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2017 Jasmin-Maria Hopp

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Impact of sustainability measures in the specialty coffee supply chain on the end consumer

Author: Jasmin-Maria Hopp
Supervisor: Martin John David Quigley, LL.M.

Declaration of Authenticity

I hereby declare that the Master´s Thesis presented herein is my own work, or fully and specifically acknowledged wherever adapted fromother sources. This work has not been published or submitted elsewhere for the requirement of a degree programme.

Prague, August 16th, 2017
Signature

Abstract

Specialty coffee stakeholders are pursuing sustainability measures in the supply chain in order to counteract the severe negative effects of the coffee industry with regard to the threats posed on the environment, fair trade, human rights and wildlife. This study is focusing on the impact sustainability measures have on the end consumer. In order to develop recommendations, the study explores connections between the willingness to pay a premium price and sustainability, the existing knowledge of consumers about ethical industry practices and ways to improve the communication of measures. The empirical research is based on focus group interviews. The study has shown that the first step is to raise awareness and educate the consumers about industry problems. Furthermore, the clear link between specialty coffee quality and sustainable practices needs to be communicated effectively. In order to increase the impact on the consumer, the delivery method and correct timing are crucial. The research findings were worked into recommendations which can be used by companies.

Key words:

Sustainability, specialty coffee, certifications, fair trade, supply chain, business ethics

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And finally, last but by no means least, also to every cup of specialty coffee that has helped me to stay motivated on the journey.

Table of Contents

List of Figures

List of Abbreviations

4Cs	Common Code for the Coffee Community
ACE	Alliance for Coffee Excellence
C.A.F.E.	Coffee and Farmer Equity
CoE	Cup of Excellence
CSR	Corporate Social Responsibility
DKG	German Coffee Organization
FLO	Fairtrade Labelling Organization
FMCG	Fast Moving Consumer Goods
GMO	Genetically modified organisms
GTZ	German Agencyf or International Development
ICA	International Coffee Agreement
ICO	International Coffee Organization
IFOAM	International Federation of Agricultural Movements
ILO	International Labor Organisation
NGO	Non-governmental organization
PDX	Portland Oregon International Airport
PLA	Polylactide
SCAA	Specialty Coffee Association of America
SMBC	Smithsonian Migratory Bird Centre

1. Introduction

Coffee is without a doubt one of the most popular drinks across the globe. It is a very large industry and part of many peoples' daily lives. Over the last two decades standardized coffee developed into a vibrant and differentiated specialty item. Even though low quality coffee makes up the bulk of what is produced and consumed, high quality coffee is flooding the market. Specialty coffee already accounts for 20 percent of coffee volume in the United States, while capturing 40 percent of revenues due to its price premium (Lewin et al., 2004). According to a Nielsen (2017) study about the potential of premium sectors, over one-fifth of North American respondents stated their willingness to purchase premium coffee and the sales data is growing at tremendous rates. The same trend on a smaller scale can be observed all over Europe. The traditional morning ritual coffee is quietly but rapidly changing the industry.

The coffee industry is booming and coffee has reached the second place of most traded commodities across the world as a $20 billion industry (Feng, 2016). This places the importance of coffee before gold, wheat and sugar.

90 percent of the worlds coffee is grown in developing countries, with over 100 million people being involved in the trade (Piano, 2015). Unfortunately, the coffee industry is known to cause various environmental and social problems. Child labor, unregulated working conditions and inhumane treatment of workers is not uncommon and farming causes deforestation, degrading soil and wildlife destruction (Feng, 2016). Environmental and human rights activists have been arguing for more regulations over decades (Figure 1).

With the rising popularity of specialty coffee, the individual bean origin is being brought into the spotlight, shining light on unethical practices in the industry. Core values of specialty coffee besides the high quality, are sustainable practices and harmonius supply chain relationships. With corporate social responsibility (CSR) and ethical consumerism gaining importance in recent years, the constantly growing segment of specialty coffee has the ability to promote sustainable practices across the whole coffee industry.

Figure 1: Introduction to the coffee industry; Economic facts and industry problems
Source: Author; based on: Lewin et al., 2004; Feng, 2016; Piano, 2015

1.1 Relevance of the topic

A recent report shows that ethical consumerism for beverages is on the rise and nine out of ten tea brands carry an ethical accreditation, whereas in the coffee industry only half of the brands carry a certification (Hunt, 2015). Regarding the size and impact of the coffee industry, these results show only the beginning of the long path towards turning coffee into a sustainable and ethical commodity. A Nielsen (2015) study about profitable corporate sustainability strategies has found that 66 percent of consumers say they are willing to pay more for products that come from companies, who are committed to positive social and environmental impact. The problem with coffee is that coffee drinkers perceive it as a fairly ‘green' endeavor, forgetting that rainforests are being destroyed forever in order to create plantations. Big posters of smiling farmers can be found on famous coffee chain walls, which hide the human suffering that can be found on the other end of the supply chain.

For a beverage which drinkers love and often can not live without, the average consumer knows very little about its origin and the impact of their choices. With the rise in popularity of specialty coffee, independent rosters and cafés can be now found in every bigger city, in addition to the worldwide over 34,000 stores of global coffee chains, such as Starbucks, Costa Coffee, McCafé etc. (Piano, 2015). In Prague, the capital of the Czech Republic with over 1 million inhabitants, five independent roasters of specialty coffee flourished over the past few years, supplying the constantly growing community of local specialty coffee shops with their highly differentiated and premium priced offers. The Czech Republic has a yearly per capita coffee consumption of 4.3 kg, of which half is still consumed as instant coffee particlarly by older consumers (ICO, 2017a).

The author's motivation to focus the thesis research on sustainability in the specialty coffee industry is due to three years of passionate part-time work as a professional barista, to the largest extent in the coffee heaven city of Melbourne in Australia. With a clear interest in CSR and sustainability initiatives, the author decided to explore ways which positively impact the coffee consumer in order to make conscious choices. The topic of the thesis is to research the impact of sustainability measures in the specialty coffee supply chain on the end consumer.

The research question therefore is:

What is the impact of sustainability measures in the specialty coffee supply chain on the end consumer?

This study needs to be conducted in order to give recommendations to ethical supply chain actors on how to better reach the consumer with their efforts to promote sustainable specialty coffee. By using such recommendations the negative effects of the coffee industry, which strongly impact many lives, animals and eventually our planet, can be targeted. Most specialty coffee drinkers are born between 1977 and 1995, the so-called 'Millenials' or Generation Y. The 'Millennial' generation has a strong sense of community both on local and global scale, particularly when it comes to social and environmental issues. Studies have shown that they are the most willing generation to date to pay a premium for sustainable offerings (West, 2010).

1.2 Aim and scope of the thesis

The sustainability measures employed in the specialty coffee supply chain have a positive impact on farmers who grow the coffee and on the environment.

Many common practices in the coffee industry have negative but avoidable effects, such as unfair trading conditions, disregard of labor standards, deforestation, spraying of chemicals, destruction of wildlife habitat, as well as the recycling problem of single use coffee cups, coffee grounds and aluminium coffee capsules. This thesis aims at understanding what impact positive measures have on the behavior of the end consumer, whether the end consumer cares about it and what other problems are arising. For this three sub-questions are asked and their answers will be investigated.

The sub-research questions to find answers to the main research question are the following:

- *Is the willingness of the consumers to pay a price premium for specialty coffee linked to the sustainability measures employed in the supply chain?*
- *Do the consumers of specialty coffee know what the different sustainability certifications stand for and consider them as important?*
- *How could sustainability measures be redesigned or communicated in order to have a stronger impact on end consumers?*

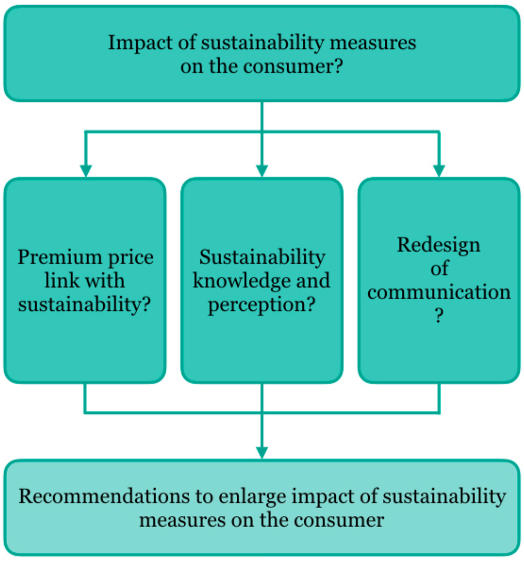


Figure 2: Research questions and objective
Source: Author

The purpose of this research thesis is to understand the impact of sustainability measures in the specialty coffee supply chain on the end consumer.

The objective of the thesis is to create recommendations that can be used by small roasters, cafés, non-governmental organizations (NGOs) and other industry actors that strive to understand and enlarge the impact of the existing sustainability measures on coffee drinkers.

The author believes that answering the sub-research questions will help to catch an invaluable glimpse into the specialty coffee drinkers mind in order to understand their motivations and reasoning for their actions (Figure 2).

1.3 Method of investigation

The thesis is divided into three main parts. The first part is comprised of a theoretic overview of current theories and practices. This analysis draws on a range of data sources. The information is gathered through scientific papers and journals from online libraries of University of Economics, Prague and results from Google Scholar. The keywords 'sustainability', 'coffee', 'specialty coffee', 'coffee cups', 'compostable cups' and 'coffee capsules' have been used by themselves and in combination in order to search for relevant material. Furthermore, materials from sustainability and specialty coffee supporting governmental, non-governmental and private organizations have been considered and their websites have been used for further research. The second part will be about the qualitative research through focus group interviews with coffee drinkers. The analysis relies heavily on the group interviews, which were roughly one and a half hour long, sequencing an online pre-questionaire to choose valuable and suitable participants. After explaining the research methods for the investigation, a summary of the interview outcomes will be given in the 'Research methods and 'Research results' parts. The next part will be a discussion that focuses on the three sub-research questions, and the generation of an answer to the main research question by including results from the previous parts. The results of the discussion will lead to the content and structure of the recommendations. The thesis will end with a conclusion and recommendations.

1.4 Limitations

There were several limitations to this thesis. As the research language was English but the city the research was based in was Czech speaking, only interviewees with a high proficiency in English could be chosen for the focus groups. The author of this thesis was not fluent enough in Czech to conduct the interviews in the native language of the country where the research was based in. This could have caused a bias, as it can be assumed that these individuals are well traveled and more internationally oriented, possibly even from a wealthier background compared to the average Czech person. In terms of specialty coffee as a global phenomenon and particularly popular among Millenials, this limitation may or may not hinder to replicate identical results with an exclusively Czech speaking control group. A second limitation was the availability of very recent data, as the most recent studies and publications by the (specialty) coffee organizations were not available without a significant purchase cost. Nevertheless, the most up to date freely available resources were used by the author.

2. Theoretical Part

The theoretical part is divided into two bigger sections that focus on the specifics of specialty coffee on the one hand and sustainability measures on the other hand. In the first section, in order to examine the specifics of specialty coffee, the history of the economy of coffee will be briefly studied to explain the reasons for the developments in the coffee market and the term specialty coffee will be defined. Next, the difference between conventional and specialty coffee will be explained and world regions of importance to specialty coffee identified. After this introduction to specialty coffee itself, the focus will shift towards the specialty coffee supply chain and the importance of each stakeholder on the way of the chain will be further investigated. Finally, the specialty coffee consumer himself will be in the centre of attention.

In the second section of the theoretical part, sustainability measures will be examined. First, the recent developments in the area of sustainable coffee will be explored. Then, sustainability stakeholders will be investigated. Thereafter, coffee certifications will be studied and the challenges of unsustainable practices and their opportunities in the supply chain and product end of life will be identified and evaluated.

2.1 The specifics of specialty coffee

As the name suggests, specialty coffee is a subdivision of coffee. To be precise, specialty coffee only represents 20 percent of the total coffee market. Even though it represents only a small fraction of the market, specialty coffee has been growing by 5-10 percent yearly, while the coffee market in general has been declining for years (Linton, 2008). This section examines the recent historical developments in the economy of coffee to explain why the demand for specialty coffee has developed in an opposite way to the industry. Furthermore, the term specialty coffee will be defined and the distinction between the conventional and specialty coffees will be explored further. To gain a better understanding of the industry, important coffee growth and consumption regions of the world will be studied. Furthermore, the supply chain of specialty coffee will be explored and the most important stakeholders will be discussed. Ultimately, the commodity coffee will be connected to the end consumer- the specialty coffee consumer.

2.1.1 History of the economy of coffee

In the time after the second world war until the 1980s, the coffee market was dominated by large corporations. The coffee that was produced had a standardized taste as it was a blended product from many different beans. Coffee in those times can be described in terms of a mass-production. The International Coffee Organization (ICO), an intergovernmental organisation for coffee that brings together the governments of exporting and importing countries, regulated the world coffee industry from 1962- 1989 with the International Coffee Agreement (ICA) (ICO, 2017c). The Agreement set quotas and standards for the production and consumption of coffee per country. In the 1980s the International Coffee Agreement rules were regarded as business unfriendly and the industry was deregulated and became privatized. Corporations tried to minimise labor costs and with the deregulation, new industry actors entered and drastically changed the industry. Countries like Vietnam and Brazil radically increased their coffee production after the production quotas of the ICA were lifted.

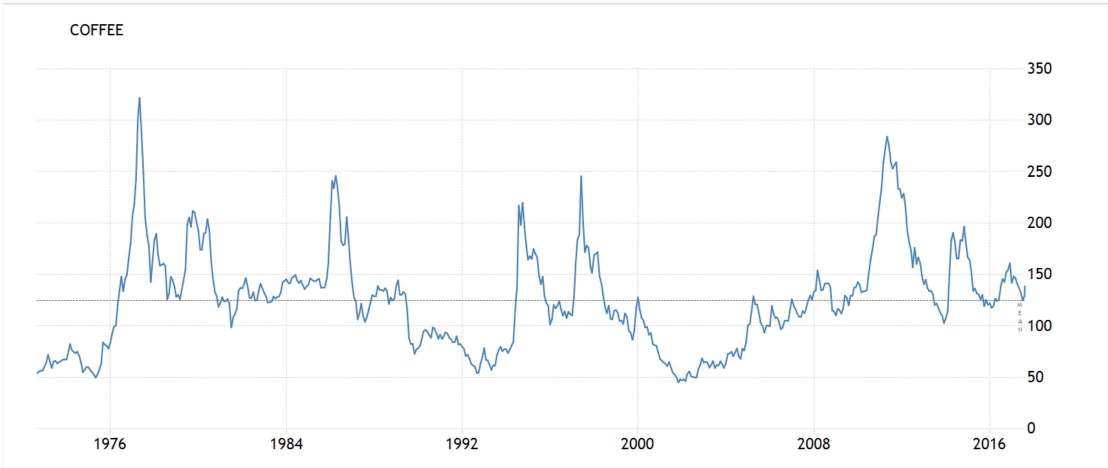


Figure 3: History of coffee prices; with years on the X-axis and coffee prices in ¢/lbs indicated on the Y-axis Source:tradingeconomics.com

All these structural changes in the global coffee market let to a sharp decline of the previously regulated coffee prices between 1999 and 2004 (Figure 3) with producers being the ones who suffered most (Bacon, 2005; Ponte, 2002). The continuous price drop reached a global 30-year low in 2001, known as the coffee crisis, and is oftentimes considered the reason for the raise of the popularity of socially responsible coffee (Bacon, 2005). NGOs and coffee consumers increasingly cared about the quality and taste of their coffee but also about the environmental and social impact it has. The consumer pressure resulted in the growth of the specialty coffee market (West, 2010).

2.1.2 Defining specialty coffee

In the literature many different definitions of specialty coffee can be found. Overall the term is used to describe coffees which are not blended together for a standardized flavor, but on the contrary, valued for their unique characteristics and tastes. Many authors agree that what makes specialty coffees so 'special' are their high quality, limited availability, specific packaging and sustainability labels (Ponte, 2004; Wilson & Wilson, 2014; Donnet, Jeitschko and Weatherspoon, 2010). Some authors distinguish specialty coffee further by differentiating between the uniqueness of the growing regions and calling those coffees 'boutique'. As there is no agreement about the differentiation of the terms 'specialty' and 'boutique' and the Specialty Coffee Association of America

(SCAA) includes uniqueness of origin into their definition of specialty coffee, this thesis will treat 'boutique' coffees the same as specialty coffees. The SCAA (2017b) also includes the importance of the coffee supply chain in its definition of specialty coffee by stating that 'specialty can only occur when all of those involved in the coffee supply chain work in harmony and maintain a keen focus on standards and excellence from start to finish' (Figure 4).

Figure 4: Specialty coffee characteristics

Source: Author; based on SCAA. 2017b, Ponte, 2004, Wilson & Wilson, 2014; Donnet, et al., 2010

The size of the specialty coffee market in the U.S. was estimated to be $12.27 bn in 2006 and the more recent numbers of 2015 estimated it to be $26.4bn (SCAA 2017a). In just one decade the market value more than doubled, showing the growing importance of this trend.

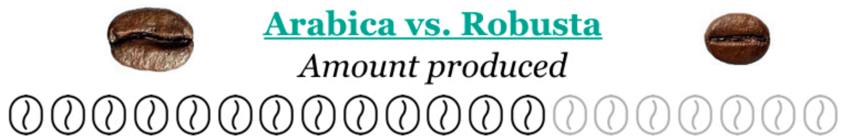
Distinguishing specialty coffee from conventional coffee

Before diving into the question about what actually distinguishes specialty coffee from conventional coffee, it is important to understand what coffee is and how it can be differentiated.

Coffee is a drink prepared from roasted coffee beans. The whole journey begins with the coffee tree. The tree can grow several meters high and is covered with green leaves. Because it grows in a continuous cycle, it is possible to see all stages of the 'coffee bean' on the branches of the tree at the same time- flowers, green fruit and ripe fruit. A tree takes 5 years of growth to reach its full potential and is the most productive for 15 more years, where it produces an average of half a kilo of beans annually. Afterwards the yield steadily declines, but the tree itself can live up to 100 years. Once a flower develops on a branch, it takes one year for the fruit, the coffee cherry, to reach maturity (NCA, n.d.). The coffee beans are actually two seeds found inside the coffee cherry and are green in color when harvested. The green beans are then roasted in order to turn into the typical brown beans consumers know.

The two most common and dominant types of coffee are called Arabica and Robusta. Nowadays, approximately 65 percent of the world's coffee is grown from Arabica coffee plants and 35 percent is grown from Robusta (ICO, 2017d). Other types exist, but are not grown for commercial purpose. Robusta trees receive their name from being a very robust plant. They can grow in more difficult conditions and climates, in lower altitudes and bear fruit early. All these features make it a cheap coffee plant to cultivate. The beans themselves are in a circular shape and produce a coffee with a strong bitter taste which makes it unpleasant to drink. The taste is due to the high caffeine content of 2.7 percent (NCA, n.d.), which on the other hand is toxic to parasites and makes the plant more resistant to diseases. Arabica coffee trees on the other hand seem to be at a disadvantage in comparison. They take almost 2 years longer to come to fruit, with a smaller yield, have deep root systems, which require more space and they need to grow at higher altitudes. Growing coffee at higher altitudes in mountainous regions means that the cherries often have to be picked manually by hand instead of harvesting technology. The Arabica beans have a caffeine content of 1.5 percent which makes the plant more susceptible to parasites (NCA, n.d.). In turn, the lower caffeine content and specific growing conditions reflect positively on the taste. Arabica coffee is more delicate in its flavor and picks up the aroma from its surrounding, such as fruits and flowers, sun and rain, the soil it grows on and the climate itself. These influences differentiate Arabica coffee by region and even between individual farms and therefore can result in outstanding quality beans that can be sold for a very high price. The Arabica beans themselves are larger and more oval shaped than the round Robusta beans (Figure 5).

In practice, most conventional and commercially available coffees are a mix between cheaper Robustas and the more flavorful and at least twice the price Arabica beans. The aim of the blending is to save costs and produce a uniform flavor (Ponte, 2004). Apart from the general commercial bean blends, Robusta is the primary ingredient used in instant coffees, where the flavor does not matter much. Surprisingly, the 'lower quality' Robusta is also found in Italian style blends and espresso blends. The reason for that is that the Robusta component of around 10-20 percent that is added to the high quality Arabica beans creates the much desired 'crema', a layer of golden or tan coloured foam found on the surface of a shot of espresso. 100 percent Arabica on the other hand is a more recent trend, which emerged through the popularity of specialty coffee. Arabica beans which are grown in high altitude, generally between 610-180 meters above sea level with a certain proximity to the equator, are considered to be more premium in taste due to their mild and aromatic qualities (NCA, n.d.).



Mild	*Taste*	Bitter
High	*Price*	Low
High	*Production costs*	Low
Longer	*Time to harvest*	Shorter
Fragile	*Resilience*	Robust
Low	*Caffeine content*	High
Specialty coffee, base for blends	*Usage*	Instant coffee, filler for blends

Figure 5: Differences between Arabica and Robusta coffee beans
Source: Author; based on NCA, n.d., ICO 2017b, Kaffeeverband 2017

Hence, specialty coffees can be distinguished by the origin and type of beans and are desired to be as unique and unblended as possible, preferably all coming from the same farm (Wilson & Wilson, 2014). Freshness is another central aspect of specialty coffee, as once the beans are roasted their aroma becomes volatile and is hard to preserve for long. Apart from the beans themselves, high quality coffee beens also distinguish themselves through their supply chain relationships. As growing the premium priced specialty coffee beans is more labor intense, leads to lower yields and brings about many other risks, farmers as well as roasters require long-term supply relationships.

Regions of specialty coffee

When looking at regions of the world and specific countries that are related to coffee, the focus will lay on those that are producing the majority of the beans and those that consume the largest amount of coffee.

In 2016 the annual global coffee production amounted to 151.6 million of 60kg bags and the production is steadily growing at 1 percent per year (ICO, 2017d). The best climate for coffee trees can be found in the equatorial zone of the earth, which is often referred to as the 'Bean Belt' (Figure 6). Even though coffee is grown in over 50 countries, there are several big players among the producing nations. Accoring to ICO statistics (2017d) the largest coffee growing countries are Brazil, Vietnam, Colombia, Indonesia, Ethiopia, Honduras and India, all producing over 5 million of 60kg bags of coffee beans annually. In terms of world regions this means that half of the worlds coffee is produced in Latin America (49 percent), 28 percent is produced in Asia and Oceania, and the remaining amount is equally split between Central America and Africa. Brazil alone grows 36 percent of the world's coffee and is followed by Vietnam with 17 percent. However, these statistics combine the farming of all coffee types of Robusta and Arabica, regardless of quality. According to the SCAA (2017b) the main producers of specialty coffee beans can be found in all previously mentioned countries, with the exception of Vietnam (the main grower of Robusta), as well as in Costa Rica, Guatemala, Kenya, Jamaica and Peru. Specialty coffee is usually grown on smaller farms in higher altitude regions of the named countries.

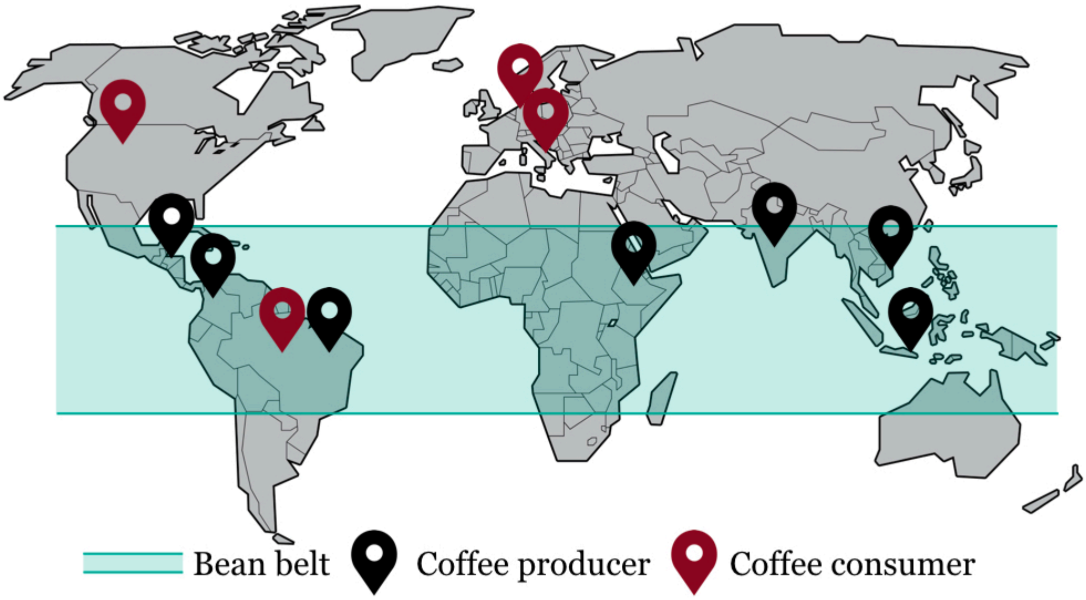


Figure 6: World map of coffee; with coffee growing 'Bean belt', main coffee consumer and producer nations
Source: Author; based on Wikimedia, 2016; ICO, 2017a; ICO, 2017d; SCAA, 2017b

The annual global coffee consumption in 2015/2016 on the other hand amounted to 155.7 million of 60kg bags with the growth rate of 2 percent is overtaking the increase in production (ICO, 2017d). The trend shows that people all over the world drink more coffee and quality becomes more of a focus. It is notable to say that even though the countries which produce coffee only represent one third of the world's coffee consuming countries, the number is steadily growing. Accoring to ICO statistics (2017d) the nations who drink the most coffee are the United States, Brazil, Germany and Italy, all consuming over 5 million of 60kg bags of coffee beans annually. In terms of world regions this means that one third of the worlds coffee is consumed in Europe (33 percent), followed by Asia and Oceania (including Australia and New Zealand) with 21 percent, North America (18.5 percent), South America (16.3 percent) and the remaining amount is consumed in Central America and Africa. The United States alone drink 16.3 percent of the worlds coffee and are followed by Brazil (13.2 percent) and Germany (11.5 percent). However, these statistics do not differentiate between conventional and specialty coffees. Due to the higher price and popularity of coffee shops, the majority of specialty coffee is consumed in the United States, Europe, Australia and Canada (SCAA, 2017b).

2.1.3 Specialty coffee supply chain

The supply chain describes the relationships between the growers or manufacturers of a product as well as the suppliers, retailers and end consumers. The supply chain therefore represents the network and steps necessary in order to bring a product to the end consumer (Investopedia, 2017). There is no standardized coffee supply chain, neither for conventional coffee nor for specialty coffee. The supply chain differs from nation to nation and even between the sizes of farms. In this section the complexity of the coffee supply chain and specialty coffee supply chain is studied further by looking at models found in the literature. Moreover, the main players in the supply chain, such as farmers, traders, roasters, buyers and consumers are examined in more detail. The definition of specialty coffee includes the necessity for a supply chain that is in harmony and maintains high standards of excellence thoughout the whole chain (SCAA, 2017b). These factors will be kept in mind when looking at the stakeholders of the supply chain. Furthermore, e-auctions are a recent trend in the industry. Their effects on the existing supply chain will be discussed in this section. Lastly, the big question about who rates the actual quality of the coffee and decides what is special will be investigated.

Modeling the supply chain

In the beginning of every coffee's journey the coffee farmers can be found. The supply chain model for coffee as proposed by Kolk (2012) starts with the 3 different sizes of farms: small, medium and large. The large farms are also known as plantations. The farmers often have two alternative options and can either produce conventional coffee in bulk as a low-cost producer or opt for quality instead of quantity and focus on specialty coffee by differentiating their product. The growing conditions vary significantly by farm and region across the world and influence the coffee quality significantly. There is certainly an effect of the country of origin when it comes to coffee, as everything from rainfall, winds, vegetation and soil, up to processing and harvesting techniques influences the end product immensely (Neilson, 2007).

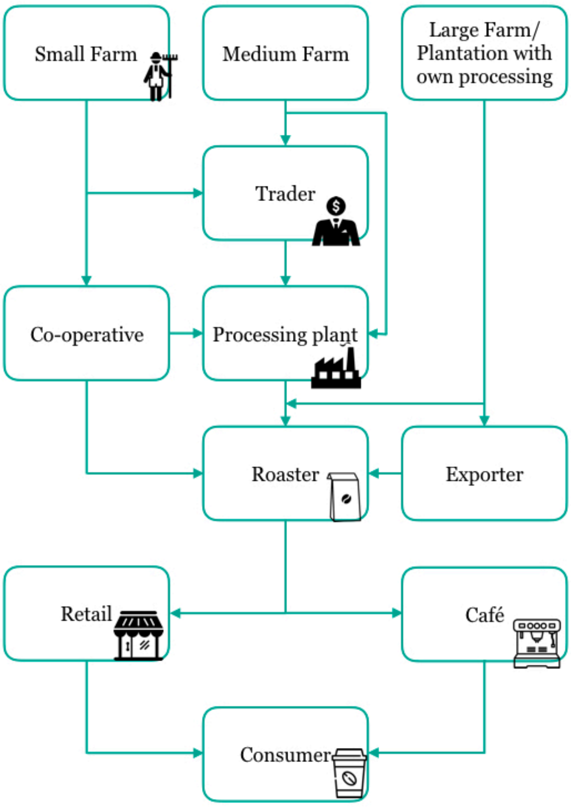


Figure 7: Conventional coffee supply chain; from bean to cup
Source: Author; based on Kolk, 2012

After the farm itself there are several options for the supply chain to procede, but generally speaking traders are almost always involved. These intermediaries in the supply chain can be a single trader who buys from the farm and sells to the processing plant, or a small trader selling to a larger trader who then sells to the processing plant or processes part of the coffee. To be more precise, a small farm will usually work together with a co-operative. Co-operatives are committed to building fair and direct trade relationships for the benefit of small-scale farmer families, their communities. Small farms in the same region will set up a cooperative for more bargaining power and to support each other. The co-operative either processes the coffee beans at an external processing plant or has the necessary equipment for processing itself and sells the coffee straight to the roaster. Alternatively small farmers can sell their green beans to a trader. Medium farms are faced with similar options, and either sell to a trader or to the processing plant directly. Large farms usually have their own processing facilities and can sell their beans either to an exporter who will sell them further to a roaster or the large farm can sell to the roaster directly.

Processing of the coffee beans is either done as part of the supply chain, after a farmer sold his beans to a trader and the processing facility (a coffee co-operative or separate processor) received them from the trader, or farmers who have the necessary equipment themselves might already process the coffee after harvesting it. This type of commercial processing is typical for conventional coffee. Roasters are the experts who turn green coffee beans into the final brown beans that consumers love to drink. Roasters are often know companies or the parent company of known coffee brands. They also provide the marketing, branding and packaging activities and add value to the final product through that. Retailers are the part of the supply chain who sell the coffee to consumers. This can be in form of a large supermarket, catering companies or small independent stores or cafés (Figure 7).

The specialty coffee supply chain follows the idea of the normal coffee supply chain, but has some differences (Figure 8). Specialty coffee is not grown on plantations and hence, only small and medium size farmers are involved. Furthermore, roasters have the ability to purchase coffee directly from the producers or anonymously through e-auctions. Traditionally, high-quality coffee beans are produced through long term supply relationships with farmers. Through the technological development in recent years, new paths for the purchasing and evaluation of specialty coffees were developed. The appearance of e-auctions plays a role in the steady growth of the specialty coffee market (Wilson & Wilson, 2014). Niche coffee buyers and producers struggle with the existing supply chain and internet auctions have brought new possibilities to sell and purchase coffee with premium quality at premium prices. These auctions can either be hosted by farms or, more commonly, by marketing organisations, such as the Alliance for Coffee Excellence (ACE) (Donnet, et al., 2010). In order for the ACE to test the quality of the auctioned coffees, competitions are in place. The Cup of Excellence (CoE) program is one of those competitions where farmers can test their best beans against the ones from the same country. Participation in these programs is free and they are hosted each year (ACE, 2014).

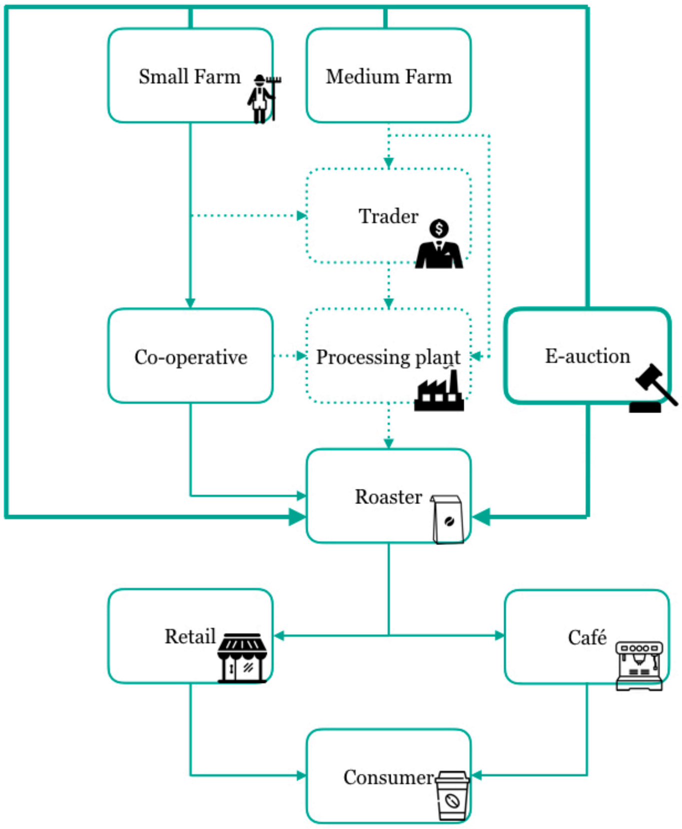


Figure 8: Specialty coffee supply chain;
from bean to cup including direct sourcing and e-auctions
Source: Author; based on Kolk, 2012; Wilson & Wilson, 2014

Once beans are submitted by farmers, the coffees are 'cupped' by specialists in coffee grading and scored according to their quality. 'Cupping' is a term that combined the roasting, grinding, brewing and tasting of coffee. The scores are given out of 100 and anything with 84 or above receives the very prestigious Cup of Excellence Award. The coffee winners are then sold through an online auction. It is to note that the winners of these auctions are regarded as the best quality coffees among specialty coffees themselves and prices are on average 4.5 times higher than the market average. The auctions are funded by the roasters, who are constantly on the look out for high quality coffee. As the participation for farmers is free, this is a win-win situation. The often overlooked farmers receive a majority of the auction prices while the roasters can purchase very high quality coffee and avoid middlemen (Wilson & Wilson, 2014).

The alternative method without e-auctions means that long-term relationships between roasters and farmers are established. The costs of this are very high as a representative of the roaster will need to travel to producing countries to evaluate and select suppliers. These supply chain relationships involve co-operatives and traders as intermediaries, but a number of roasters of specialty coffee will want to understand the farms operations and exchange information with the grower. This involvement of the roaster can include help with financing (Daviron and Ponte, 2005; Donnet, et al., 2010)

In contrast to personal relationships, specialty coffee e-auctions bring the possibility of buying coffee beans from many suppliers in a single interaction. E-auctions are a new way for directly matching the highly fragmented and differentiated supply and demand sides of the specialty coffee market (Donnet , et al., 2010). Furthermore, traders can be completely cut out in this special part of the industry through more direct sourcing methods. Processing plants are often not necessary in the process, as smaller quantities of coffee can be processed on the farm or at the roaster. Some specialty coffees develop their characteristics by not being processed commercially at all.

Stakeholders

The main stakeholders in the specialty coffee supply chain are farms, traders and roasters. In the following section, their role and importance in the specialty coffee supply chain will be showcased.

Farms

In order to create specialty coffee, the producer has to focus on quality only, not the quantity. Altitudes and climates are selected carefully and often generations of coffee farmers bring the coffee beans to perfection. Years go by for coffee trees to reach maturity and after a careful harvest only the beans in perfect condition, without any defects and with ideal ripeness will be passed on in the supply chain. Inferior beans can be sold without premium price to be used in Arabica blends.

Farmworkers are the lifeblood of the coffee production and manage every single step from the tree nursery up to the harvest. The large majority of the farmwork occurs during the time of the harvest. It is often forgotten that coffee farmwork is very dangerous. The harvesters work in challenging terrain, are exposed to harsh weather conditions and work very long hours picking and carrying up to

90kg of finished coffee per day (SCAA, 2017b). The beans represent only 20 percent of the coffee cherry, so this means the farmers harvest up to 450kg of coffee cherries per day during harvesting season. As the largest bulk of work occurs during the harvest, the job is done by temporary workers. Those are often migrants, indigenous people or descendants of slaves. Among these groups it is not rare to also find women and children workers. Due to the nature of the temporary work, formal contracts, workers rights, health benefits or ongoing employment are not guaranteed. Even though international labor standards and worker protection all exist in theory and the binding contracts are signed by the coffee producing countries, the actual enforcement is a problematic field due to a lack of resources or political problems. On top of the dangerous work itself, surveys showed that coffee-growing regions are regularly subjected to gang activity, violence, sexual abuse and drug trafficking. This environment creates a lawless environment in many coffee growing regions in Asia, Latin America and Africa (SCAA, 2017b). It comes as no surprise that farm workers are paid minimum wage or below and work in conditions that do not allow for adequate breaks and regulated working hours. According to the SCAA (2016a) the labor costs for the farmwork amount to 70 percent of the total costs of coffee production and farms are often pressured to lower their costs even more. Even though the specialty coffee category centers around the quality, the social inequalities in the coffee production is also addressed. The engagement of farm workers and their empowerment is an integral part of the specialty coffee supply chain. The SCAA (2016a) believes that tens of millions of farmworkers conditions have improved due to the positive effects the values of specialty coffee have on the supply chain.

Roasters

Specialty coffee roasting can be considered a form of art, which demands a high degree of experience and knowledge. The roasting process is closely monitored by the certified roaster, who applies principles of thermodynamics and coffee chemistry to achieve the highest quality outcome with regard to the flavour (SCAA, 2017b). Their role is to match a particular coffee bean with a particular roast. According to Donnet, Weatherspoon and Moss (2009), roasters are considered the chain leaders, as they define the coffees final quality and work closely with both sides of the supply chain, with the procucers as well as the retailers and consumers. Their quality ratings are also the basis of information about the coffee that gets shared in the supply chain. By having the overview over the product differentiation, roasters' information and ratings work as an integrative force for the marketing chain for specialty coffee. Gibbon and Ponte (2005) consider the situation of asymmetric information as the basis for the roasters dominant position in the supply chain but believe this can change in the future with the rise of the popularity of specialty coffee, as the supply chain develops into new directions (Neilson & Pritchard, 2007). With the rise of quality competitions in e-auctions the farmers can establish the worth of their beans early on and make use of that information. Traditionally, the roaster who source directly from the farms negotiates the relationship terms with growers early in the season, to establish the buying conditions. The relationship with the other side of the supply chain, with the buyer, is only established afterwards but before the coffee harvest. Information from the previous years helps to estimate demand, however an underestimation can be devastating for the roaster and lead to a loss of future business cooperation. As the specialty beans receive a premium price and are volatile in flavour, an overestimation is equally problematic (Donnet, et al., 2010).

To understand the development of the importance of roasters in the supply chain it crucial to realize how highly fragmented the industry is. In the United States for instance, in the late 1960s only 20 small roasters operated. The number doubled within a decade, and by the early 1990s over 400 small roasters could be counted. The industry booms and according the SCAA (2017a) almost 24,000 small roasters were already roasting by 2006. The number has been steadily increasing since and the fragmentation did not only increased the importance of specialty coffee but also changed the coffee industry structure fundamentally.

Retailers

Specialty coffee can be purchased either in form of packaged beans or ground, or in form of a beverage at a café. Retailers of coffee can hence represent larger and smaller stores that sell packaged specialty coffee, and cafés that sell the actual prepared coffee in the form of coffee specialities or in a packaged form to the consumers. The influencer in the field of coffee chains or independent coffee shops are often specialty baristas and owners- coffee brewing experts- who prepare the final beverages and decide about the varieties they provide. Retailers focus on taste quality but also on the sustainability of the supply chain and communicate it to the consumers. Sustainability in the supply chain will be covered in the second section of the theoretical part of the thesis.

Consumers

The consumers represent the completion of the life cycle in the specialty coffee supply chain. Even though consumers might possess a passion and certain knowledge of coffee quality, it is the traders and roasters who are the expert tasters (Donnet, et al., 2010). Nevertheless, it is the consumer who seeks out specialty coffee and is willing to pay a premium for it, compared to conventional coffee. Donnet, et al. (2011) argues that the knowledge asymmetry about the quality of coffee is particularly evident at consumer level as consumers lack the knowledge and expertise to rate the coffee quality. This is different in other industries, such as the wine industry. Specialty coffee consumers will be studied in-depth in the following section.

2.1.4 Specialty coffee consumer

Studies show that nowadays nearly 90 percent of consumers treat coffee similar to wines and cheeses, as a highly differentiated product (Beaver, 2006). It is astounding that so much value is placed on differentiation and premium prices are paid by specialty coffee consumers even though the real knowledge about the coffee quality can be found at a different supply chain level- among the traders and roasters. The Specialty Coffee Association of America even encourages consumers to take the time to learn more about the beloved beverage from their local coffee shop baristas (SCAA, 2017b). Through this they hope to increase consumers passion for the sustainability within the supply chain, not just a focus on the superior taste. While mentioning this, it is important to highlight that while certain brands of specialty coffee are marketed to appeal to consumers' ideas about the outstanding quality of taste of the coffee, others focus more on political beliefs and fairness. The second type of coffees captures drinkers who use specialty coffee that is sustainable to express their political ideas (West, 2010). This raises the question whether there are two different types of consumers of specialty coffees- the ones who care more about the taste and the others who wish to better the life of the 'poor farmers' and look for sustaibably grown coffees. A different explanation could be that there is only one type of specialty coffee consumer. Bacon (2005: 497) argues that this consumer cares about the 'quality, taste, health, and environment' altogether and that this 'good-willed' consumer types develop and supported the increasing growth and popularity of the specialty coffee industry.

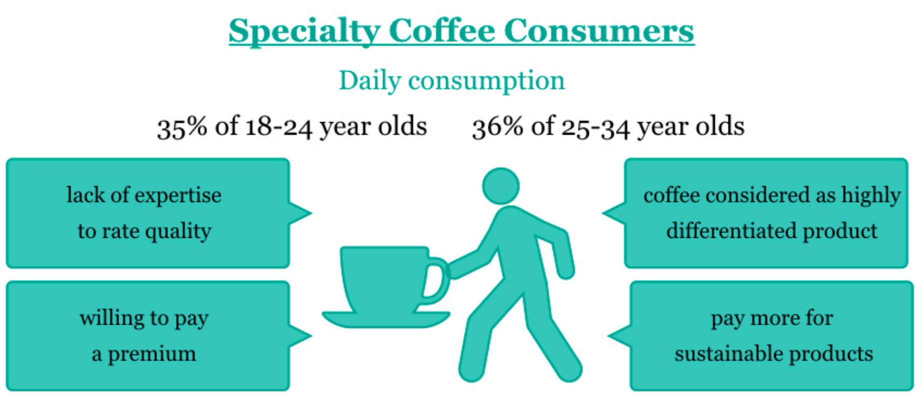


Figure 9: Specialty coffee consumer; consumption results based on United States
Source: Author; based on Beaver 2006; SCAA, 2017b; Nielsen 2015; Donnet, et al., 2010

When speaking about specialty coffee consumers one particular age group comes to mind- the Millenial generation. Millenials are people born between 1983 and 2000, currently aged between 34 and 17 years. They make up the group that can be found sitting in specialty coffee shops, drinking cappuccinos or espressos with their friends, by themselves and even working or studying in the café environment. This perception is proven through studies from 2015 that show that 35 percent of 18-24 year olds in the United States say they drink specialty coffee daily. In the age group of 25-34 year olds this number reaches 36 percent (SCAA, 2017a). With the number of roasters and specialty coffee shops continually increasing, it can be assumed the tendencies are rising. These studies furthermore show the drinking habits of Americans. Coffee drinkers drink up to 3 cups per day and 50 percent of adults say they drink specialty coffee at least weekly. The study furthermore says that consumers believe that 48 percent of the United States coffee cups they drink are specialty coffee. In fact the real share is at 51 percent, so they are well aware of what they purchase.

Millenials are often referred to as the 'Green generation' and a recent Nielsen (2015) global online study found that they continue to show the highest willingness (with three out of four respondents) to pay a premium for sustainable offerings. 66 percent of the global respondents admitted that they are ready to pay extra for products coming from businesses that show commitment to positive social and environmental change. The specialty coffee consumer summary can be seen in Figure 9.

When looking at the coffee tastes across the globe, studies have found that buyers value the quality differently depending which region of the world they are from (Wilson & Wilson, 2014). The research shows that coffee drinkers in the Nordics and other European countries are willing to pay the highest prices for coffee, followed by North Americans. Asians on the other hand pay the lowest price for coffee.

2.2 Sustainability measures

Authors like West (2010) argue, that specialty coffee is inevitably liked to economic justice and environmental as well as social sustainability. The reasons for this lie in the specifics of the coffee sector itself. Coffee is grown in vital tropical eco-systems by peasant farm laborers across several continents. The use of economic instruments in order to preserve the biodiversity in coffee growth regions and to promote economic sustainability can be explained with the disbalance coming from the fact that coffee farmers who live in poverty are responsible for managing some of the most important and diverse agro-ecosystems (Kitti, Heikkila, & Huhtala, 2009). Furthermore, studies have found that retailers who committed to source their coffee in a socially and environmentally responsible way, performed significantly better to those who are concerned about the higher purchase price of sustainable coffee (Joo, et al., 2010). The more expensive coffee purchasing price resulting from fair trade principles is often offset through the branding advantage of brands that are recognized for being sustainable.

In this second section of the theoretical part sustainability measures in the specialty coffee industry and supply chain will be discussed. In the beginning, the meaning of the term sustainable coffee will be defined and the history of the sustainability movement in the coffee industry summarized. Subsequently the approach to sustainability of the main stakeholders will be outlined and different coffee certifications will be be discussed. Finally, sustainability challenges and opportunities in the specialty coffee supply chain will be evaluated, as well as product end-of-life challenges and prospects critically assessed.

2.2.1 Defining sustainable coffee

Coffee that is produced in way that positively addresses environmental and social problems is typically called sustainable coffee. A certain number of consumers is concerned about damages to the tropical environments coffee is grown in and about the poverty coffee farmers live in. Volatile coffee prices cause further social and economic inequalities between the drinkers and producers of coffee. The increasing value placed on sustainable coffee can be seen through the fast growth of sales across North America and Europe along with rising consumer consciousness (Raynolds, Murray, & Heller 2007). In the early 2000s sustainable coffee only accounted for 0.5 percent of the total market and 2.8 percent of the specialty market in the coffee sold in North America and in Europe the numbers were only slightly higher (Ponte, 2004). The consumer perception compared to those times in the coffee crisis has slowly evolved to accepting and expecting sustainability to be a component of specialty coffee.

The author Linton (2008) defined sustainable coffee guidelines based on research from the Coffee Research Institute (2005):

- Reusing of coffee husks (the dried skin of the coffee bean that falls off after the roasting process) as heating fuel
- Reducing water consumption and pollution
- Caring for the planting soil by using organic fertalizers such as composted coffee grounds between the coffee trees

- Partaking in techniques such as shade growing, biodiversification, and organic farming
- Supporting small farmers in receiving a fair share of the coffees price
- Providing adequante wages, health and education benefits as well as improved living conditions for farm workers

Generally speaking, sustainable coffee refers to the standards and conditions in which the coffee is produced and traded and voluntary certification systems are in use to showcase the usage of improved social and environmental coffee standards.

2.2.2 History of sustainable coffee

The history of sustainable coffee starts where the history of the quota system of International Coffee Organization (ICO), which regulated global coffee production and prices prior to the 1990s, ends. With the deregulation, production increased causing prices sharply to decline. Similar to the beginning of specialty coffee, sustainability measures raised due to this coffee crisis (Raynolds, et al., 2007). While the roasters and retailers focused primarily on reduction of prices, the farmers were the ones to pay the price with continuously deteriorating wages. This was the time of ethical consumerism and coffee drinkers started to focus more on quality and the coffee's sustainability. The sustainability niche became increasingly mainstream partly due to societal pressure and partly due to own initiative of the larger players in the industry (Neilson & Pritchard, 2007). Corporate Social Responsibility (CSR) came onto the agenda of many corporations in the late 1990s. In the following decade it became a trend use sustainability in the marketing of products and brands in order to differentiate. Even though this movement seems benevolent in the first place, many corporations faced threats of boycott through NGO's over their controversial practices.

After the crisis reached its high point in 2001, movements against the unfair practices started to arise globally. Negotiations in 2004 and 2005 established a 'Common Code for the Coffee Community ' (known as the '4Cs') (Neilson &

Pritchard, 2007). This common code, which was developed by the German Coffee Organization (DKG) in collaboration with the German Agency for International Development (GTZ) brought together various stakeholders, such as producers, NGOs and coffee-industry representatives, in an attempt to include environmental and economic sustainability into the mainstream coffee sector. They established the borderline between acceptable and unacceptable coffee farming practices. Unexpectedly, large roasters were the ones in favor of this move and the biggest critics of the code were certain producers who feared the long-term implications for small farms (Neilson & Pritchard, 2007). The problem was the fact that all the additional costs of farming practices would be burdened on the producer, whereas the roasters and retailers would benefit from the added value of sustainable practices to their products.

In the years to come large coffee chains such as Starbucks could build their success stories on the social positioning and sustainability practices rather than only quality coffee and NGO campaigns against them came to a halt. Nowadays, it is possible to buy coffee beans which are certified as 'Fair Trade', 'organic', 'shade-grown' and 'bird friendly' in many cafes and most supermarkets. To showcase the scale of this development, the worldwide sales of 'Fair Trade' certified coffee increased by 40 percent between 1999 and 2004, another 40 percent percent between 2004 and 2005, and another 53 percent between 2005 and 2006, adding millions of dollars to the incomes of small farmers (Linton, 2008).

2.2.3 Stakeholders of sustainable measures

When it comes to sustainability measures in the specialty coffee industry there are several stakeholders that need to be analyzed. Those key players are businesses, NGOs, farmers and end consumers. They all have different viewpoints about sustainability initiatives as well as methods of governance and certification (Figure 10).

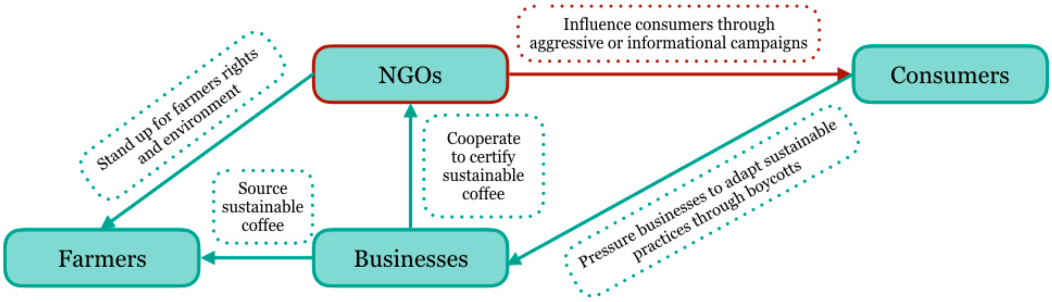


Figure 10: Relationship between the sustainability stakeholders

Source: Author; based on Neilson & Pritchard, 2007; Linton, 2008;

Businesses

One characteristic that is dominant in the coffee industry is the fact that roasters are the leader of the supply chain. This is not only due to their power of information, but also due to the fact that the big FMCG players have global market scope, strong purchasing power and ownership of successful brand names. In the 1990s a steady consolidation within the roasting industry led to a point where five roasters dominated the global market: *Nestlé*, *Altria* (*Kraft*), *Proctor and Gamble*, *Sara Lee* and *Tchibo* were purchasing 50 percent of the worlds coffee (Neilson & Pritchard, 2007). The market power caused them to disregard the coffee production standards as well as social responsibility. Similar to the disreputabilities in the apparel and footwear industries during that time, such as the *Nike* ethical sourcing scandals, sustainability certification and standard monitoring also came into the spotlight in the coffee industry (Neilson & Pritchard, 2007). Since 2003, each of the above mentioned big players improved their sustainability guidelines and added coffees with 'Fair Trade' or other certifications to their brand portfolio (Neilson & Pritchard, 2007). Even though many of the corporation have brand lines that are certified, a large part of their offer is not and many businesses only adhere to the minimum acceptable standards.

Some of the large coffee chains, such as *Starbucks* started their own voluntary sustainability initiatives. In order be a supplier for *Starbucks,* producers need to comply with the C.A.F.E. (Coffee and Farmer Equity) practices, which control quality, environmental and social indicators. Other big brands started partnering with NGOs and using their independent certifications. The problem with the transparency of using own guidelines instead those of independent certifications is not apparent to many consumers.

Corporate engagement in the coffee industry developed step by step and first the big businesses in the industries supplied niche product lines that were certified through NGOs. This practices was complemented by the general awareness of the businesses of improved standards with regard to sustainability in the supply chain. Slowly these individual efforts were accepted by the industry as a whole (Neilson & Pritchard, 2007). With the previously mentioned defragmentation of roasters in the supply chain, and a large number of small roasters joining the industry of specialty coffee, sustainability measures became a desired aspect for specialty coffee.

NGOs

Non-governmental organizations (NGOs) attempted to influence the behavior of the other industry stakeholders through big campaigns. For businesses they used threats of demonstrations or boycotts and for consumers informational campaigns in order to reach their goals. On the other hand they supported farmers with implementing sustainable guidelines.

These tactics created problems between NGOs and the specialty coffee industry businesses, but were nevertheless effective in pushing roasters to source their coffee beans in a more ethical way for the first time (Linton, 2008). The successes of this rogue pressure paved the way for the more common mellow methods of letter-writing and consumer education campaigns (Linton, 2008). In order to reach consumers, NGOs focus on the connection between the beloved coffee beverage and the conditions under which it was produced. For farmers, NGOs provide training and technological assistance to support and encourage environmentally sound practices. The increased revenue the farmers receive from growing environmentally sound coffee often leads for the cycle to continue by itself.

Many NGOs provide their own certifications, such as Rainforest Alliance and Fair Trade. They build their own governance structures based on certain standards and procedures that are rewarded with certifications, which will be discussed in detail in the next part of this section. Even though the partaking in certifications is completely voluntary, many businesses have no other choice if they wish to stay competitive among the other socially conscious brands in the eyes of the concerned consumers (Raynolds et al., 2007).

Consumers

Due to successful campaigns by NGOs and the prevalence of certifications, some consumers are aware of the sustainability struggles in the coffee industry. The consumers who pay premium prices first and foremost expect high quality. Linton (2008) argues, that these consumers also ask for certified coffees and may participate in campaigns that encouraging businesses and institutions to offer certified coffees. Even though the author ackowledges that the degree of consciousness varies, she remains convinced that specialty coffee consumers generally are conscious of the social and environmental issues around the global coffee trade. Other authors conducted survey in the United States that show, if both certified and non-certified coffees are available, consumers will choose certified ones even if they cost more (Bacon 2005).

Farmers

The producers of sustainable specialty coffee are usually owners of small farms or coffee growing estates and their employees. Some research has shown that small farm co-operatives take part in the sustainable movement and certifications as a business strategy, not necessarily in terms of social equality or for environmental protection (Linton, 2008). Sustainable practices, once certified, increase the farmers revenue (Linton, 2008). This is an ideal encouragement to keep growing premium coffee in a sustainable way. These practices nevertheless have a positive impact on the surrounding environment and community. Recent studies have shown that 77 percent of Fair Trade-certified farmers direct a part of their premiums towards community projects with focus on education, environment, initiatives for women and infrastructure (Linton, 2008). Even though there is room for improvement for the collaboration between NGOs and farmers who do not meet the standards for certifications on their own thus far, many producers do recognize the importance and financial benefit of farming sustainably (Linton, 2008).

2.2.4 Certifications

Process standards that relate to the environment and community where the coffee is grown cannot be verified by examining the final product. Certifications come into place as a labelling system to validate compliance.

Coffee certifications first emerged in the 1980s, with certified organic coffee being the pioneer in the field followed by fair trade coffee (Kleist, 2004; Neilson & Pritchard, 2007). Since that time many different labels have emerged, including 'bird- friendly' or 'shade-grown' with focus on environmental protection in order to complement the organic and fair trade spheres (Neilson & Pritchard, 2007).

Certifications in the coffee industry can be divided into NGO-based certifications and private certifications roasters implemented. NGO-based certifications distinguish themselves by their participative approach, unambiguous standards and credibility. These systems are independent and impartial from corporations or smaller businesses and appeal particularly to consumers (Raynolds, et al., 2007.) Private certifications can either be created by companies in the coffee industry or by research institutes. Company owned certifications are a debatable matter as their standards are not objectively assessed and regularly come under fire by critics. On the other hand, having private standards in place is preferable to having no certification or sustainability practices at all.

The five best established NGO-based coffee certifications are Fair Trade, Organic, Utz Kapeh, Bird-Friendly and Rainforest Alliance (Figure 11). In the remaining part of this part, these certifications will be assessed according to their standards and prevalence.

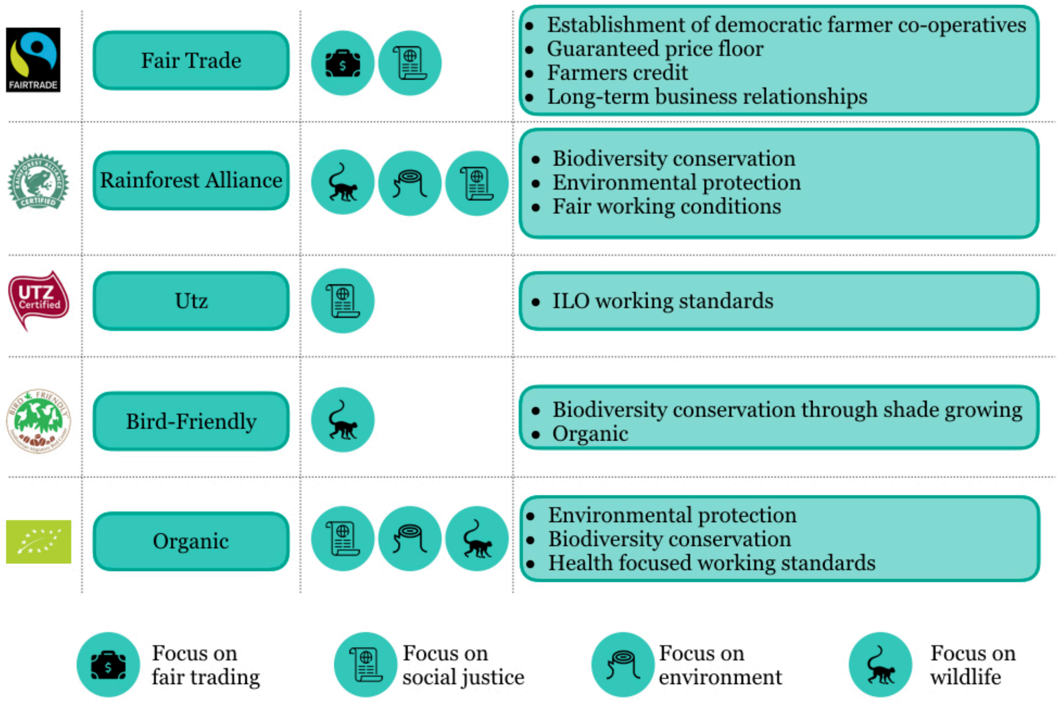


Figure 11: The major coffee sustainability certifications
Source: Author; based on Linton, 2008; FLO 2009; Rainforest Alliance 2017; Utz 2017; SMBC 2017; IFOAM 2017

Fair Trade

The Fair Trade certification is one of the most renowned coffee certifications in the world. It is recorded and distributed by the certifier Fairtrade Labelling Organization (FLO). The time involved for receiving the certification if conditions are met takes about 6 months and the applicant pays the certification and monitoring costs, even though the certifier provides grants in certain circumstances (Linton, 2008). Fair Trade has a clear social justice and developmental mission, as it seeks “ensure equitable trading arrangements for disadvantaged smallholders who are organised onto co-operatives” (FLO, 2009). Criteria for the certification are the establishment of democratically managed coffee farmer co-operatives which sell the produce, a guaranteed price floor when market prices are low and offering of farmers credit, promotion of long-term business relationships with poor producers in problematic parts of the world (FLO, 2009). When looking at the certification more critically, it has to be mentioned that the farmers that participate in Fair Trade program often are not aware of the meaning of and benefits associated with the certification and display a weak engagement with the organisation (Ortiz-Miranda & Moragues-Faus, 2014).

The majority of Fair Trade labeled coffee is grown in Latin America and some farms are in Africa or Asia. It is mainly sold in Europe and North America and represents the second largest volume of certified coffee beans being produced (Raynolds, et al., 2007). Fair Trade is involved in very active consumer communication which extends far beyond the borders of coffee itself.

Rainforest Alliance

The Rainforest Alliance certification is a well known certification due to its connection to food or beverage chains such as McDonald's, Costa Coffee, Dunkin' Donuts and airline KLM. It is recorded and distributed by the certifier Rainforest Alliance and also known under the name Eco-O.K.. The time involved for receiving the certification its not specified and annual certification fees are required (Linton, 2008). Rainforest Alliance's wishes to "integrate productive agriculture, biodiversity conservation and human development" (Rainforest Alliance, 2017). In order to receive the Rainforest Alliance certification, farmers need to plant trees around roads, housing and areas that are not suitable for crops. For erosion control and usage of less chemicals they need to create buffer zones from native vegetation on the ground along waterways. Pollution from farming activities must be reduced and local workers hired for fair wages in safe working conditions. Access to clean drinking water and proper sanitary facilities is also part of the conditions. There is no farm size limit for the certification, which means larger farms can get certified. In fact, with the goal to change the farming practices, Rainforest Alliance specifically targets plantations and is hence less involved in the certification of specialty coffees, even though small farmer certifications are increasing and outnumber plantations in terms of sheer number (Rainforest Alliance, 2017).

Rainforest Alliance labeled coffee is grown in Latin America and the majority of certified coffee is sold in North America, with some presence in Europe, Brazil and Australia (Raynolds, et al., 2007). Rainforest Alliance is involved in consumer communication and informs with the use of logos whether a partner is 100 percent certified or with a label identifying the exact percentage if it surpasses 30 percent(Rainforest Alliance, 2017).

Utz

The Utz certification is the newest and most recently created coffee certification system, founded by the Dutch retailer Ahold (now called Ahold Delhaize). Originally the certification was called 'Utz Kapeh', which means 'good coffee' in the Mayan language (Raynolds, et al., 2007). It is awarded by approved third-party certifiers, not the foundation itself. What makes the Utz label special, is that it creates an industry standard for all roasted coffee that is sold under private labels in European supermarkets (Neilson & Pritchard, 2007). Through this large retailers can't hide their sourcing paths for non-branded coffee and all coffee can be traced back to the origin. The certification Utz pushed onto retailers is supposed to become a part of their CSR strategy. Utz certified coffee can be found at IKEA, Aldi, Kaufland and Tschibo for instance. As Utz originally focused on large retailers, the their coffee comes mainly from plantations, even though small producers can be found (Raynolds, et al., 2007). There is no time specification for receiving the certification if conditions are met and inspections are held on an annual basis (Linton, 2008). Utz mission is to "implement a global decency standard for responsible coffee growing and sourcing" (Utz, 2017; Raynolds, et al., 2007). Criteria that the certification follows are set by the International Labor Organization (ILO). Hence, this certification is an example of meeting the bare minimum of sustainability standards. The majority of Utz labeled coffee is grown in Latin America with some certified farms in Asia and Africa. It is mainly sold in Europe and Japan, but can be found in North America as well (Raynolds, et al., 2007). Utz Kapeh is involved in business to business communication only, which is a reason why it could be relatively unknown to consumers.

Bird-Friendly

The Bird-Friendly certification is the smallest among the key coffee certifications. It was created by the Smithsonian Migratory Bird Centre (SMBC), the only scientific institution solely dedicated to studying migratory birds (SMBC, 2017). Hence, it is not an NGO-based certification, but a private one that operates much like its NGO-based equivalents. It is awarded through private certifiers that are approved by the institution. Coffee that is grown Bird-Friendly asks the farmers to provide a forest-like bird habitat by planting their coffee trees under a canopy of trees. The coffee is also grown on organic soil without the use of pesticides, which harms insects that feed the birds and pollute waterways used by animals and the local community. The label mainly certifies small producers, but several plantations have also been awarded (Raynolds, et al., 2007). For being considered Bird-Friendly, the farm needs to be certified organic first and in order to stay Bird-Friendly has to be reevaluated and recertified every three years (SMBC, 2017). There is no time specification for receiving the certification if conditions are met and inspections are held on an annual basis (Linton, 2008). The Bird Friendly mission is ''to encourage the production of shade grown coffee, and the conservation of migratory birds" (SMBC, 2017; Raynolds, et al., 2007). Criteria that are required for the certification are shade cover, canopy structure plant diversity and waterway buffer zones. Bird-Friendly labeled coffee is only grown in Latin America and mainly sold in North America (Raynolds, et al., 2007). The Bird Friendly labelling is typically used at the point of sales as it has a strong consumer appeal.

Organic

The Organic certification is presumably the most known certfication among agricultural commodities, with certified organic coffee representing 10 percent of the world production (Linton, 2008). The Organic labels used to be awarded by individual national associations, until the International Federation of Agricultural Movements (IFOAM) harmonized the standards. IFOAM is a democratic membership organisation with over 800 affiliates in 100 countries that functions as an international umbrella organization of the organic world (IFOAM, 2017). The time involved for receiving the certification if conditions are met takes about 2-3 years or more and the applicant pays the certification and monitoring costs (Linton, 2008). National laws often require additional labeling on the packaging, such as the 'Euro-Leaf' for organic produce sold in the European Union. However, these national organic certifications have largely adopted IFOAM rules. Organic certification has an environmental protection goal by promoting less chemical-intensive farming practices (Raynolds, et al., 2007). IFOAM's mission states that their "goal is the worldwide adoption of ecologically, socially and economically sound systems that are based on the principles of Organic Agriculture" (IFOAM, 2017). Criteria for the certification are that the produce is grown without the use of pesticides, fungicides, synthetic herbicides, synthetic fertilizers or genetically modified organisms (GMO) (Organic, 2017). Organically labeled coffee is mainly grown on small farms, but some plantations are included as well. The commitment of farmers to the organic profile of their farm is very strong. They understand the meaning of growing organic, receive a price premium when selling their beans and obtain help from supervising technicians of the certifying organization. The farmers themselves value their role of protecting the environment and health of their own workers, community and others (Ortiz-Miranda & Moragues-Faus, 2014).

The majority of Organic labeled coffee is grown in Latin America and some farms are in Africa or Asia. It is widely available for purchase in Europe, North America, Australia, Japan and can be also found in Latin America (Raynolds, et al., 2007). Organic coffee is labeled at the point of sale but the organization admits the difficulties that are faced to sell certified Organic coffee in comparison to labels such as Fair Trade or in combination with them. This can be explained by the additional price premium for organically grown produce (Ortiz-Miranda & Moragues-Faus, 2014).

2.2.5 Supply chain challenges and opportunities

The specialty coffee supply chain targets challenges, which the standard coffee supply chain is exposed to. These challenges are with regard to trade relationships and power balance and environmental impact. The most severe challenges in the supply chain are faced by the first level- the farmers. Due to the nature of the coffee industry, where the beginning of the supply chain is based in economically less wealthy countries and the chain leaders (roasters) as well as other half of the supply chain is based in wealthier countries, farmers have the least power and face the most issues. On the other hand, once the coffee reaches the end of the supply chain- the consumer- more challenges arise. In the end-of-life stage of coffee problems like waste creation and removal have created new troubles in recent years, in particular with one-use coffee cups and capsule machines. Coffee grounds themselves will also be briefly discussed.

Fair trading relationships

The trade power imbalance is felt most among the farmers. Often small farms lack bargaining power and intermediaries take advantage of them. Trader intermediaries can buy the coffee for half the price they sell it for (Joo, et al., 2010) and by doing so small farmers sometimes can not cover the initial costs of production. This practice leads to poverty and debt. Small farmers abandon their farms and look for employment elsewhere. NGOs or governments can assist with cooperation and communication between coffee producers and buyers and try to reverse the problems in the industry. As small farmers do not have the financial resources to cut down trees or invest in chemical fertilisers, they are the ideal partners for organic coffee production. The fair prices they receive are the best encouragement to continue with their practices. By establishing more direct and sustainable sourcing of coffee and cutting out intermediaries, who do not have the coffee farmers best interest in mind, fair long-term business relationships can thrive. Fair relationships are often based on payment of a living wage. The price of coffee will be higher than the market price, which in turn enables the producer to guarantee safe working conditions, employee training, no forced child labor and adherence to other labor conditions. Empowering of farmers leads to more transparence in the coffee industry (Joo, et al., 2010). The additional income is often invested in developing the surrounding community and to support education.

Environmental impact

When farmers focus on large yields and low costs the environment suffers. Conventional coffee farming, just like other conventional farming, makes use of chemicals in the growing process. These can be in in form of pesticides, herbicides or fertilisers. Using chemical substances when growing coffee has a ripple effect that should not be underestimated. With a product like coffee, that takes up its surrounding nature to form a specific taste, use of harmful farming methods can be expected to reflect on the final product and impact the person who drinks the coffee. Besides this final consumer, the farmer himself can face serious health problems when working with strong herbicides and pesticides. Moreover, the substances pollute the soil and waterways, which will sooner or later impact the family of the farmer and the community in a negative way. On the other hand, the environment, particularly the soil and animals nearby suffer whenever chemicals are used. The pesticides poison bugs, birds then eat those bugs and can die from the poison. With less birds around, the bug problem will get worse and more pesticides have to be used. This is made worse when there are no nesting trees for birds on the coffee farms, which is an issue on larger plantations in particular. Chemicals also impact bees who are needed to pollinate the coffee flowers in order to bear fruit. This ripple effect works towards the opposite side as well, which is the aim of many NGOs in the field of specialty coffee. When farms are small in size and the coffee trees grow under the shade of large other trees, waterways are protected by other vegetation and no chemicals are used in the growing process, it leads to an all over positive impact. With bug eating birds nesting and living in the trees nearby, the fragile Arabica trees are virtually protected from pests. Clean waterways keep the community healthy and ensure long term benefits for everyone who uses the water, as well as the environment.

Coffee grounds and sustainability in cafés

Cafés represent one of the paths for consumers to purchase and consume coffee in the supply chain. They are one of the only touchpoints, besides stores, that the consumer has with the whole chain. Cafés play an integral part when we speak about opportunities for sustainability in the coffee industry as they not only deal as actors but also as educators.

There are many excellent examples of cafés being sustainable. Beside offering sustainable coffee in its assortment, the waste management system can be adjusted in a concious way. It is possible to keep a large amount of unusable items out of the usual trash stream, such as landfill. With some modification café trash can often be recycled. A large proportion of any café's trash represents coffee grounds. The author of this paper has worked as a barista in several cafés across the world and can confirm that approximately half of the daily trash that gets created are coffee grounds. These grounds do not have to go into plastic bags and landfill. Many cafés offer them for free to local community gardens and individual gardeners, upon self arranged pick up. Avis (2012) visited some of the most sustainable cafés in the United States and confirm that they manage to keep more than 80 percent of their waste out of the conventional waste stream.

A food waste diversion project at the Portland Oregon International Airport (PDX) showcased exceptional results. 21 airport vendors, ranging from restaurants to cafes, were instructed to compost all of their suitable waste through the airports new compost container. With strict monitoring and educational campaigns for employees, the airport managed to divert 35 percent of its waste stream to the compost. Within ten months that amounted to 60 tons of food scraps, of which 67 percent were coffee grounds (Drake, Bunn, Blue, 2004). This program shows that particularly cafes create a large amount of compost-friendly waste which can be exposed of in a sustainable way if the infrastructure is provided for it.

Some cafes go far beyond the trash separation and include green practices into every facet of their business. This includes efficient energy use, and renewable energies, water saving, waste reduction in general, reduction of pollution and sustainable building materials (Keller, 2014).

If cafes take on the additional role of a consumer educator it can show in many different ways. Keller (2014) describes a café that created a recycling and composting station on the dining floor where customers could actively separate their waste and become part of the solution. This particular café managed to divert 90 percent of its waste from landfill. According to the owner of the café, once consumers start caring about Fair Trade and organic coffee, it is an easy next step to interest them in green buying habits. If the coffee itself is great, with actively including the consumer in sustainable practices, they receive a better experience overall and this business model can be profitable across the entire supply chain (Keller, 2014). Other sustainable café owners also point out the importance of encouraging customers to participate in the recycling and composting of waste by providing clearly labeled bins with explanations. The owner furthermore states that customers often approach him to say how they never feel guilty for spending more money at his café as the products are all unique, made with care and help the environment (Keller, 2014).

Many customers drink their coffee in porcelain cups inside the establishment. The recent 'to-go' trend however, has added a new sustainability challenge. Carrying a 'to-go' coffee cup in the streets creates a desired and trendy image in consumers minds and can be observed daily on the streets of every larger city in Europe, Australia and the United States. The whole problem of single use coffee cups will be discussed in the next part.

Overall, every coffee company is responsible to create a system of delivering coffee that is not harmful to the environment. However the reality shows that putting this idea into practice it not easy and it becomes evident that consumer education and sustainable practices go hand in hand. Furthermore, the environmental emphasis does add costs and inevitably cuts into profits.

Single-use coffee cups

Estimates are that 80 percent of the iconic Starbucks cups end up in landfill. All in all, annually over 200 billion single use coffee cups are thrown into regular trash in the United States (Kamanetz, 2010). A study in New Zealand has shown that every year more than 180 million single-use coffee cups are thrown into the trash (Hawkes Bay Today, 2016). This equals 38 to-go coffee cups per person each year. Even more shocking estimates by the Keepcup company (2017) show that worldwide 500 billion coffee cups are produced every year. When this amount will equal the actually yearly disposed cups, which can be assumed due to the increasing popularity of the 'to-go trend', about 60 million cups would end up in landfill every hour.

Take away coffee cups are usually branded. They serve as a walking billboard while the consumer drinks the coffee and the brand still remains visible when the cup gets disposed of in a place where it should not. Kamanetz (2010) argues that the cup sits directly between the brand itself and its sustainable image. But most coffee drinkers do not realise that they are contributing to the creation of unfathomable amounts of trash with this harmful practice by simply taking a coffee ‘to go’.

Often retailers are criticized for the creation of trash through take away coffee cups. Even if they provide recyclable cups and special bins in-store, as soon as the customer leaves the store this fact becomes irrelevant. The vast majority of to-go cups are also consumed outside of the store. At this point the municipal waste infrastructure takes over. Only if bins for composting or recycling are available an informed customer can throw away the cup responsibly. Starbucks has attempted to promote the use of tumblers over disposable cups and served tens of millions of beverages in the cups every year since the launch of the campaign. The company realises that this number is still only a drop in the bucket and has recognized the availability and access to recycling services at consumers homes and workplaces as a larger opportunity for positive environmental impact (Johnson, 2010). It is possible to argue that the person who bought the coffee takes ownership of it and is in turn responsible for the proper disposal regardless of the surroundings. This train of thought is flawed once it becomes clear that most consumers do not realize that paper cups are not made from paper alone (Figure 12).

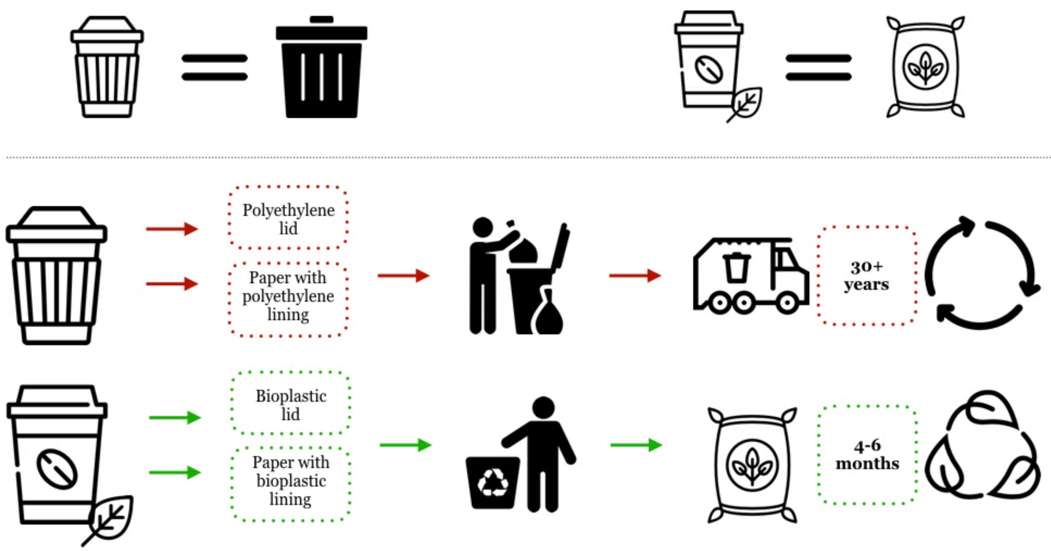


Figure 12: Problem and alternative for single-use coffee cups
Source: Author; based on Kamanetz 2010; Frewin, 2010

The problem with single-use paper cups is that they are not made from paper alone. Even though they are technically made of cardboard, they are also plastic-coated (with polyethylene) on the inside in order to not let the liquid soak through them. This fact makes the cup almost impossible to be recycled. Recycling processor do not take the regular coffee paper cups, due to the plastic or wax lining which makes them watertight. Unless the plastic is plant derived, it cannot go to composting facilities (Kamanetz, 2010). An article in The Guardian (Hunt, 2015) featured Chris Cheeseman, a professor of materials resources engineering at Imperial College London, who explained that the polyethylene in coffee cups is resistant to degradation and could take around 30 years to break down. According to the professor, the problem with this estimate is that no studies have been conducted on the degradation of coffee cups specifically.

Corporate or café initiatives are not the force, which enables sustainability, it is usually the law. There are places in the world that have taken on the battle with the trash problem successfully. Examples of locations that require recycling by law in North America are Seattle, San Francisco and Ontario. All coffee shops, even the big brands, need to comply and show that it is in fact feasible. On the other hand, wherever recycling is not lawfully required, big coffee chains do not follow the same rules. Sustainability laws do not need to start with mandatory recycling. Increasing the prices charged per ton of landfill usually has a similar effect. For instance, landfills in Europe can charge up to 6 times the price of those in the United States and therefore create more incentives for sustainable practices. Ireland for instance doubled the price for landfill in an attempt to support the idea of a zero waste economy (Kamanetz, 2010).

In the city of Seattle any food establishment that serves or packages single use food or beverages must do so in recyclable or compostable containers since July 2010 (Sullivan, 2011). Recycling is required by law, but composting is not. Nevertheless, the municipality facilitates composting by providing special trash bins. Items that need to be recycled or composted go far belong coffee cups, but include napkins, bakery boxes, deli sheets and bags, food trays, utensils, coffee sleeves, food service gloves, cold cups and straws.

Cedar Grove is a composting plant near Seattle and has created the Cedar Groves Brown Line Program. A brown line is used as the company’s logo to indicate which single serve items in Seattle can be composted in its facilities (Sullivan, 2011). Every compostable item has a brown line running along it. The composition facility sees itself as “a best case answer to the question of what happens when waste leaves your hand" (Kamenetz, 2010, p.118) and functions as a recycler, manufacturer, wholesaler and retailer. The facility gets paid when the composting trash comes in and it gets paid when it comes out as bagged compost for gardeners (Kamanetz, 2010). The only problem it still faces is that by law organic fertiliser can not contain bioplastics, which coffee cups contain. Due to that 2 streams with organic and non organic compost products are available at the facility until the laws change in the future (Sullivan, 2011).

More and more companies enter the market that produce 100 percent compostable products. VegWare is one of those businesses and produces products such as coffee cups and food packaging that breaks down in less than 180 days (Frewin, 2010).

Estimates suggest that the global demand for biobased or biodegradable plastics will rise 19 percent to 950,000 metric tons in 2017 (Desai, 2014). Biobased commodity resins, such as biopolyethylene and biopolypropylene are used for plastic bags and other packaging. The increasing demand shows that the industry is adapting to changing demands and willing to innovate.

The Repurpose cup is a biodegradable cup that has been awarded by the Specialty Coffee Association of America (SCAA) for its sustainability. The cup and lid are made from corn and require 65 percent less carbon dioxide to make than plastic. The cup decomposes within 90 days in a commercial composter but is not suitable for backyard composting (Wright, 2012)

Coffee drinkers are usually excited to hold a take away cup which states that it is compostable or biodegradable. However, if these cups are thrown into plastic bags that go into landfill they will not decompose. This shows that publicly available composting stations are a prerequisite for the system to work.

Composting certainly has its pros and cons. As highlighted previously, currently available compostable coffee cups are decomposing in commercial facilities but are not considered suitable yet for the backyard compost. Critics argue that there is no point for these cups if they can not be composted everywhere by regular people. The industry on the other hand considers it as a step towards the right direction and it is still the greenest option on the market. Advocates reason that that such biodegradable cups are still a better option in landfill compared to the petroleum-based alternative, as it does not endanger the environment (Wright, 2012).

Typically biodegradable resins and plastics can be found at the centre of compostable products (Rhodes, 2009). Bioplastics and resins are usually created from vegetable fats and oils, starches or microorganisms (Chua, Yu, Ma, 1999). One of the most commonly known biodegradable resins is PLA. PLA stands for polylactide and is derived from renewable resources, such as corn starch or sugarcane (Rhodes, 2009).

There are several businesses in the world that manufacture the biodegradable materials. NatureWorks in the United States for instance manufactures Ingeo, a PLA resin. It is the largest PLA producer in the world and Ingeo is available in various grades. This means that the chemistry is tailored to fit various applications, such as flexible packaging film, clamshell packaging or diapers. Ingeo could be modified in a way that it receives heat deduction properties and is hence suitable for hot beverages, such as coffee. In this case extrusion coating is used in such a way that a thin layer of the bioresin is applied to foundation such as cardboard (Rhodes, 2009; NatureWorks, 2017). Telles is another major manufacturer in the United States, that produces the resin Mirel from microorganisms. This material is scientifically called PHA, which stands for polyhydroxyalkanoate, a coating product received from microbial fermentation and reacts similar to starches when it degrades (Rhodes, 2009; Telles, 2017). The Italian manufacturer Novamont created Master-Bi, one of the most promising biodegradable materials for coating paper and created from starches and biodegradable polyesters (Rhodes, 2009; Novamont, 2017). BASF, the German chemical giant, produces EcoFlex among its bioplastics, a biodegradable polymer made from fossil based materials. By using fossilized carbon, the bioplastic is less susceptible to water damage and has a very high heat resistance (Rhodes, 2009; BASF, 2017). Taiwanese Wei Mon Industry works together with President packaging, a company supplying coffee cups for Starbucks and other major chains. They developed PLA coated paper alternatives together for any product which is normally polyethylene (plastic) coated (Rhodes, 2009; Bloomberg, 2017).

Even though compostable coffee cups are more expensive than their plastic coated counterparts, the environmental benefits they offer can not be overemphasized. The real challenge was not the development of the materials, but is for people to become aware of their existence and to develop the willingness to pay the premium.

Coffee capsules

Coffee capsules, also known as single-serve coffee pods or on demand coffee, are growing in popularity all over the world. A Nielsen study found that between the years of 2008 and 2012 capsule machines were the fasted growing sector of the UK coffee market, with sales rising by 85 percent (Joseph, 2013). Particularly university students that are looking for convenience are prone to purchase coffee capsule machines while living in small-sized living arrangement, such as dorms. This trend contradicts the idea that students are among the most environmentally conscious consumers (Zanetti 2016). Environmentalists highly criticize the wasteful and irresponsible business model which coffee capsule producers pursue by selling billions of capsules each year (Gelles, 2016). The critics argue that of the many ways coffee can be made, capsules are ones using the most packaging. The debate has come to the point where some institutions, such as the government of city state Hamburg, Germany, banned the use of the machines in official buildings altogether (Gelles, 2016).

Traditionally coffee capsules are manufactured using a hard plastic or aluminium shell. The coffee is made by inserting the capsule into the suitable machine, which punctures the capsule to flush it it hot water. During this process the coffee is brewed.

The capsule brand Nespresso, which came to fame by creating an unforgettable marketing campaign starring George Clooney, uses aluminium for its capsules. According to the brand, it is the best material available to protect their delicate premium coffee from influencing factors such as oxygen, light and humidity. Technically Aluminium is infinitely recyclable. Nespresso shops in 34 countries participate in a capsule collection program, where consumers can return used Nespresso branded capsules for recycling. According to own statistics over 80 percent of capsules are returned (Marchand, 2015). According to Euromonitor

Nepresso has a global market share of around one-thirs of the $10bn coffee capsule market (Joseph, 2013).

The debate about the environmental damage done by coffee capsules never came to a halt and alternative solutions had to be created. A green capsule would need to bring the same properties that made existing ones so appealing, for instance a material that would withstand the pressure from the machine and create an oxygen barrier, yet still be punctured to brew the coffee.

With the existing common capsules, if consumers wished to recycle them by themselves, it was necessary to peel of the aluminium or plastic top by using their fingernails or a knife and remove the coffee grounds. A convenience product quickly becomes very inconvenient if the consumer attempts to recycle it. Furthermore, there is no guarantee that the individual parts would be recyclable after all.

But sustainable alternatives to the environmentally harmful common coffee capsules do exist. A compostable alternative called PurPod100 developed by the company Club Coffee recently won the 2016 Innovation in Bioplastics Award (Coons, 2016; Club Coffee, 2017). These coffee capsules include a paper lid, a ring using chaff materials gained from coffee roasting, and a bioplastic mesh filter. The capsules are proven to biodegrade in industrial composting facilities in approximately five weeks (Club Coffee, 2017). Other companies, such as Canterbury Coffee and OneCoffee have also created coffee capsules which are up to 99 percent biodegradable (3BL Media, 2015). The question that arises now is how consumers will react to the new offers and whether it represents a suitable alternative in reality.

2.3 Summary

This chapter showcased the theoretical background for the research of the thesis and was divided into two parts. The first part explained the specifics of the specialty coffee industry and the second part focused on sustainability measures employed in the coffee industry. A brief outlook on the history of the economy of coffee showed that the recent changes emerged from the industry crises.

Furthermore, the commodity coffee was introduced in detail and specialty coffee distinguished from conventional coffee. The main models and differences between the conventional and specialty coffee supply chain were studied in the chapter. It was established that the specialty coffee trend is a global one and can be observed particularly strong in North America and Europe. The consumers of specialty coffee are mainly 'Millenials', whose characteristics converge past country lines. Even though the research is based in Prague, the Czech Republic, much of the data from other parts of the world is applicable due to the global context of the topic. In the second part, various sustainability measures were studied in-depth. The history and reasons for the measures introduced the topic and stakeholders were discussed. Furthermore, the most important certifications used in coffee and their meanings were explored. The negative impacts of the coffee industry do not stop with the drinking of the coffee, but are also affected by coffee by-products such as grounds, single-use cups and capsules. Measures to counteract these negative effects were also discussed. The background research shows that solutions for many of the problems do exist, with some being still in the early stages of development (sustainable coffee capsules) and others gaining more popularity globally (composting of grounds and compostable cups.

2.4 Conclusion

Industry experts define specialty coffee as an unblended single-origin coffee, with limited availability, unique taste, high quality and specific packaging. Furthermore, harmonious supply chain relationships and sustainable practices are encouraged, however not always followed through. It becomes apparent that the specialty coffee consumers belong to a generation that is generally willing to consume and pay a premium for ethical products, but is lacking the in-debth knowledge. Many of the sustainability measures introduced in the second part have successful pilot projects and can be observed in in various locations of the world. However, the information about the positive impact of the measures needs to be shared in the industry. In order to give recommendations on how to increase the impact of sustainability measures, it is first necessary to identify the perceptions of consumers towards specialty coffee as well as their knowledge gaps with regard to the negative impact of the industry.

3. Research methods

This chapter is the first section of the second part of the thesis, and it will explain the process of how I chose my research methods for the investigation. As focus groups were used, I will focus on explaining my selection of interviewees and questions for the focus group guide. Furthermore this chapter will explain the method used to analyze the outcomes.

3.1 Current Practice

The cases I reviewed in order to work my way into the topic and to write the theoretical chapter were based on qualitative and quantitative analysis. As my research topic is to understand the impact of sustainability measures in the specialty coffee supply chain on the end consumer, I chose to use qualitative analysis. As the examined subject-matter determines the choice of research method, and not the other way around, quantitative research did not seem suitable as it is a way to analyze subject-matters by dividing them into variables, instead of looking at them as a whole in their everyday situation. Qualitative research methods are acceptant that views and opinions on subject-matters differ, and acknowledge the perspectives that develop from differing social backgrounds and experiences of researchers. The researcher's impressions, influences, emotions and confusions become a part of the data, as they have influence on the interpretations in protocols and research journals.

3.2 Selection of research methods

In order to be considered valid, the research investigation has to provide answers to the topic of research for which it was undertaken with use of appropriate methods and procedures. Reliability of the study requires the research method to produce consistent measurements. Therefore, if a second researcher was to use the same method similar results would be expected in a reliable data collection for the research.

3.2.1 Choosing data collection methods

The approach used to gather information in my research study is primary data collection. The primary sources I will be using are focus groups with specialty coffee consumers. A focus group is a form of recorded group interviewing which relies on the interaction within the interviewed group based on the questions and topic which are supplied by moderator. The specific purpose of focus groups is to help find answers to the research question. Focus groups are used by researchers to draw upon respondents' experiences, attitudes, feelings, beliefs and reactions which are more likely to be revealed through the social setting and interaction between the individuals of the group. By using such an interactive group setting the gap between what people say and what people do can be better understood, as they challenge each others viewpoints and reveal multiple explanations of their behaviour and attitudes. Focus groups can be unstructured, semi-structured and structured, varying the freedom of the moderator in terms of the questions asked and encouraged interaction between participants. Organizing focus groups interviews requires significantly more planning than other interviewing methods, as arranging such group meetings at appropriate venues requires a lot of time. The number of people for focus groups depends on the type of interview session planned and can range anywhere from three to ten and last between one to two hours.

Focus Groups

For the purpose of this research 4 focus groups were conducted, with the specifics and differences in interviewees described below. The focus groups will be divided in 1,2,3 and 4. Further details about the individuals can be found in appendix III. The interviewees will remain anonymous and personas with a first name have been created to achieve that. All remaining information about each person, besides the name, is authentic. All focus groups were conducted in English language and every participant spoke English at a high level of proficiency and has lived in Prague, Czech Republic for many years. The participants had to fill out a questionnaire before being selected for the focus groups, which can be seen in the appendix I. All selected candidates displayed a strong interest in specialty coffee, drink one or several coffees every day and have an emotional connection with the topic. Overall 15 coffee consumers were interviewed in 4 focus group units (Figure 13).

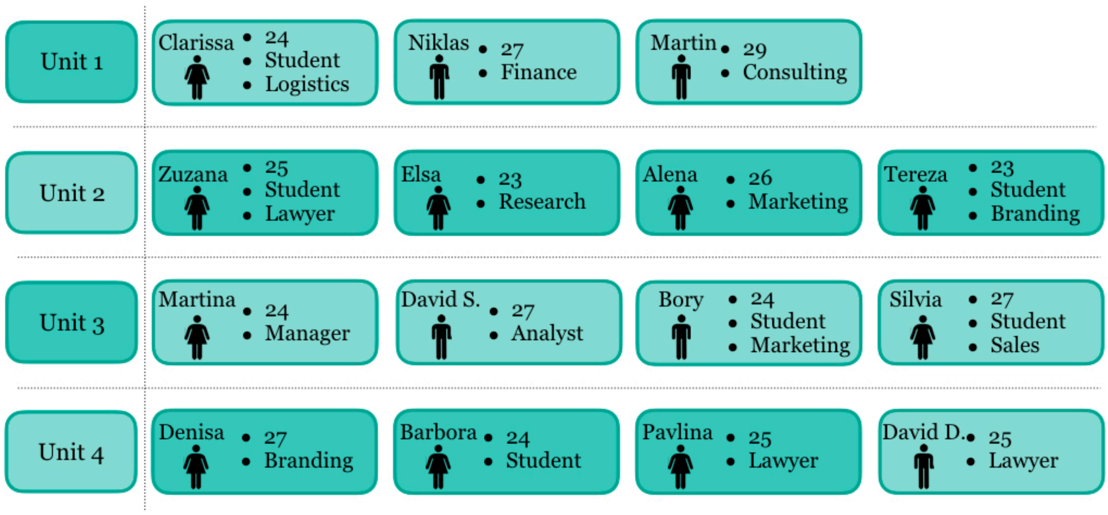


Figure 13: Focus group units
Source: Author

- **Focus Group 1:** The focus group consisted of three persons, one female and two males. Clarissa, a 24 year old female, is a student who also works in the FMCG industry in logistics. Niklas, a 27 years old male, works as a finance analyst and Martin, a 29 years old male, is a management consultant.
- **Focus Group 2:** The second focus group was composed of four females. Zuzana, 25 years old, is a student that works as a junior lawyer. Elsa, 23 years old, is involved in marketing reaearch and Alena, 26 years old, works as a marketing specialist. Tereza, 23, is still studying and has a job in branding in the construction industry.
- **Focus Group 3:** This focus group consisted of four persons, two females and two males. Martina, a 24 years old female, works as a product manager and David S., a 27 years old male, works in venture capital as an investment analyst. Silvia, a 27 years old female, is a student and sales consultant in the

construction industry and Bory, a 24 years old male, is also a student but works as a digital strategist.

- **Focus Group 4:** This last focus group was composed of four persons, one male and three females. David D., a 25 year old male, and Pavlina, a 25 year old female, are both junior associate lawyers. Barbora is a 24 year old female student in the field of economics and Denisa, a 27 year old female, works as a brand manager at a beverage company.

In order to gain the trust of the participants and to create a comfortable atmosphere, I am willing to provide further information on my thesis after submission and share the final version of the thesis. This transparent approach shows my respect for their engagement and that I do not intend to misinterpret or misuse their given information.

Specifics of the interview format

The interview format used in this thesis is the structured interview. Questions have been developed before the focus group takes place and all groups are asked the exact same questions in the same order. The reason for choosing a structured interview format is that it assures a comparability of data due to its uniform questions. The interviews were held at the author's home in the living room, with participants sitting in a U-shape on comfortable couches facing each other and the moderator was sitting on a chair to the side. People often feel more confident to speak in relaxed surroundings. The interviews were video and audio-recorded and the participants have been asked for permission to do so.

3.2.2 Development of the focus group questions

I developed the interview guideline myself as there were no suitable interview guidelines available within the material I studied; data I worked with previously was collected through quantitative and qualitative analysis, which I found through desk research.

In order to collect questions I brainstormed all questions that came to my mind with regards to my research topic and wrote them down. After collecting these questions I discarded those ones which seemed to be the least suitable, and arranged the remaining according to different topics and whether they were main questions, or sub questions to keep the conversation going. I structured the focus group question guide into five parts with subquestions. The guide consists of 14 questions in total and they were asked in English and can be found in appendix II.

Before starting each focus group a brief introduction was given. Participants were welcomed and thanked for their volunteering. The context of the research was explained, but the exact topic of the thesis was not mentioned in order to not influence any following answers. Participants were instructed that there were no correct or false answers and it is all opinion based. They were encouraged to build on each other answers and to agree or disagree, if appropriate.

The first part was an introductory question to be worked on individually which encouraged each member to warm up to the topic. The moderator asked for word associations with the term 'specialty coffee' and the participants each received five colored post it notes and were motivated to write a word on each, which they connect to the topic. Afterwards, each participant briefly shared their associations. This practice served as an icebreaker for the group and people felt more comfortable speaking openly with each other. The second part asked the group about their motivations to pay more for specialty coffee, where they find information about the quality and what quality stands for in their opinion. The third part served as a interactive transition to the sustainability topic and was meant to encourage participants to explore the idea of the coffee supply chain. As a group they used post it notes to create their idea of the journey from bean to cup. The fourth part explored the impact of sustainability measures in the specialty coffee supply chain on the end consumer by diving into negative effects of the coffee industry, by investigating the meaning of the most common certifications and by learning about the opinions towards to-go coffee cups and coffee capsule machines. The fifth and last part served as a conclusion and investigated the participants interest in sustainability measures and information sharing. In this section the participants also explored who drives negative impacts and sustainability within the supply chain.

Supportive sub-questions were prepared in case that the conversation or debate would not flow naturally, asking for more examples, or if they can think of anything else with regards to the matter. The resulting interview questions can be seen in appendix II. None of the participants received the questions in advance or were informed about the exact topic of the research, besides it covering specialty coffees.

3.3 Process of data analysis

The recorded focus group interviews are considered to be raw data. The raw data can be used by giving a narrative description or by doing a content analysis, such as coding. Content Analysis helps to identify the main topics throughout the interview. Those main topics give a guideline for the classification of the responses. The main themes and relevant responses have to be integrated into the thesis for the research. Coding in particular enables the researcher to organise large amounts of data and to discover patterns. Participants' answers are organised by category codes and labeled. Afterwards, if relationships appear between ideas these can be diagrammed, special use of vocabulary highlighted and main themes discovered. Eventually certain codes are eliminated, combined or subdivided while looking for repeating ideas and larger recurring themes.

After main topics and opinions are identified, they will be summarized. The main findings with regards to the impact of sustainability measures in the specialty coffee supply chain on the end consumer will be discussed. At the end I will reflect on the given answers and work with them in order to include the results opinions into my recommendations.

3.4 Summary

This chapter was the first section of the second part of the thesis and explains why the qualitative research method and focus group interviews were chosen for the empirical part. Furthermore, the participants and focus group units were introduced and their selection explained. The development of interview questions and the general procedure of the group interview were explained. The chapter finished by showing the steps that will be used in order to analyze the outcomes of the focus group interviews.

3.5 Conclusion

This part is the basis for the second section of the second part of the thesis. After explaining the research methods for the investigation, the next chapter will contain a summary of the focus group interview outcomes. The introduction of the participants and groups gave an opportunity to become more familiar with them and their personal backgrounds. Due to the total number of participants, the focus group interview results should give a broad range of answers to the interview questions.

4. Research Results

After completing four focus groups with a total of 15 specialty coffee end consumers about the impact sustainability measures in the supply chain have on them, the following chapter will focus on results of the focus group interviews and limitations to the research. To be more precise, in this chapter the key answers to the interview questions and other recurring topics during the group interviews will be summarized. Furthermore, limitations and reasons for them will be explained.

4.1 Summary of results

With regards to summarizing results it will be explained first how answers were analyzed. Afterwards the answers will be summarized. The recorded interviews were summarized in written form and can be found uploaded to the INSIS system in an Excel document as the size does not fit in the appendix. In order to summarize the results, the main given answers to the questions, which the group discussed were extracted and written down. Furthermore recurring ideas and keywords which appeared during the interview questions were extracted and put in a table, which is known as coding. The keywords and ideas were ordered in their significance by comparing in how many interviewees referred to them during the focus groups. Key ideas that were discussed in all four of the focus group units, were given more emphasis than keywords by several interviewees but were not mentioned in all groups.

4.1.1 Summary of answers

The following questions were asked in English during the focus group interview. For the summary, only the most relevant answers were included.

(PART 1) When you hear 'specialty coffee', which words come to your mind?

This question was asked at the very start of the interview to learn more about the interviewees personal associations with specialty coffee and also as an introductory question and ice-breaker in order to engage every single person. Each person wrote the answers down individually in silence on post-it notes and they were shared with the group afterwards. With 15 individuals giving five associations each, the most frequently mentioned among the 75 associations will be summarised. All individual answers can be seen in appendix IV and the summary in Figure 14.

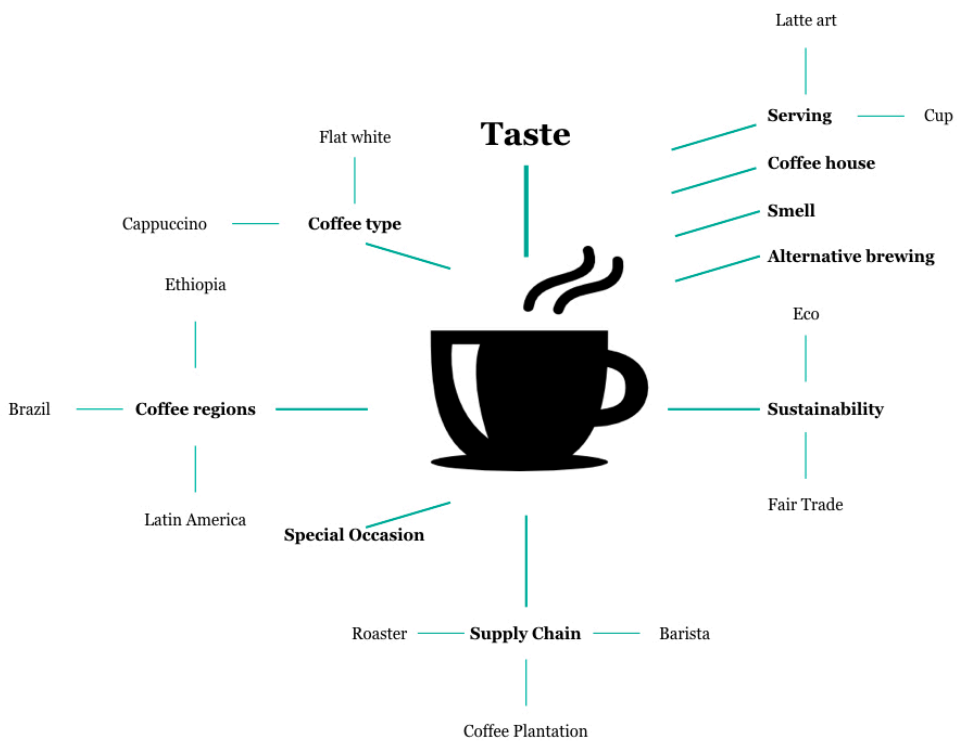


Figure 14: Associations 'specialty coffe'; most frequently mentioned associations in focus groups
Source: Author

The most frequent association with specialty coffee was *taste* and was mentioned by eight interviewees. The second most prominent association was coffee house/ café with six mentions. Certain answers can be grouped in themes together, such as supply chain related answers (eight in total), countries of origin (seven in total) and serving related answers, such as latte art or a nice cup (eight in total). The words which had three to four mentions were: *high quality*, *alternative brewing methods*, *barista*, *rostery* and *smell.* Furthermore, interviewees mentioned words related to sustainability (four in total), to the coffee type they prefer (four in total) and to the occasion of consumption (three in total).

(PART 2.1) Specialty coffee has a price premium compared to conventional coffee. What are the reasons that you are willing to pay more for it?

All 4 focus group units agreed that they are willing to pay more for specialty coffee, because it tastes better and offers them a special experience. The higher price is acceptable in turn for the higher quality of the coffee. Niklas, Zuzana, Denisa and Barbora furthermore stated individually, that they simply do not like conventional coffee. Alena and Tereza discussed in unit 2 that they view specialty coffee as a treat. Pavlina and Barbora in unit 4 both mentioned that they like specialty coffee because it calms them down. Bory (unit 3) was the only one specifying the origin of the coffee as a factor for paying the price premium. The only mention about sustainability as a reason came from Niklas (unit 1).

(PART 2.2) Where do you get the information about the quality of the coffee you drink or buy from?

In every one of the focus groups the importance of personal recommendations was discussed. Most interviewees received the information about the quality of the coffee from friends or baristas they know personally. All groups with the exception of unit 3 also mentioned that they use the internet, particularly social media and online recommendations, for finding information. All groups with the exception of unit 1 furthermore stated, that coffee places often speak for themselves when it comes to showcasing their quality. Martina (unit 3) summarised the general attitudes very well by saying: "A *place that has a good vibe has a good coffee*". Clarissa (unit 1) was the only one to mention that she can receive the information about the coffee quality from the origin of the coffee that is served. Alena (unit 2) furthermore stated that she learns about the quality from special coffee events she attends. David D. (Unit 4)mentioned that he is well aware of local rosters and can derive the information about the quality if he knows which café serves which roasters coffee.

(PART 2.3) What does quality mean for you?

All interviewees without exception agreed that quality for them means that the specialty coffee tastes good. Alena (unit 2) furthermore mentioned that certifications, such as Fair Trade and bio stand for quality as well.

(PART 2.4) Do you relate geographical regions or the country of origin with the quality of coffee?

Every unit discussed the countries of coffee origin which they preferred and those ones, which they were avoiding. Everyone who engaged in the conversation agreed that they prefer coffees from Latin America, with Colombia being the most frequently mentioned origin. Only three interviewees (Tereza from unit 2, David D. and Denise both from unit 4) stated that they enjoy drinking coffee from Africa, particularly Ethiopia and Tanzania. Niklas (unit 1) and Zuzana (unit 2) voiced strong opposition towards Vietnamese coffee. Furthermore, Niklas avoids Brazilian coffee and has no connection to African ones, whereas Zuzana prefers not to drink coffees from India. In every unit was at least one person that did not engage in the discussion or said they have no preference and can not distinguish between the origins.

(PART 3) Please create the coffee supply chain. This refers to the journey from the bean to the consumer.

All units created their version of the coffee supply chain using post-it notes and a big A2 paper. This exercise was intended as a team building to make the interviewees work together and interact mainly with each other, without focusing too much on the moderator. Furthermore, with every member of each unit being engaged and trying to establish the coffee supply chain, everyone had to think well about all stages involved. It was evident that none of the participants have done so beforehand and were surprised by the perceived complexity. What all 4 chains had in common was that they started with the farm and ended with the customer. All chains included a trader position after the farm, even though it was called intermediary, taster, middle man and bean hunter. Three units included the roster as a part of the chain and two units differentiated between a path via a café and via a store. Two units also acknowledged the packaging and distribution. All in all, the chains were between five to eight stations long and facilitated brainstorming and engaging conversation. The chains can be seen in appendix IV.

(PART 4.1) Besides all the joy coffee brings, what are in your opinion negative effects of the coffee industry?

The negative effects of the coffee industry that were named in the focus groups ranged across many topics. All in all the problems of fair trading, health, social and environmental issues were discussed. Two problems named by all four units were environmental impacts such as pollution, water use, pesticides, erosion, and rainforest destruction as well as unfair prices, referring to the low wages paid to the farmers. David D. (unit 4) pointed out that someone in the chain must be taking the money and Martin (unit 1) stated that the push on prices from mass producers leads to extortion of small local producers. David S. (Unit 3) realized that "*The value to the product is always added outside the origin of the country. Coffee, diamonds etc. This is why they cannot escape this cycle of exporting something valuable but receiving very little money*". Two units (1 and 3) furthermore identified social problems such as the violation of employee protection laws, inhumane conditions, immigrant workers and poverty linked to food shortage. Another topic which appeared in two units (2 and 4) was linked to health issues experienced by coffee drinkers. David D. (unit 4) was the only one to point out that transportation has a negative environmental effect and stated "*I think it's the only commodity that needs to be 100 percent exported. Because people that can grow coffee don't drink it and people who can't grow it, drink it. You need to move it all over the planet, which is bad for the planet*".

(PART 4.2) Do you know any sustainability certifications for coffee? What do they stand for?

The certifications, which were named by the participants are Fair Trade, Organic and Rainforest Alliance. At the minimum one person per unit named Fair Trade (in total 5 mentions) and had a basic understanding of what it could stand for. Niklas (unit 1) and Alena (unit 2) named the Bio certification, which is identical to the Organic one. In some countries Organic is called Bio, which is the case for the Czech Republic. The idea of Rainforest Alliance was recalled by four participants (over 3 units), even though only Niklas (unit 1) was able to name the actual certification. Other participants called it something similar to the original name and could remember and describe the logo. Martina's (unit 3) statement of "*I will drink what the coffee shop has and assume all the coffee is certified*", resonated with the whole group and everyone nodded in approval.

David D. (unit 4) pointed out that sustainability information can be seen on some packaging, where the farm of bean origin is mentioned and that it is possible to track some coffees online. Denisa (unit 4) stated that specialty coffees can have a local specialty coffee certification by a specialty coffee organization. Zuzana (unit 2) mentioned that she inquired about the certifications of Starbucks at a branded store and was informed that they have their own certification, which she found untrustworthy.

Surprisingly two participants from unit 1 could not name a certification even though they named one in their associations with specialty coffee, in the first question. Six from the 15 participants could not name any sustainability certifications for coffee from the top of their mind.

(PART 4.2.1) What does Organic stand for?

Each of the four units was able to state the principles of the Organic logo in terms of not using chemicals such as pesticides or unnatural fertilizers while growing coffee. All groups also mentioned that the Organic certification means that the coffee is grown in harmony with the natural environment with the aim to protect it as it is. Furthermore Niklas (unit 1) and Alena (unit 2) both pointed out that Organic means no use of GMO crops but they can not imagine this to have an effect on coffee. Barbora (unit 4) raised the interesting point that Organic also means there can't be any fillers or additives in the coffee.

(PART 4.2.2) What does Rainforest Alliance stand for?

All nine participants across all units that voiced their opinion about the meaning of Rainforest Alliance brought similar results. They all agreed that the Alliance protects the rainforest trees from being cut and that animals which live in the rainforest are being protected. Elsa (unit 2) believes that the certification goes beyond the farmer and involves every actor in the supply chain. Six respondents could not imagine what the certification stands for.

(PART 4.2.3) What does Bird-Friedly stand for?

No participant knew the Bird-Friendly certification. This is not surprising, due to the fact that it is uncommon in Europe. Each unit was asked to brainstorm and imagine what it could mean. All units could not imagine at first how coffee growing could possibly have a harmful effect on birds. Unit 1 believed that this logo stands for the protection of nesting areas of special bird species. In unit 2 the conversation went towards the idea that chemical spraying of the coffee berries could harm birds that want to eat them. They also connected this certificate with protection of the rainforest. Unit 3 and 4 both believed that the certification is similar to the Rainforest Alliance one and cutting of trees endangers the habitat of the birds. They also thought that birds might be eating the berries or coffee beans.

(PART 4.2.4) What does Fair Trade stand for?

All units agreed that Fair Trade is related to working conditions and the prices paid to the farmers, but no one was confident about what the certification stands for. All units agreed that fair working condition means that the workers on the farms are adults and treated according to labor standards and are not held as slaves. Pavlina (unit 4) stated that it could relate to the possibility to take breaks and have reasonable working hours. Everyone agreed that fair working conditions meant that children should not work on farms, except for Niklas. Niklas (unit 1) expained that child labor is not bad in a family business context, as long as the children are able to go to school and help out with the family business without compromising on their education. He also stated that he believes the Fair Trade Organization makes sure that a certain percentage of the profit margin is used for community projects and education. There was also consent in all units about the fact that workers are paid fair wages. The idea of what fair wages stand for differed. Tereza (unit 2) argued that fair wages are minimum wages plus something extra in order to live a normal life (known as living wages). Martina (unit 3) believes that there is one uniform Fair Trade price across the world which is set by the organisation. Silvia (unit 3) on the other hand thinks that the market price equals the fair price farmers should receive according to the certification. Barbora (unit 4) stated that since farmers are on the bottom of the chain, everything they receive above the average price (market price) can be considered fair. Bory (unit 3), as well as Zuzanna and Elsa (both unit 2) all came to the conclusion that Fair Trade tries to balance out the returns of each party across the supply chain, in particular between the farmer and the trader who buys from the farmer.

(PART 4.2.5) What does Utz (Kapeh) stand for?

None of the interviewees knew what the Utz certification stands for, however five participants (Niklas in unit 1, Zuzana in unit 2, David D., Denisa and Barbora in unit 4) have heard about the certification and seen the logo.

(PART 4.3) Do certifications or sustainable practices bring you value and are you willing to pay a higher price for it?

The majority of the respondents (12 from 15) strongly perceived certifications as something positive that brings value to specialty coffee. They also agreed that if priced the same or given the choice consciously, they would choose the sustainable option when drinking specialty coffee. The remaining respondents have not received enough information about certifications and can either not make a proper decision or stated they do not fully trust the certifications. Niklas (unit 1) went far enough to say he does not trust sustainability measures unless they are certified.

(PART 4.4) How do you perceive to-go cups?

There were participants in each unit who perceived to-go cups in a positive or neutral way. Most of them were convinced there was no context with sustainability, as the cups are made from paper. David D. (unit 4) stated that "*Cups, that's paper. It's ok. The cups, they are from paper they should be compostable*". Real compostable cups themselves were only mentioned twice, by Alena (unit 2) and Barbora (unit 4). Interestingly, three interviewees (Martin in unit 1, and Pavlina and Barbora both in unit 4) mentioned that they no not like the plastic cover of take away cups and only take the 'paper' cup itself if they have coffee to go. Overall there was always minimum one person per unit who knew or suspected that the cups are not made entirely from paper but have a lining of plastic or wax (Niklas in unit 1, Zuzana and Elsa in unit 2, Martina in unit 3 and Pavlina and Barbora in unit 4). Elsa (unit 2) voiced a very strong negative opinion about the cups: "I *think they are not good. You are buying trash. You buy the cup and thousand people to the same and you have those cups that have a life of 10 minutes. It's just stupid*". The confusion about how to dispose of the paper cup lined with plastic was mentioned by Barbora (unit 4). Niklas (unit 1) recognised that the cups cause a very big issue for the environment but says he does not act on it, apart from trying to bring his own mug if possible. Five respondents (Clarissa and Niklas in unit 1, Tereza and Zuzana in unit 2 David D. in unit 4) discussed the fact, that they used to or still bring their own mugs when they take coffee to go. Unit 3 had the discussion going into a different direction when David S. mentioned that he never takes coffee to go. Both Martina and Bory replied that they would not take specialty coffee to go out of principle. Martina stated that it is "*a shame that they sell all this certified coffee and then put it in a plastic cup*".

(PART 4.5) How do you perceive coffee capsule machines?

All participants except for one have tried coffee from coffee capsule machines. Nine interviewees have a capsule machine at work, their own home or a friends home. The opinions about the coffee quality were strongly divided. Clarissa (unit 1) was the only one specifically stating that capsule coffee can not be specialty coffee. Niklas (unit 1), Denisa and Barbora (both unit 4) said it is the worst coffee and that they do not like it. Five respondents (Martin in unit 1, David S., Silvia and Martina in unit 3, as well as David D. in unit 4) all agreed that the coffee is average, something between specialty coffee and instant coffee. Three participants from unit 2 (Tereza, Zuzana and Elsa) said the coffee can be of high quality and could be considered specialty coffee. Five people (across units 2, 3 and 4) furthermore stated that capsules are expensive and Alena (unit 2) mentioned her struggle to find the correct ones. The convenience side of coffee capsule machines was discussed in each of the focus groups. Six people strongly agreed that coffee from capsules is convenient, especially for guests or offices, and no one argued against this opinion. In terms of sustainability most interviewees acknowledged that a problem exists. Five interviewees were certain that capsules cannot be sustainable, but did not know what to do with them. In each unit there was one person arguing in favor of sustainable options and stating that some capsule companies take the capsule back for recycling purposes and that fully sustainable capsules surely do exist. David D. argued that it is in the users control whether they recycle the capsules or not. Other interesting aspects mention were by Niklas (unit 1), who said he can see a single use convenience trend rising with one-use washing powder capsules and dishwasher tabs, as well as Martina (unit 3) and Barbora and Denisa (both unit 4), who all acknowledged the strong marketing of the Nespresso brand by using George Clooney as their campaign face.

(PART 5.1) Does sustainability in the coffee industry interest you? How should knowledge be shared ideally?

Five interviewees honestly answered that they are not interested in learning more about sustainability in the coffee industry, ten participants stated that they are interested. Martin (unit 1) said that the "*volume of coffee I drink does not justify the time*" and Bory (unit 3) stated that "*the coffee industry is such a small industry there is no point to educate the consumers*". Silvia (unit 3) went even stronger by arguing that she thinks "*I don't see what that paying more is for, I don't care about it, I don't think about it. I just want a cup of coffee*" and Barbora in her unit (4) stated that "*coffee is the least thing people worry about. They have enough worries*". All units discussed possibilities how to share information, regardless whether they are interested themselves to learn more. Nine people argued that the information should be displayed in cafés. Tereza, Alena and Zuzana (all unit 2), as well as David S. and Silvia (both unit 3) and Barbora (unit 4) stated that the time waiting in line should be used to convey information. This could be done through messages on the café walls or through the barista himself. Four respondents furthermore thought of printing information on to-go cups and napkins. Zuzana (unit 2), Pavlina and David D. (Both unit 4) suggested using bathroom and toilet doors in cafés to display information on posters. Alena (unit 2) and Denisa (unit 4) individually came up with the idea of educational workshops to create conscious coffee drinkers. Tereza and Alena from unit 2 discussed that university students are the best targets, as they are still willing to learn and care about sustainability. David S. (unit 3) furthermore suggested using documentaries to spread the message or to create infographics that could be shared via social media.

(PART 5.2) Who is responsible for the negative effects in the supply chain and can change them?

This question led to the biggest discussion in each focus group. Originally six respondents (there was minimum one in each unit) argued that everyone in the chain is responsible. David D. (unit 4) explained that "*everyone is responsible because everyone wants profit. Farmers, transport companies, cafes and customers. Everyone. Maybe Quality control is not responsible*". One interviewee in each unit (Clarissa in unit 1, Tereza in unit 2, David S. in unit 3 and Barbora in unit 4) voiced the opinion that a middle part of the chain carries the responsibility for the negative effects, whether it is logistical companies, roasters, traders or vertically integrated coffee conglomerates. Nine out of 16 respondents agreed that the final consumer carries the responsibility. Pavlina (unit 4) summed up the arguments well by saying "*Demand dictates the supply. If customers want good and sustainable coffee and all people in the chain have to do it. So it depends on the customers*". After some discussion in each unit, most people came to the conclusion that the consumer has the power for change. Elsa (unit 2) shared that she thinks "consumers need more motivation to pay more". Niklas (unit 1) made an interesting country specific observation that Czechs are not willing to pay a premium for quality but the newer generations are changing and start to value quality over quantity.

4.1.2 Summary of recurring topics

In addition to the general interview questions, other topics related to sustainability measures and impacts on end consumers emerged during the interviews and could be observed by the moderator. Those were about uninformed connoisseurs, drinking occasions influencing the choice of coffee and specialty coffee consumption in relaxation. Furthermore, sustainability marketing and certification doubts, the link between quality and sustainability , the idea that all specialty coffee is certified and coffee consumer health were discussed.

Uninformed connoisseurs

Even though all 15 interview participants described themselves as specialty coffee lovers, very few actually had in-debth knowledge about subjects related to specialty coffee. Four individuals openly admitted during the interview that they are no experts and six others gave answers during the focus groups that exposed them as not being very informed on the subject-matter. Interestingly, all interviewees mentioned in the course of the focus groups that good taste matters for them most when it comes to specialty coffee and that they are willing to pay a price premium for that alone. The theme of 'uninformed connoisseurs' emerges from this finding. A connoisseur is an expert judge in matters of taste, hence all interviewees were primarily focused on the taste alone, which is only one part of what makes specialty coffee so special.

Drinking occasion influences choice of coffee

Throughout all of the focus groups a common topic emerged about the occasion when the respondents turn to specialty coffee. It became apparent that there are two situations to drink coffee: a quick buzz of caffeine versus a special occasion for specialty coffee. Twelve respondents agreed that specialty coffee calls for a special occasion. Eight interviewees across all 4 interview group units mentioned the division in normal coffee drinking settings versus specialty drinking occasions. To be more precise, conventional coffee was drunk at work by most respondents when they were looking for a *boost and to keep them going* (Martin, unit 1), *to be productive* (Tereza, unit 2), *for a buzz* (Martina, unit 3) or for the *caffeine* (David D., unit 4). Specialty coffee on the other hand was either prepared at home by Barbora (unit 4), Martin and Niklas (unit 1). Martin described that "*during the weekend I take my time, ground the coffee myself and use it as a relaxation method and because I don't drink so much of it I can afford to go premium*". On the other hand, respondents considered it a special occasion to go to a pleasant looking café to have a *treat* (Alena, unit 2), *my after work time* (Denisa, unit 4), *weekend chill* (David D., unit 4) or *finally good coffee* (Tereza, unit 2). Barbora (unit 4) explains that for her "*having coffee is a ritual more than an addiction*" and for Pavlina having specialty coffee equals to "*calming down, enjoying the moment, the smell and the taste in some nice place".*

Specialty coffee consumption in relaxation

Almost all focus group participants (13) explained that specialty coffee is not something they like to drink while on the run. Many participants explained that the café setting is a very important part of the whole experience for them. Some interviewees consider making specialty coffee at home their ritual, relaxation practice and something to look forward to after work and on weekends. The idea of specialty coffee as a treat or reward has been mentioned many times. Martina (unit 3) summarised the general attitude very well by saying: "*I would not pay for specialty coffee to go but have it as it's supposed to be: sit down and have it in a nice cup, enjoy the atmosphere*".

Sustainability marketing and certification doubts

Seven interviewees across all four focus group units have voiced doubts related to the marketing of sustainability efforts and the validity and transparency of certifications. Niklas (unit 1) was unsure of the direct farm sourcing background story of his favourite roasters and supposed it could be a *fairy tale story*. Alena (unit 2) also did not know whether to trust the pictures of farmers on posters or packaging when she is asked to pay a higher price for a product.

Tereza (unit 2) heard that Fair Trade is doing harm to the farmers but she could not remember the reasons. She explained that since she became suspicious, she avoids the coffee with that certification. David S. (unit 3) shared that he cares about sustainability issued but has "*a really hard time to trust the authority that certifies. If it was more transparent, maybe then it would be more beneficial or more credible*". Elsa (unit 2) and Pavlina (unit 4) both agreed they don't have any information about certifications in order to make a decision. Elsa continued that she is not sure what they claim is really true. Zuzana (unit 2) shared her doubts about the transparency of certifications, which started when she found out that Starbucks decided to develop their own certifying practice after dropping Far Trade.

Quality and sustainability link

The relationship between coffee quality and sustainability was mentioned at least once in every focus group unit. From the earlier summarized answer to question what quality means for the coffee drinkers, the result has shown that quality stands for great taste. From the eight participants that made the connection, two (Clarissa and Niklas in unit 1) agreed that the quality in terms of taste and sustainability certifications are in no way connected for them personally. In Clarissa's own words "*sustainability does definitely not equal quality*" and "*sticking to this lifestyle is a bit of a charity*". The remaining six saw a clear connection between sustainability and quality. Alena (unit 2) perceived sustainability certifications as a clear sign of quality and Barbora (unit 4) linked particularly organic coffee with higher quality.

All specialty coffee is certified

The assumption that all specialty coffee is sustainable and certified was raised in three interview units. Martin (unit 1), Martina (unit 3), David D. and Barbora (both unit 4) all expressed their views that they assume all specialty coffees are ethical or certified, particularly the ones offered in specialty coffee cafés. Bory (unit 3) went as far as to say that "specialty coffees should be mindful".

Coffee consumer health

When the focus groups were asked about negatives effects of the coffee industry, many participants first thought about negative effects of drinking coffee on the consumers body. Nine people across three units clearly spoke up about the fact that they believe there are reasons to believe that coffee could cause health problems, such as high blood pressure, addiction, increased heart rate or headaches. Silvia (unit 3) pointed out her confusion about information that was available about the topic and that "*one year its healthy, one year its unhealthy*", and Bory from same unit agree with her. Niklas (unit 1), Alena (unit 2) and Barbora (unit 4) all identified themselves as conscious buyers and explained that quality for them matters more than quantity. They clearly stated that they perceive certified Organic produce in general, including coffee, to be better for their health.

4.2 Limitations

There have been issues raised during the focus group interviews which were discussed previously in the summary of recurring topics under the point of sustainability marketing and certification doubts as well as in coffee consumer health. Even though sustainability marketing doubts raise very interesting questions and could be further discussed, they go past the scope of this thesis. Furthermore, the topic was merely mentioned by the interviewees and would require a whole new research with focus on the specific issue. Literature on the topic exists and has brought many debates about the ethical viewpoint of sustainability marketing in the coffee industry. Coffee consumer health with regard to the effects of drinking coffee on the human body will not be discussed in this thesis either. The research seems to bring forward many contradicting opinions which can be observed in common media outlets. The topic is of medical and nutritionist nature. There will be no further discussion in the thesis towards these two topic.

The other problem raised previously was that different drinking occasions influences choice of coffee between specialty and conventional ones. This is not yet an important enough issue to be researched about in literature of sustainability mesures and might become more significant in the future, when the share of specialty coffee within all consumed coffee increases further. Therefore this topic is a gap in the literature and will not be discussed any further.

4.3 Summary

In this chapter, the answers to the questions of the focus group interviews were summarized and other key issues were explained.

The interviewees associations with specialty coffee were studied and their perceptions of the term quality with regard to specialty coffee discussed. With regards to the impact sustainability measures in the supply chain have on the end consumers, key issues as the general lack of information among coffee drinkers about their specialty beverage coupled with the belief that all specialty coffee is already certified were explained. Furthermore, the interviewees compiled their views on single use cups and capsule machines, which were summarized. The idea of continuing to use certifications and making them more visible raised mixed feelings due to the lack of information and transparency. However, all participants agreed that as long as this idea was placed within a identifiable and relatable frame, it would be resulting in a positive outcome for consumers choices. Additional topics that emerged during the interviews and were also discussed in this chapter. Namely, the issues summarized were the link between quality and sustainability and the preferred consumption situation of specialty coffee. Limitations to the research included doubts about sustainability marketing, coffee consumer health and drinking occasions influencing the choice of coffee.

4.4 Conclusion

After covering the research results, the next step is to interpret them in order to find answers to the research questions. The discussion chapter is one of the most important parts of the thesis. It will not only focus on the research questions, but also on the generation of an answer to the main topic by including results from the previous parts. Furthermore, the discussion chapter will be used for the development of the recommendations to increase the impact that sustainability measures in the specialty coffee supply chain have on the end consumer.

5. Discussion

The findings of the research have to be interpreted in order to transform data into knowledge which can be discussed further. The three sub research questions about willingness to pay, certification perception and improvement suggestions, have to be reviewed under consideration of the new findings during the focus group interviews. Furthermore, answers to the main research question will be collected and discussed in order to develop a list of recommendations that will help to increase the impact of sustainability measures in the specialty coffee industry.

5.1 Discussion of research questions

The three sub-questions which were researched throughout the paper are all closely related to finding answers to the main research question of what the impact of sustainability measures in the specialty coffee supply chain is on the end consumer. In this part, the consumers willingness to pay a price premium, their knowledge and perception of sustainability certifications and suggestions how to improve sustainability measures and communication will be further discussed.

5.1.1 Willingness to pay a price premium

The first smaller research question was about the reasoning that consumers have to pay a price premium for specialty coffee and whether it is linked to sustainability measures.

- *Is the willingness of the consumers to pay a price premium for specialty coffee linked to the sustainability measures employed in the supply chain?*

The secondary research has shown that the explanation for the existence of the price premium is due to the higher production costs. Pure single-origin Arabica beans produced in a sustanable manner with fair wages leads to higher production costs than mixed multiple origin Arabica coffees, as well as Robusta-Arabica blends. Another influencer on the premium price is the limited availability, as each farm has a production limit. Specific packaging and the cost of sustainability labels furthermore add to the higher end price (Ponte, 2004; Wilson & Wilson, 2014; Donnet, et al., 2010). The Specialty Coffee Association or America (2017) explains that harmonious supply chain relationships and sustainable growing practices increase production costs that are reflected in the price as well.

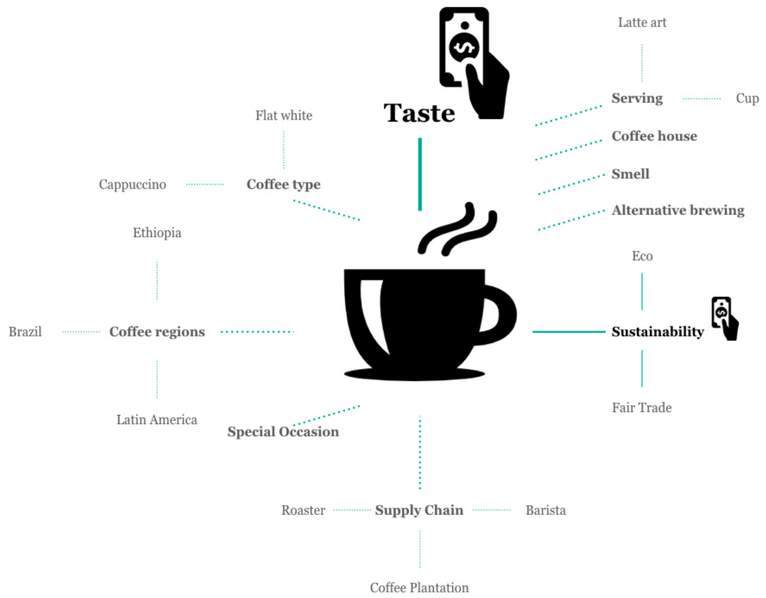


Figure 15: Willingness to pay vs. Associations 'specialty coffe'
Source: Author

Higher quality on the other hand, is the most frequent reason for the willingness of consumers to pay this premium price. Donnet, et al. (2010) argue that the knowledge asymmetry about the quality of coffee is particularly evident at consumer level as consumers lack the knowledge and expertise to rate the coffee quality. During the focus groups all interviewees without exception agreed that quality for them means that the specialty coffee tastes good. To the question why they are willing to pay the premium, every participants agreed that they are willing to pay more for specialty coffee, because it tastes better and offers them a special experience. The higher price is acceptable in turn for the higher quality of the coffee. Only two interviewees in separate units (Niklas in unit 1 and Alena in unit 2) mentioned sustainability certification or practices as an influencing factor in with regard to their willingness to pay a premium. Even though the majority of respondents would prefer a specialty coffee that is marketed as sustainable over a specialty coffee without sustainability link, they would only do so if the prices were equal. This finding disproves the assumption in the theoretical part, that consumers would choose to pay a higher price for sustainability if they chad to make a choice between the two coffees. The specialty coffee associations are contrasted with the attributes leading to the willingness to pay in Figure 15.

These results imply that according to the research, the majority of consumers willingness to pay a higher price for specialty coffee it not linked to sustainability measures in the supply chain, but to other factors, predominantly the taste.

5.1.2 Knowledge and perception of certifications

The second smaller research question indended to explore the existing knowledge of coffee drinkers with regards to sustainability certifications and measures and to understand whether they consider them as important.

- *Do the consumers of specialty coffee know what the different sustainability certifications stand for and consider them as important?*

In the theoretical part many existing certifications were discussed. The majority of them focused on the farms themselves (protection of the enviornment, labor conditions) and fair trading partnerships in the supply chain. Five important worldwide certification and what they stand for were explored in detail.

In the focus groups most participants have heard of Fair Trade, Organic and Rainforest Alliance certifications. The Utz certification was also known to several of them. None of the interviewees knew for certain what the certifications mean, with the exception of Organic, but some their guesses were close. It became apparent that certifications do not play any significant role in the lives of these coffee drinkers, with exception of Niklas (unit 1) and Alena (unit 2), who resulted in being the most concious consumers in all the groups. Interestingly, the question about Bird-Friendly coffee showed a large knowledge gap the interviewees have. The author expected that this certification will not be known to most of the interviewees. Despite this fact, the author assumed that the interviewees will be able to make the connection between organic farming, rainforst protection and the endangered wildlife habitat. All units could not imagine at first how coffee growing could possibly have a harmful effect on birds. Only after strong encouragement to brainstorm further, each group came up with some ideas which are related to the real certification. Nevertheless, this shows that coffee drinkers simply do not connect the growing conditions of the coffee with what they have in their cup, without outside pressure to do so.

What is more, several interviewees across all four focus group units have voiced doubts related to the validity and transparency of certifications. Tereza (unit 2) even explained that since she became so suspicious about Fair Trade, she actively avoids the coffee with that certification. Elsa (unit 2) and Pavlina (unit 4) both agreed they do not have enough information about certifications in order to make up their mind about them. The assumption that all specialty coffee is sustainable, ethically sourced and certified was raised in three interview units.

To answer the stated question, some consumers expect specialty coffee to be certified and this is in fact the best scenario practice. They however do not know the different sustainability certifications well. Overall the respondents perceived certifications to be something positive and to bring value to specialty coffee. As certifications are just seen as a positive extra, but no necessity, they are not considered to be important by the consumer.

5.1.3 Redesign and communication

The last sub question focused on the consumers willingness to learn about sustainability measures and to collect recommendations for improvement.

- *How could sustainability measures be redesigned or communicated in order to have a stronger impact on end consumers?*

In the theoretical research several positive exaples have been brought forward. When authorities impose sustainable measures, consumers consider them as positive and follow along. The example of Seattle being a recycling and composting city when it comes to single-use items (such as coffee to-go) and the waste diversion program at the PDX airport give hope for such measures. Cafés who encourage to recycle and compost their trash directly in-store also experience a positive interest from the consumers. It becomes clear that unless the consumer is a social and environmental activist on his or her own or comes from a country that imposes sustainability requirements on its inhabitants, not much interest is shown. This was confirmed by the interview findings, where five interviewees honestly answered that they are not interested in learning more about sustainability in the coffee industry. On the positive side, ten participants stated that they are in fact interested.

A large part of suggestions targeted coffee places. Ideas such as informational displays and posters on walls or bathroom doors, prints on napkins and coffee cups. One of the additional topics that emerged from the focus groups was that coffee drinkers want to sit and enjoy their specialty coffees in relaxation. This consumption setting can also be taken into account when designing recommendations.

Two respondents suggested to use workshops and industry events to share information. This might be a good idea, as through that only people who show general interest in specialty coffee behind the scenes would be targeted with the information. David S. (unit 3) shared the idea of creating a documentary and infographics on social media, a way to reach millions of coffee drinkers.

5.2 Increasing the impact of sustainability measures

The objective of the thesis is to create recommendations that can be used by small roasters, cafés, non-governmental organizations (NGOs) and other industry actors that strive to understand and enlarge the impact of the existing sustainbability measures on coffee drinkers.

The following graphic summarizes the recommendations found in the theoretical research, practical research and ones added by the author herself (Figure 16).

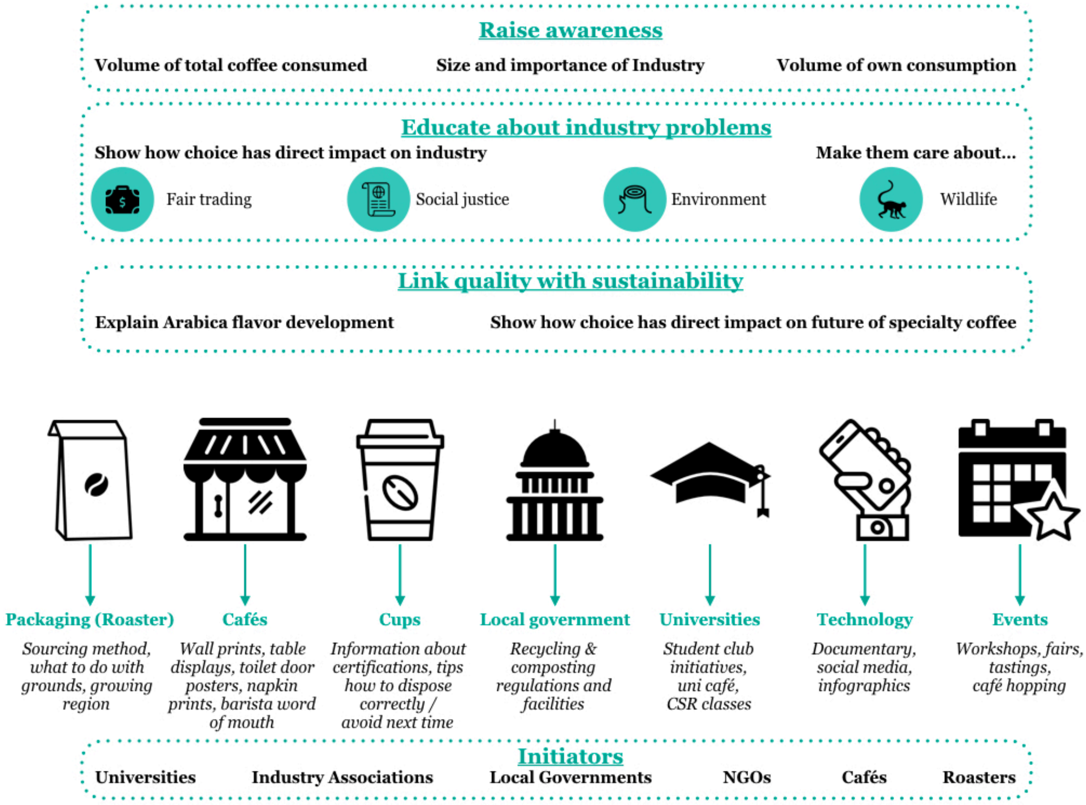


Figure 16: Recommendations to increase impact of sustainability measures in the specialty coffee supply chain on the end consumer

Source: Author

Raise awareness

The first step to increase any impact is to raise awareness. The interviews have clearly shown that cofee drinkers are not aware that with the volumes of coffee they personally drink, they can already make a positive difference. They are also not aware of the growing size and impact of the industry.

Educate about industry problems

In order to care about their own impact, and to be open to sustainability measures, the negative effects of the coffee industry need to be understood. Whether environmental, social, unfair trade or health problems are addressed depends on the actor conveying the information.

Link quality with sustainability

The research has shown that taste matters most to specialty coffee consumers and is the reason they are willing to pay a premium price. As Arabica coffee develops its unique and region specific taste through the way it is grown and its surrounding, taste in fact is linked to sustainability measures. Consumers need to understand that by supporting sustainable growing methods, they help to guarantee a future supply of specialty coffee beans.

Local initiatives

The examples of Seattle and the PDX airport in the theoretical research have shown that when local governments take the initiative to provide recycling and composting infrastructure or develop regulations for businesses, consumers perceive it in a positive way and engage in the efforts.

CSR in universities and libraries

Coffee drinkers usually start their journey as coffee lovers when they are students. At that age, young people are open for change and willing to discuss ethical consumption and corporate social responsibility. Student clubs and professors teaching CSR or other sustainability related classes can take their influential role to inform about the issues which the coffee industry creates. Virtually all libraries and universities have a coffee shop inside the building or nearby which can be used to cooperate with.

Role of cafés

The focus groups have shown that coffee drinkers expect cafés to engage in the process of educating coffee drinkers about sustainability measures. Therefore, if cafés use coffee with sustainability labels, they should share information about the meaning with their customers. This can be done via wall displays, posters in bathrooms, small informational materials on tables and via word of mouth through the barista. The focus groups have shown that drinkers of specialty coffee often enjoy to drink their coffee sitting down at a cafe and like to spend time there. In such a nice environment, many coffee drinkers would not mind to read information about the coffee they are drinking, particularly if it emphasizes a positive choice they have made with the sustainable coffee, which they are drinking in that moment. Cafés should furthermore be mindful of the take away cups they are using. If avoiding or replacing paper and plastic cups with compostable cups fully is not an option, consumers could still be encouraged to have their coffee sitting down. Small beverages like espresso, that are drunk within seconds, should not be offered in single use cups at all. Compostable cups could be sold as an alternative with a small extra charge, similar thow it is common with soy or almond milk. Alternatively, the café can give customers a discount if they bring their own mug. When to-go cups are used, information can be printed on them, for instance about the meaning of certifications or how to dispose of the cup correctly.

Role of roasters

Roasters, whether they are large or small companies, take care of the packaging of the coffee. They are able to print information about the origin, sourcing methods and about certifications on the package. If the coffee is intended for use in cafés, the roaster can encourage any of the above mentioned measures. In the case that the coffee is packaged in smaller quantities for at home use, information about what to do with coffee grounds after brewing the coffee could be included. Roasters can be creative and use this as a marketing tool. Uses of small quantities of coffee grounds include, but are not limited to 'do it yourself' beauty products (such as coffee body scrubs) or as natural fertilizer for house and garden plants or to dispose of it at a local park.

Role of specialty coffee events

During the focus group research specialty coffee events, such as fairs or tastings were suggested as platforms to share information with interested coffee drinkers. Locally in Prague, the Prague Coffee festival which annually takes place in fall could be used to reach interested consumers.

Role of technology

Information about sustainability measures can be spread by creating a documentary about the topic, similar to other popular videos that spread awareness about environmental and social issues. Social media and blogs are a great platform to inform through simple means, such as infographics. Many coffee drinkers take pictures of their coffees on post them social media channels, such as Facebook, Instagram or Pinterest and follow their favorite cafés on the same channels. This represents great material that can be used by the person in charge of the spocial media account of a café or roaster and can have a inconceivably large reach.

5.3 Summary

The discussion part gives answers and thoughts to the research question and objective of the thesis. First of all, the consumers' willingness top pay a higher price for specialty coffee is generally not linked to the sustainability measures employed in the supply chain, but is connected the high quality taste. The second sub question asked whether consumers of specialty coffee know what the different sustainability certifications stand for and if they consider them as important. It was established that even though some consumers expect specialty coffee to be certified, they do not know the meanings of sustainability certifications well enough and would require more education to make concious choices. Overall the respondents perceived certifications to be a positive extra, but no necessity, which means they are not considered to be important. The discussion of the final sub question came to the result that there are specialty coffee drinkers who would like to learn more about the sustainability measures in the industry and examples were given. The objective of the thesis was to create recommendations that can be used by small roasters, cafés, NGOs and other industry actors that strive to understand and enlarge the impact of the existing sustainbability measures on coffee drinkers. The main recommendations and suggestions can be found in Figure 16.

5.4 Conclusion

In terms of practical implications, the discussion has resulted in important recommendations for engaged coffee drinkers, small roasters, cafés, NGOs and other industry actors to increase the impact their measures have on the end consumer and to make them more engaging. Important factors that need to be considered are to raise awareness, educate about the industry problems and link the taste of coffee with sustainability measures in consumers minds first, before initiatives can be started. Various recommendations for cafés, roasters, governments, universities and technology using stakeholders have been given.

6. Conclusion

In the beginning of the thesis two issues were discussed. On the one hand the specialty coffee industry is thriving and expected to grow further in the future. Arabica coffee which requires much more financial investment, work and time to be grown is the center of this trend of single-origin coffee. On the other hand negative effects of the global coffee industry are devastating and can be found in areas such as unfair trade relationships, wildlife endangering, environmental destruction and human rights violations. The problem that appeared is that coffee consumers do not seem to connect those two realities and see themselves as the main driver for change. Many actors within the industry do adopt better practices and NGOs are often pushing for improvements. As demand dictates supply, it is crucial to reach consumers with these sustainable initiatives and have their support.

The thesis therefore researched how the impact of sustainability measures in the specialty coffee supply chain on the end consumer can be increased. Even though informing is the first step, knowledge does not always translate into taking action. In order to truly drive positive change in behavior, the sustainability measures need to reach consumers at certain life stages and moments of their daily lives where they are more susceptible to be impacted.

6.1 Recommendations

Through the research a number or recommendations can be given to sustainability stakeholders in the specialty coffee industry who want to increase their impact on the end consumer.

Raise awareness and educate about industry problems

The very starting point to increase the impact of any measure is to create a coffee drinker culture that cares. This can be achieved only through raising awareness that problems in the industry exist. Consumers are neither aware of the size of the industry and sheer impact it has due to its size, nor that their daily cups of coffee also add up to an influencing number over the years. Many consumers are furthermore not aware of the negative impact their coffee drinking habit has on the world. In order to care a clear connection needs to be established. Due to the single-origin policy, industry actors have an unparalleled opportunity to connect the beginning and end of the supply chain and educate the consumer about the life of the farmer and how their choices have influence on the environment, local community, wildlife, social and trade fairness and other aspects.

Link quality with sustainability

With the taste of specialty coffee being in the center of all attention, consumers need to be informed that their sustainability choices will have a positive impact on the coffee taste and by that on the overall quality of the coffee. By making the conscious selection of roasters and cafes that source their beans ethically, consumers guarantee to reward the positive farming practices and can support the sustainable and long-term partnerships which are the basis for the success in the specialty coffee industry.

Correct timing

The research has shown that some coffee drinkers react rather defensive when confronted with the realities happening in the industry. As many consumers use strong emotional connections as 'love' when describing their relationship to coffee, it is comprehensible that they are not willing to have their worldview turned upside down. That is why it is important to have incentives for change coming from several directions at the right time. On the one hand local governments should provide recycling and composting infrastructure and legislation to help resolve the trash problem which is created through coffee capsules and single-use cups. On the other hand, industry associations, roasters and cafés can target consumers while they are purchasing or consuming coffee and when using technologies, such as social medial. The consumers explained that drinking specialty coffee is connected with relaxation and disconnecting from daily routine. While doing so, they are distanced from everyday problems and open to new information, as long as it is conveyed in a positive way. By reinforcing positive behavior, such as praising the choice of buying a sustainable coffee through explaining the good impact their decision has. Moreover, correct timing can also refer to life stages. Students at universities or visitors at libraries are much more open to learning about the world than busy office workers and can be targeted through student club CSR campaigns or the university and library cafés.

Application of results

This thesis intended to understand the impact of sustainability measures in the specialty coffee supply chain on the end consumer. The objective was to create recommendations that can be used by small roasters, cafés, NGOs and other industry actors that strive to understand and enlarge the impact of the existing sustainbability measures on coffee drinkers.

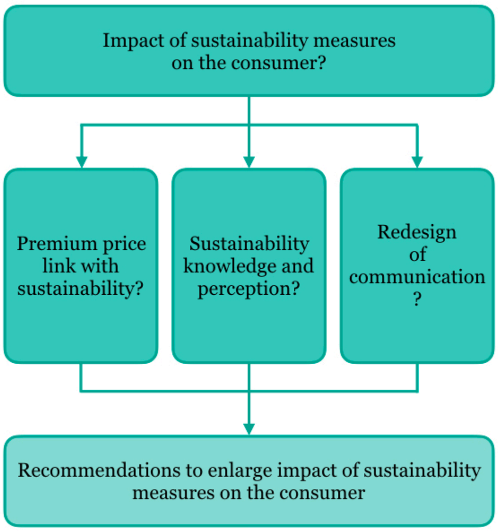


Figure 17 : Research questions and objective
Source: Author

The author believes that answering the sub-research questions has helped to understand the specialty coffee drinkers thinking and perceptions and revealed the motivations and reasoning for their actions. The research questions and objective can be reviewed in Figure 17. The author successfully created practical recommendations based on the objective of the thesis (Figure 16).

This research can also be used as the basis for information for coffee consumers who wish to educate themselves about the specialty coffee industry and existing sustainability measures. All focus group participants have given the verbal feedback after the interviews that they enjoyed diving deeper into the topic of sustainability in the coffee industry, a topic many were not familiar with. The results can also be used by researchers who wish to explore fields related to sustainability, ethical consumerism or the specialty coffee industry. For further exploration into the topic the author recommends to focus on the success and problems of sustainability marketing as a complementary research, as well as further study on how the health effects of drinking coffee impact consumer choices in the specialty coffee industry with particular focus on certified Organic coffees.

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Appendix

I. Focus Group Participant Pre-Selection Questions

II. Focus Group Guide Questions

III. Summary of the Pre-Selection Answers

IV. Summary of Focus Group Guide Answers

V. Recurring Topics

I. Focus Group Participant Pre-Selection Questions

SECTION 1	Answer options
What is your full name?	Short text (Confidential*)
How should I call you in the thesis? Please provide your real first name or an alias.	Short text
How old are you?	Short text
What is your country of birth?	Short text (Confidential*)
How long have you lived in Prague?	Short text (Confidential*)
Are you a student?	Yes/ No
What is your occupation? Please provide the job title and industry. (If you are a student and don't work, please put N/A)	Short text
SECTION 2	
How often do you drink coffee?	1. Daily, often several coffees per day 2. Daily, mostly one or two 3. Few times per week 4. Once per week or less
What percentage of the coffee you drink, do you drink at cafés (take away or sit in is treated the same)?	0 to 10 rating scale 0% (None of the coffee I drink comes from a café) to 100% (All the coffee I drink comes from a café)
Which are the cafés you frequent the most in Prague? Name your top 3 (if you have that many)	Short text
I drink coffee because...(multiple answers possible)	1. I love coffee 2. coffee makes me happy 3. it's a social thing- you go for coffee with friends 4. I would not survive my workday/ school day without it 5. I need coffee to function as a person 6. Other
If you purchase coffee to drink at home, how do you prepare it? (multiple answers possible)	1. Percolator/ Espresso maker 2. French press 3. Turkish coffee pot 4. Filter coffee machine 5. Coffee capsule machine 6. Professional 'barista' home coffee machine 7. Fully automated coffee machine (no capsules, but whole beans) 8. I don't drink coffee at home 9. Other
On a typical workday, how is the coffee you drink prepared?	1. French press 2. Filter coffee machine 3. Fully automated coffee machine 4. Take-away from a café 5. I don't drink coffee at work 6. Other

II. Focus Group Guide Questions

PART 1
1. When you hear ‘specialty coffee’, which words come to your mind?
PART 2
1. Specialty coffee has a price premium compared to conventional coffee. What are the reasons that your are willing to pay more for it?
2. Where do you get the information about the quality of the coffee you drink or buy from?
3. What does quality mean for you?
4. Do you relate geographical regions or the country of origin with the quality of coffee?
PART 3
1. Please create the coffee supply chain. This refers to the journey from the bean to the consumer.
PART 4
1. Besides all the joy coffee brings, what are in your opinion negative effects of the coffee industry?
2. Do you know any sustainability certifications for coffee? What do they stand for?
3. What does Organic stand for?
4. What does Rainforest Alliance stand for?
5. What does Bird-Friedly stand for?
6. What does Fair Trade stand for?
7. What does Utz (Kapeh) stand for?
8. Do certifications or sustainable practices bring you value and are you willing to pay a higher price for it?
9. How do you perceive to-go cups?
10. How do you perceive coffee capsule machines?
PART 5
1. Does sustainability in the coffee industry interest you? How should knowledge be shared ideally?
2. Who is responsible for the negative effects in the supply chain and can change them?

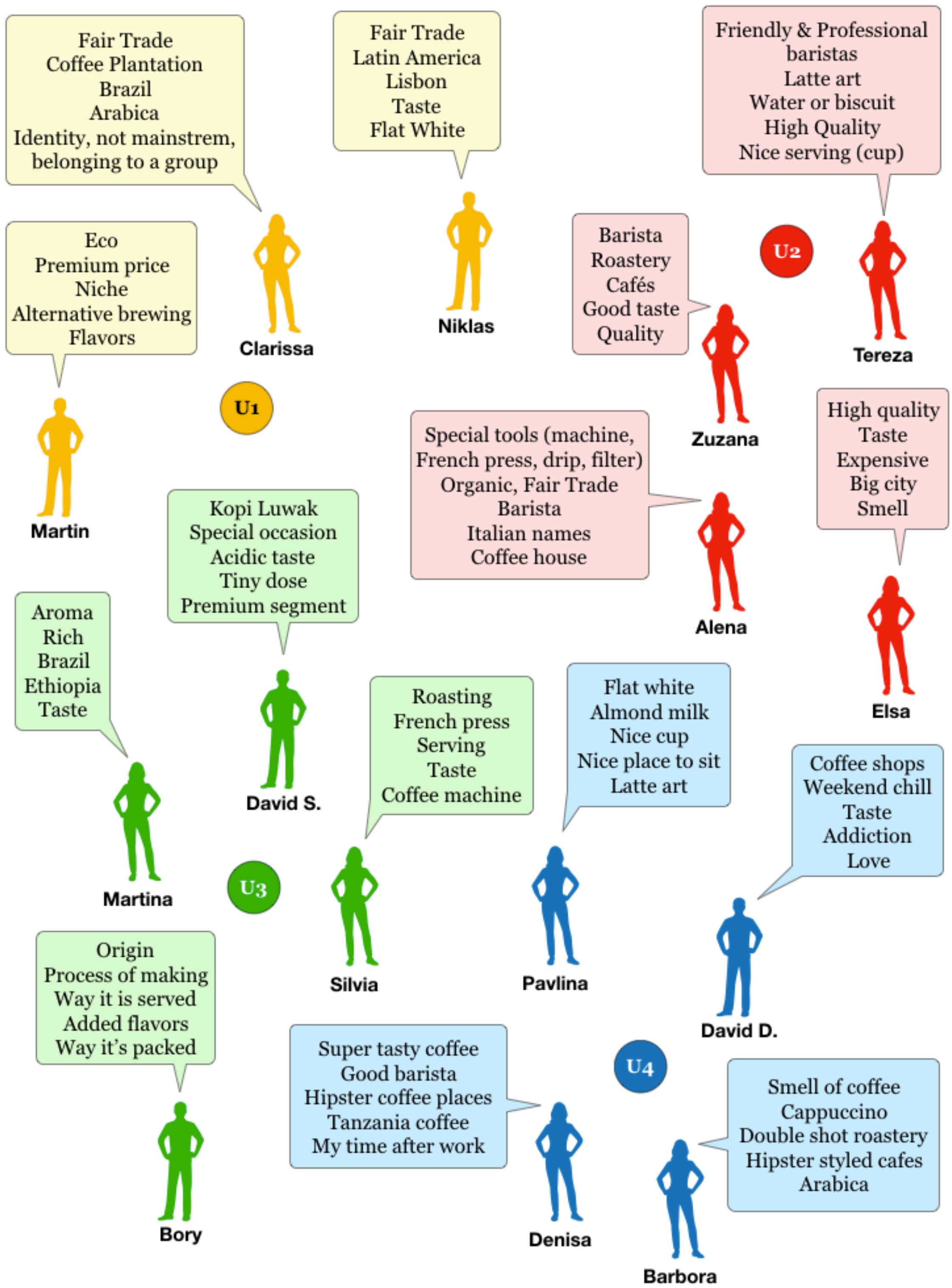
III. Summary of the Pre-Selection Answers (1st part)

How should I call you in the thesis? Please provide your real first name or an alias.	How old are you?	Are you a student?	What is your occupation? Please provide the job title and industry. (If you are a student and don't work, please put N/A)	How often do you drink coffee?	What percentage of the coffee you drink, do you drink at cafés (take away or sit in is treated the same)?	Which are the cafés you frequent the most in Prague? Name your top 3 (if you have that many)	I drink coffee because… (multiple answers possible)	If you would order coffee in a café, what would your typical order be?	If you purchase coffee to drink at home, how do you prepare it? (multiple answers possible)	On a typical workday, how is the coffee you drink prepared?
Clarissa	24	Yes	Logistics, FMCG	Daily, often several coffees per day	4	Costa Coffee, Cervena Zidle, random take-away places	I love coffee, coffee makes me happy, it's a social thing- you go for coffee with friends, I need coffee to function as a person	Capuccino	French press	Fully automated coffee machine
Niklas	27	No	Finance analyst, FMCG	Daily, mostly one or two	2	Bistro 8, cafe karlin, kavarna colore	I love coffee, coffee makes me happy, I enjoy tasting different coffees	Flat white	French press	Fully automated coffee machine
Martin	29	No	Management consulting	Daily, often several coffees per day	2	V|nitroblok, Momoichi	I love coffee, coffee makes me happy	Filtered coffee/ French press	Filter coffee - no machine	Fully automated coffee machine
Zuzana	25	Yes	student/junior lawyer	Daily, often several coffees per day	5	Double B, Coffee Room, Ema	I love coffee, coffee makes me happy, it's a social thing- you go for coffee with friends, I would not survive my workday/ school day without it	drip/aeropress	French press, aeropress, V60	Fully automated coffee machine
Elsa	23	No	Marketing account researcher	Daily, mostly one or two	10	N/A	I love coffee, coffee makes me happy	Flat White	I don't drink coffee at home	Fully automated coffee machine, Take-away from a café
Alena	26	No	Marketing Specialist	Daily, mostly one or two	7	Cross Cafe, Costa, mammacoffee	I love coffee, it's a social thing- you go for coffee with friends, I need coffee to function as a person	Cappuccino	Turkish coffee pot	Fully automated coffee machine
Tereza	23	Yes	Brand Intern, Constructing industry	Daily, often several coffees per day	3	La Boheme cafe, Interier&styl, Kobliharna close to VSE	I love coffee, coffee makes me happy, it's a social thing- you go for coffee with friends, I would not survive my workday/ school day without it	Espresso lungo	Coffee capsule machine, Fully automated coffee machine (no capsules, but whole beans), Instant coffee	Fully automated coffee machine

III. Summary of the Pre-Selection Answers (2nd part)

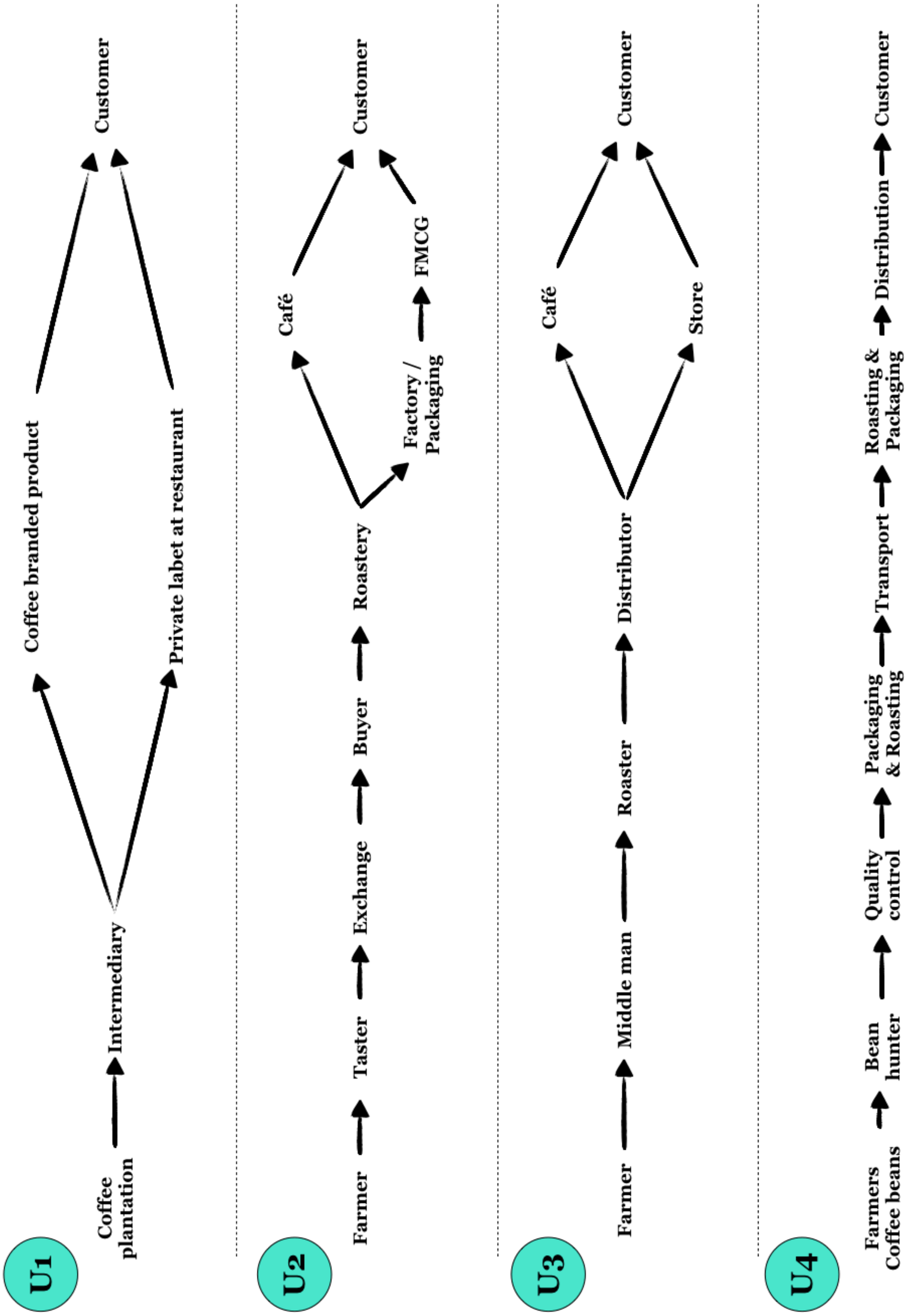
How should I call you in the thesis? Please provide your real first name or an alias.	How old are you?	Are you a student?	What is your occupation? Please provide the job title and industry. (If you are a student and don't work, please put N/A)	How often do you drink coffee?	What percentage of the coffee you drink, do you drink at cafés (take away or sit in is treated the same)?	Which are the cafés you frequent the most in Prague? Name your top 3 (if you have that many)	I drink coffee because... (multiple answers possible)	If you would order coffee in a café, what would your typical order be?	If you purchase coffee to drink at home, how do you prepare it? (multiple answers possible)	On a typical workday, how is the coffee you drink prepared?
Martina	24	No	Product Marketing Manager - IT/Tech	Daily, often several coffees per day	5	Kavarna Co Nema Jmeno, Coffee Corner Bakery, Microsoft Cafe	I love coffee, coffee makes me happy, I would not survive my workday/ school day without it, I need coffee to function as a person, cafe environment - setting, moment	americano (black)	Percolator/ Espresso maker, Fully automated coffee machine (no capsules, but whole beans)	Fully automated coffee machine
David S.	27	No	Investment Analyst, Venture Capital	Few times per week	8	N/A	I love coffee, coffee makes me happy, it's a social thing- you go for coffee with friends	Espresso	I don't drink coffee at home	Fully automated coffee machine
Silvia	27	Yes	Territory salesman / civil engineering, construction field	Daily, mostly one or two	2	Kaficko...	I love coffee, it's a social thing- you go for coffee with friends, I need coffee to function as a person	Espresso or cappuccino	Professional 'barista' home coffee machine, I don't drink coffee at home	Fully automated coffee machine
Bory	24	Yes	Digital Strategist	Daily, mostly one or two	7	Kofarna, Eska, Muj salek kavy	coffee makes me happy, I would not survive my workday/ school day without it	Filteref coffee	Coffee capsule machine, Aeropress	
David D.	25	No	Junior associate, law	Daily, often several coffees per day	2	Mezi Srnky, Momoichi, Kavarna Co Hleda Jmeno	I need coffee to function as a person	Fakt white	Kalita, Aeropress	Fully automated coffee machine
Pavlina	25	No	Lawyer, Havel, HolÅisek & Partners	Daily, mostly one or two	5	Double B, Ema, Mezi srnky	I love coffee, coffee makes me happy, it's a social thing- you go for coffee with friends, I would not survive my workday/ school day without it, I need coffee to function as a person, To rise up my blood presure	Flat white	Fully automated coffee machine (no capsules, but whole beans)	Fully automated coffee machine
Barbora	24	Yes	N/A	Daily, mostly one or two	5	Kafemat,Kavarna misto, Kavarna Novy Svet	I love coffee, coffee makes me happy	Cappuccino	Percolator/ Espresso maker	Take-away from a café
Denisa	27	No	Brand Manager at Mattoni	Daily, mostly one or two	6	Ema espresso bar, coffee room, Kavarna co hleda jmeno	I love coffee, coffee makes me happy, it's a social thing- you go for coffee with friends	flat white, V60, Chemex,	Filter coffee machine, Professional 'barista' home coffee machine	Filter coffee machine

IV. Summary of Focus Group Guide Answers (1st part)



For the summary of the Part 2, 4, and 5 of the Focus Group Guide Answers, please refer to the Excel file attached to this thesis in INSIS. For the summary of the Part 3, see the next page.

IV. Summary of Focus Group Guide Answers (3rd part)



V. Recurring Topics

For the summary of recurring topics, please refer to the Excel file attached to this thesis in INSIS.