important to notice, that while the roasters emphasized the importance of transparency of farmers with for example code of conduct or the use of certificates, some of them also think that they can impact the transparency actions at the farms in the long run.

6.1.3 The difference in transparency and traceability between different-sized roasters.

The third research question aimed to find out “How does the importance of transparency and traceability vary in different-sized coffee roasters in Finland?” Several differences were found, however some of them might also happen between smaller roasters. Thus, while trends can be seen, there is no clear line of what the practices of different-sized roasters are.

Contradictory to literature review findings, smaller roasters were more involved in direct trade, while larger roasters often used an exporter or some other sort of intermediaries to buy coffee, mainly because of the size of their operations. Smaller roasters were also less likely to use advanced technologies to track the transparency or traceability-related aspects. While it was perceived that larger roasters do not necessarily use these technologies, they have potentially better resources for implementation of them. It was found out, that larger roasters use certifications more likely, as they are a relatively effortless way to promote transparency actions with complex supply chains and large roasting amounts. Smaller roasters had a little more sceptical look at the actual impact of the certifications.

As expected, smaller roasters saw relationships with farmers more important compared to the larger roasters. Smaller roasters also more frequently focused on initiatives that help the farmers develop their communities, while larger roasters focused on more broad sustainability goals and community development. Smaller roasters generally provide more information about their products and processes to the public.

6.2 Limitations

While six interviews were the target number for the research, having more roasters participating could have revealed even more insights into the importance and implications of transparency. In the interviews, there were found quite many different ways of implementing transparency values, but there was not one consensus made about what are the best ways to do so. A larger sample for the interviews could have helped to better recognize trends. Especially helpful would have been to have a larger number of bigger roasters. However, there is a limited amount of such roasters in Finland.

As the research focused on Finnish coffee roasters, the findings cannot be completely generalized in a global view. Also, as what the roasters said in the interviews cannot be fact-checked, there is always a possibility of them making things seem different from how they actually are. Also, as more companies were contacted than interviewed, it is possible that the companies who accepted the interviews are doing better than those who did not.

Another limitation of the research is, that it focuses on the transparency values from distinct viewpoints and does not necessarily take everything into account. Additionally, while the qualitative nature of the interviews helps to understand the actions of participating roasters, quantitative data could help to see trends with higher confidence.

6.3 Implications for international business

The thesis research explored a topic in the coffee industry, which had not any significant past research done on. Therefore, the qualitative data gathered from the importance of transparency, its implementations, as well as the differences between different-sized roasters can serve several different target groups. As the coffee supply chain goes through several countries, it can in the best scenario benefit the parties in different countries.

The research is useful for both roasters and consumers. Roasters all around the world can benefit from the data when they are thinking of what transparency aspects to implement. On the other hand, consumers can use the data to better understand the complexity of coffee supply chains as well as to what extent different-sized roasters value these aspects. While the data gathered focuses on the Finnish coffee industry, it can to some extent also be applied to roasters that originate from similar countries to Finland, most notably Nordic countries. Also, the practices related to coffee farms could be implemented at the coffee origins.

As the findings of the research are focused on the actions of companies and their supply chains, the results could be used for the development and implementation of transparency in the supply chains of other similar products. The findings can also be used to understand the current transparency

implementations of roasters better and to see what there is to improve in the future.

6.4 Suggestions for further research

Further research on the topic of transparent supply chains should be made in addition to the studies of this thesis. Considering the limitations of the study, a quantitative analysis of the importance and implications of transparency and traceability should be made in order to understand the broader picture of these actions. Similarly, doing related research on the roasters originating in other countries or continents could help to see if there is a difference in these values between different geographical locations.

The consumer perceptions on the importance of sustainability values in coffee could also be further researched to understand if the transparency implementations addressed in this thesis are actually important to the consumers. Lastly, an analysis of how modern technologies could help to achieve more transparent supply chains could be made, as the current findings show, that roasters are yet to use advanced technologies in their supply chains.

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Appendices

Appendix A: Interview questions

1. How much coffee does the roaster you represent roast annually (approximately, in kilograms)?
2. How important transparency is for the roaster you represent?
3. What steps does the roaster you represent take to ensure transparency in its operations (from farmer to roaster)?
4. Does the roaster you represent use any specific technology to promote transparency in the supply chain?
5. Does the roaster you represent buy coffee with sustainability-related certificates (including for example: Certified organic, UTZ, Rainforest Alliance, and Fair Trade)?
6. Do you think the use of certificates is essential for coffee roasters to enhance transparency in their supply chains?
7. What kind of relationship do you keep with the farms and farmers you buy coffee from (do you for example visit the farms)?
8. How do you communicate transparency and traceability to the consumers? To what extent can they find information about the coffee (for example: origin, variety, and processing)?
9. How important the information about the origin of the coffee beans is to the roaster you represent?
10. How precisely can the roaster you represent track where the coffee beans you buy originate from (country level, farmer level, etc.)?