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Promoting chances of Colombian coffee in the department of Antioquia, Colombia

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Zusammenfassung

Direct Trade ist neuste Form von Handel mit Agrarprodukten aus fernen Ländern. Der Konsument kauft direkt beim Produzenten ohne Zwischenhändler. Dies führt zu diversen Vorteilen für beide Seiten. Transparenz, eine respektvollere Beziehung und bessere Preise sind nur einige Aspekte. In der Welt des Kaffees ist der Begriff «Direct Trade» eine Definition wo Röster direkt beim Kaffeeproduzenten einkaufen, wodurch Zwischenhändler wie Exporteure, Importeure aber auch Zertifikations-Organisationen wie Fair Trade oder Rainforest Alliance ausgeschaltet werden.

Röster welche diese alternative Handelsmethode nutzen sind überzeugt davon. Einige tun dies aus Unzufriedenheit gegenüber dritten Zertifikationsprogrammen, während andere durch den direkten Kontakt mit dem Produzenten mehr Kontrolle über Aspekte wie Qualität, Soziale Aspekte oder Bedenken bezüglich Umwelt erlangen.

Zurzeit sind Länder wie Brasilien und Äthiopien an der Spitze in Bezug auf Direct Trade mit Kaffee. Kolumbien, eines der grössten Kaffeeproduzenten der Welt könnte dieses Model ebenfalls anwenden und von den diversen Vorteilen profitieren.

Das Ziel dieser Arbeit war es, die Vermarktungschancen von kolumbianischem Kaffee bezüglich Direct Trade zu analysieren. Wie steht es um das Potenzial von Direct Trade in Kolumbien? Was sind die Bedingungen für einen erfolgreichen Direkthandel? Sind diese Bedingungen gegeben und wenn nicht, welche Massnahmen müssen getroffen werden, um diese zu erfüllen?

Die Analyse dieser Arbeit hat aufgezeigt, dass das Potenzial für Direct Trade in Kolumbien sehr hoch ist aufgrund optimaler Bodenbeschaffenheiten, generell hoher Kaffeequalität, manueller Ernte sowie einer mit anderen Ländern verglichen hohen Biodiversität auf den Plantagen. Allerdings zeigen die Resultate auch, dass die Bedingungen für einen erfolgreichen Direct Trade meistens noch nicht gegeben sind. Dies primär aus Unwissenheit in Bezug auf die Qualität der eigenen Ernte. Zudem müssen sich die Produzenten aus alten auch kulturell bedingten Gewohnheiten lösen und neue Vertriebskanäle nutzen anstatt die ganze Ernte direkt an die Kooperative zu verkaufen. Um von neuen Vertriebskanälen profitieren zu können, sind neue Ansätze nötig wo der Umgang mit technologischen Hilfsmittel wie Computer und sozialen Medien unumgänglich ist. Produzenten müssen bei den potenziellen Käufern auf deren Existenz aufmerksam machen. Hierzu ist es wichtig, sich selber nicht mehr nur als einfachen Produzenten wahrzunehmen, sondern viel mehr als eine Marke aufzutreten und auch entsprechend zu operieren.

Eine Steigerung im Direct Trade würde nicht nur den Produzenten zu einem höheren Einkommen und einer besseren Existenzgrundlage verhelfen, sie würde auch der gesamten kolumbianischen Wirtschaft einen zusätzlichen Schub geben.

Abstract

Direct trade is the newest form of sourcing in agricultural products from distant countries. It is practiced by consumers through purchasing directly from the producer; the lack of intermediaries results in benefits for both parties. Examples of this is financial transparency, consumer loyalty and fair pricing. In the coffee industry, ‘Direct Drade’ is adopted by coffee roasters as an alternative to Fair Trade as it is perceived to have multiple limitations which Direct Trade addresses such as higher premiums for farmers. In addition to some roasters emphasising the significance of this alternative form of trading as they are dissatisfied with third-party certification programs, some roasters desire greater control over their goods in various aspects regarding the quality of the coffee and several social and environmental concerns.

Direct trade is employed in countries such as Brazil and Ethiopia meaning that it is both feasible and sustainable. Colombia, being one of the world's largest coffee producers, would benefit largely from the utilisation of this model.

The aim of this piece is to explore the promotability of Direct Trade in Colombia. How is the potential of Direct Trade? What conditions must be fulfilled to achieve a successful Direct Trade relationship? Do such conditions exist? And if not, what steps need to be taken to achieve these conditions?

This dissertation highlights that the potential for Direct Trade in Colombia is extremely high, due to ideal Climate conditions, generally high quality of coffee, manually harvested cherries and a high biodiversity on the plantations compared to other countries. These are important selling points that many direct trading roasters attach importance to. However, the current situation fails at the conditions for a successful ‘Direct Trade’. The main reason for this is the producers’ lack of knowledge on their own crop. Furthermore, in order to benefit from the Direct Trade model, modern innovative approaches are needed where computer skills and social media are indispensable. Additionally, farmers must adapt to new agricultural habits instead of relying on cooperatives. Prospective customers need to know of the existence of a producer. Accordingly, a producer must also draw attention to them. For this, it is important for a coffee producer not only to see himself as a simple producer, but also as a brand and accordingly behave and market himself.

An increase in Direct Trade would not only help the producers for a higher income and thus lead to a better livelihood, it would also give the whole Colombian economy an additional boost.

Content

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1 Introduction

Direct trade is the latest form of trade in agricultural products from distant countries. The consumer purchases directly from the producer without any intermediaries which leads to several mutual benefits. Transparency, respectful relationships and better prices are just a few of it. In case of coffee “Direct Trade” is a term used by coffee roasters who buy straight from the growers, cutting out both the traditional middleman buyers and sellers and also the organizations that control certifications such as Fair Trade or Rainforest Alliance, for example (Ethical Coffee, 2016). Some roasters are convinced about this alternative form of trading, because they are dissatisfied with the third-party certification programs, while others want to have more control over aspects ranging from the quality of the coffee, to social issues, or environmental concerns.

Currently, countries like Brazil or Ethiopia are at the top of the list of Direct Trade with coffee. Colombia, one of the world's largest coffee producers, could also establish this model and benefit from the advantages.

The aim of this work is to analyse the promoting chances of Colombian coffee. How is the potential of Direct Trade? What are the conditions for a successful Direct Trade? Are they given? And if not, what steps need to be taken to achieve these conditions.

In order to analyse the current situation, different producers were interviewed during an 11 weeks trip to Colombia. Furthermore, other key players within the value chain such as cooperative, public institutions or Direct Traders were visited too in order to get an in-depth understanding of the challenges and the complexity within the value chain of coffee.

After these interviews the answers were analysed and evaluated. According to the results, a plan of action was drawn up to illustrate the coffee farmers what further possibilities they would have in order to market their product better and thus to create a better income and livelihood.

2 Theory

This chapter provides a background on coffee in general as well as an introduction in Direct Trade and its impacts for both sides, buyer and seller.

2.1 Coffee

2.1.1 Production

The cultivation of Coffee has spread from its origin in Africa into the world's "Coffee belt" which is located between latitudes 25 degrees North and 30 degrees South (Figure 1) (National Coffee Association of U.S.A., 2017). This is the area which satisfies the climatic conditions of coffee.

Figure 1: coffee growing regions in the world with the top 5 producers and consumers, source: own graphic

In 2014, the worldwide production reached a volume of almost 9 million tonnes (Figure 2) (International Coffee Organization ICO, 2016). Especially since the 90's coffee production increased by 45% and has experienced a global shift, with an intensified mono-culture production expanding in Asia while contracting in Africa. Within three decades, Vietnam and Indonesia has risen from an insignificant coffee producing country to the second and third largest coffee exporter in the world, while Colombia fall back from number two to the fourth largest (Food and Agriculture Organization of the United Nations (FAO), 2017).

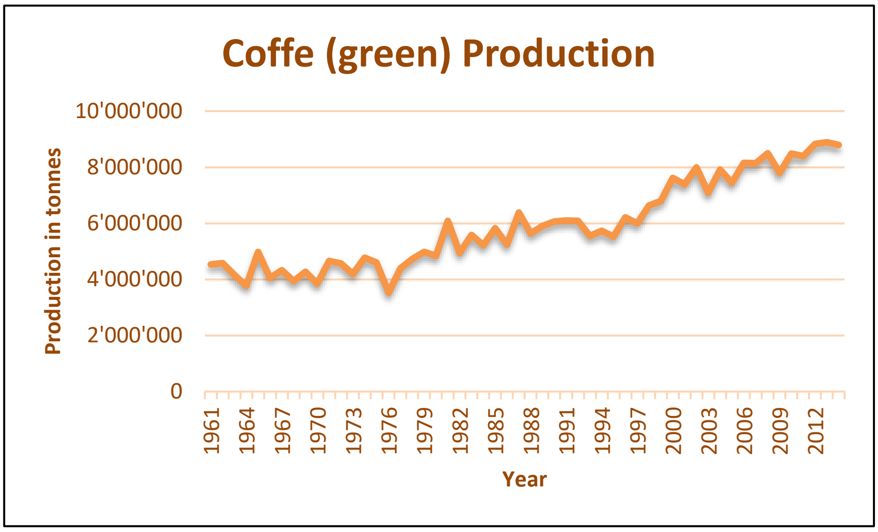

Figure 2: Coffee (green) production in tonnes, source: (Food and Agriculture Organization of the United Nations (FAO), 2017)

2.1.2 Cultivars

The two main cultivars of coffee are Arabica (*Coffea arbabica*) and Robusta (*Coffea canephora*) (Figure 3), whereof Arabica is generally known for its better quality and complexity in terms of flavour, although Robusta has a higher concentration of caffeine (Kaffeezentrale, 2017). While Arabica has a caffeine concentration of around 1,2%, Robusta has a concentration of 2,2%, depending on the preparation (Coffee Intelligence, LLC, 2015). Because of its higher caffeine, Robusta is mainly used for Espresso (E. Guerra, 2017). Worldwide, Arabica is cultivated around three times more than Robusta although Robusta is more resistant against diseases, as well as extreme variation in temperature (Kaffeezentrale, 2017). One of the most important disease of Arabica is the coffee leaf rust (*Hemileia vastatrix*) which is nearly impossible to be treated under an elevation of 900 meters above sea level (Gaitán, Cristancho, Castro Caicedo, Rivillas, & Cadena Gomez, 2015). Therefore, Arabicas are mainly cultivated above that elevation, where in contrast they're forced to face the risk of frost which can cause serious damages to the plant. Moreover, higher altitudes are mostly associated with longer ripening

Figure 3: roasted Arabica bean (left) and roasted Robusta bean (right), source: (Kaffeezentrale, 2017)

periods, smaller harvests, steep slopes and hindered transportation ways. Due to all these difficulties in cultivation of Arabica, its price is automatically higher than Robusta (Kaffeezentrale, 2017).

2.1.3 Post-harvesting process

Before the coffee is roasted, the bean must be separated from the fruit in the post-harvesting process. For this purpose, there are various methods which are used depending on the region, climate, resources and water availability. Each method influences the taste of coffee on its own way. This influence is traced back to the different layers of the fruit (Figure 4), which can be made to advantage according to the method.

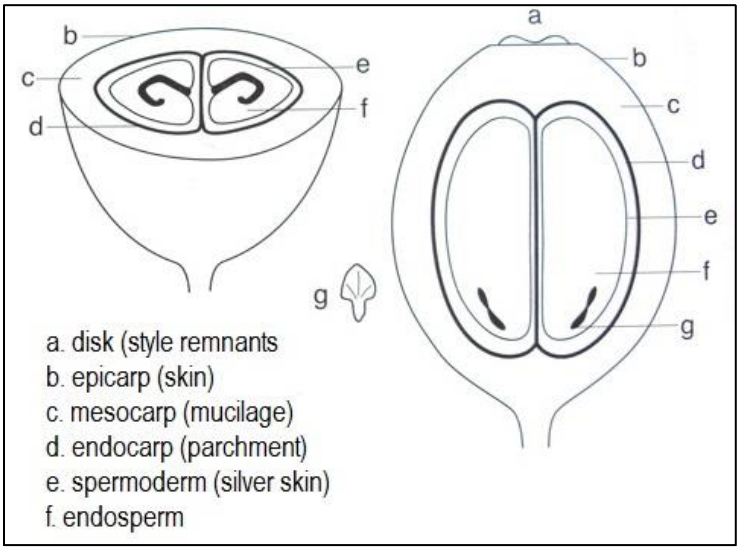

Figure 4: Transverse and longitudinal sections of coffee berry, source: (Casa Brasil, 2015)

Natural process

The natural method is the oldest method of processing coffee and is still used in countries where rainfall is scarce and long periods of sunshine are available to dry the coffee properly (Solstice Roasters, 2014). The freshly picked cherries are simply spread out on huge surfaces to dry in the sun like drying a grape into a raisin (Figure 5). The beans are dried with all of their layers intact, including the coffee cherry and mucilage. In order to prevent the cherries from spoiling, they are raked and turned throughout the day, then covered at night or during rain to prevent them from getting wet (National Coffee Association of U.S.A., 2017). Depending on the weather, this process may take several weeks for each batch of coffee until the moisture content of the cherries drops to 11-

Figure 5: Natural post-harvesting process, source: (Rave Coffee, 2017)

12.5% (Solstice Roasters, 2014). At this stage, the berries resemble dark nuts before being hulled by machine. In the market place this process is usually called “natural” or “unwashed”.

Washed process

Washed-processed coffee is a relatively new method of removing the first layers up to the endocarp surrounding the coffee bean. This method is called washed, or, wet process because water is the primary means to both moving the coffee through the process and to making the extraction of the seed possible. After picking, the berries are first sorted in a large machine to parse out any of the smaller, less desirable berries. After sorting and cleaning, the pulp is removed from the cherry (Figure 6). This operation is the key difference between the dry and the wet methods, since in the wet method the pulp of the fruit is separated from the beans before the drying stage. After the berries have had the pulp removed, they must go through a process of washing and sieving to remove any remaining pulp, skin and mucilage (E. Guerra, 2017).

Figure 6: Depulping machine, source: own photo

Figure 7: washing corridor and fermentation tank, source: own photo

To that end, the beans are put into tanks for a slight fermentation (Figure 7). This fermentation process can take anywhere from 6 to 80 hours depending on the farmers gusto (E. Guerra, 2017). The beans are ready now for the next stage, which is drying.

Drying the beans can be done in many different forms. There are three main drying methods with different technologies. They can be sun dried like in the natural process by spreading them outside on the floor or on surfaces like the so called African beds (FAO, 2006).

They can be dried mechanically. In this case hot air caused by burning wood or coal is forced through a coffee bed (FAO, 2006).

The last drying method is solar assisted drying process by using the sun as a source of energy and generating a greenhouse effect in a so called marquesina or parabolico (Figure 8). This was designed to be built cost-efficient with local materials such as wood and is aimed at small-holder farmers (FAO, 2006).

Figure 8: Marquesina or parabolico for drying coffee, source: own photo

Honey process

The honey process is a process in between the other two methods, washed and natural. After picking the pulp of the fruit is separated from the beans. In comparison to the washed process, only the skin is removed, while the mucilage remains on the bean during the whole drying process. Mucilage, composed of natural sugars and alcohols, plays a crucial role in the drying process as it is developing the sweetness, acidity and overall flavour profile in the coffee beans. Before drying the beans, mucilage can be partly removed in a washing process. Depending on how much mucilage is left on the bean the process is named white, yellow, gold, red or black honey. These names are led back to its colour in the dried stage (Figure 9).

Figure 9: different processes in dried stage, source: (Ronen, 2016)

2.1.4 Commercial relevance

Coffee became the worldwide most drunk beverage and one of the world's most valuable commodity for developing countries (Gaitán, Cristancho, Castro Caicedo, Rivillas, & Cadena Gomez, 2015). It's cultivation, processing, trading, transportation and marketing provide employment for around 125 Mio people worldwide, many of whom formally rely upon coffee as their primary source of income (Fairtrade Foundation, 2017). Around 25 Mio small-scale farmers living in developing countries produce more than 75% of the world's coffee (Fairtrade Foundation, 2017).

For many countries, coffee exports generate a significant national tax income and foreign exchange earnings. Burundi, for example, relies on coffee for 60% of its export earnings, Honduras for a quarter and in Ethiopia, 15 Mio small holders, nearly a fifth of the population's livelihood is directly impacted by the production of coffee (Fairtrade Foundation, 2012).

As already mentioned, there are many players in the value chain (Figure 10) of coffee and the price of the coffee increases with every further link within the chain. However, the distribution of the profit margin is by no means uniformly allocated. Currently, the cooperative Cooperativa De Caficultores De Antioquia offers the coffee producer for one kilogram of immaculate green coffee without defects or parchment USD 6.90 (Cooperative De Caficultores De Antioquia, 2017). However, after all the intermediaries and roasters, packaged Colombian coffee in Switzerland is offered to the final consumer for USD 58.- per Kilo in online shops such as Kaffeezentrale (Kaffeezentrale, 2017). This is a margin of nearly 900%, compared to the earning of the farmer. The coffee farmers are exploited as they earn only a fraction of what the end consumer pays for coffee, while much of the margin is appropriated by other intermediaries, roasters and brands (Figure 10).

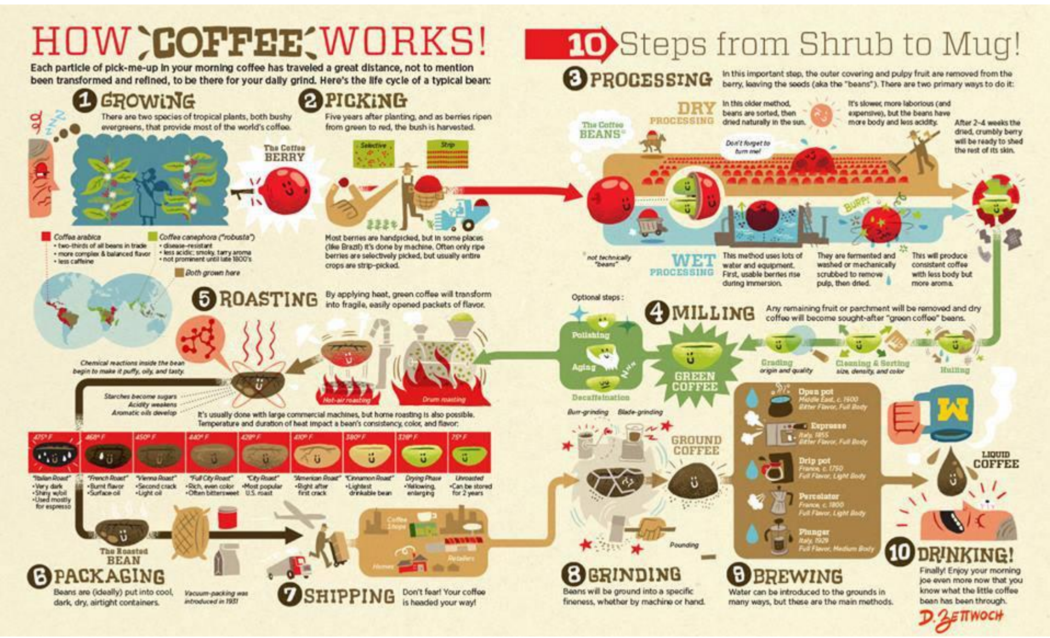

Figure 10: Value chain of coffee, source: (Zettwoch, 2014)

2.1.5 Background and recent developments

Prior to 1989, the coffee market was in reasonable balance, mainly between USD 1 and USD 1,50 per pound, due to International Coffee Agreement (ICA) and subsequent agreements until an abuse of the quota system suspended the convention (Craves, 2006). Simultaneously, institutions like World Bank and US Government, the largest coffee importing nation, required governments of producing countries to liberalise the coffee industry (Fairtrade Foundation, 2012). Consequently, the coffee price dropped down up to 49 US Cents a pound (Trading Economics, 2017). The price remained low for a couple of years until frost hit the production in Brazil in 1994 and prices dramatically increased to above 200 US Cents a pound (Figure 11) (Fairtrade Foundation, 2012). During this time, Brazil increased their production. Additionally, in Vietnam, where government investments in expansion of the coffee sector surged to the second largest producer after Brazil, increased their production by 2000% between 1989 and 2001 (Food and Agriculture Organization of the United Nations (FAO), 2017). The resulting oversupply caused a coffee crisis and heralded the prices down to a 30-year-low to 45 US Cents a pound in 2001 making small-scale farmers extremely vulnerable to this market volatility. Experiencing up to a 70% drop in their incomes, many were devastated. Many farmers abandoned their land, migrated to cities searching for work, or cleared their land for more profitable crops, or even coca for the cocaine production. (Craves, 2006). The US Agency for International Development estimates that more than 600'000 have lost their jobs during the coffee crisis (Stein, 2002). Nestor Osorio, executive Director of International Coffee Organization calls this "the worst crisis ever" for coffee (International Coffee Organization ICO, 2016).

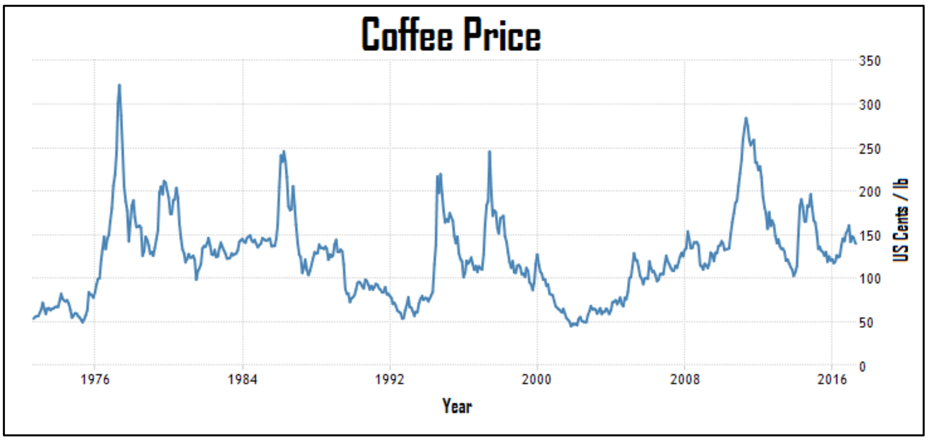

Figure 11: Historical coffee price in US Cents per pound, source: (Trading Economics, 2017)

2.1.6 Volatile coffee market

Although the prices have recovered due to rising demand of coffee, particularly due to chains such as Starbucks who became a popular trending franchise in the last two decades and expanded from 3500 stores in 2000 to more than 22'500 in 2015, and yet the price of coffee remains very volatile (Starbucks Corporation, 2017). This price volatility has significant consequences for those whose livelihoods depends directly on coffee production, especially small-scale farmers. When prices are low, farmers have neither the incentive nor the resources to invest in maintenance or even improvement of their farm (E. Guerra, 2017). When prices fall below the production costs, farmers struggle with serious financial problems like buying food, paying medical bills or school fees – a major reason for children taken out from their school; in order to help the family by working on the farm (Fairtrade Foundation, 2012).

There are several factors influencing the price of coffee. The following parameters are the major drivers of this volatility.

Climate

Coffee, Arabica in particular, is highly sensitive to weather conditions (Kaffeezentrale, 2017). Extreme weather conditions, primarily in the top producing countries, like heavy rain falls, droughts, or frost can have a significant affect to the harvest volume and quality. As mentioned in Chapter 2.1.5, if Brazil experiences a frost, coffee prices boom like in 1994 and 2014. If the harvest is bountiful and supply becomes higher than its demand, prices fall.

Weather conditions can also affect the spread of diseases like the coffee leaf rust (*Hemileia vastatrix*) which is one of the most damaging disease and a serious threat in the coffee industry. The leaf rust first arose in Ceylon and Southern India in 1869 and caused a complete destruction of the crop in Sri Lanka and forced the country to replace the crop with tea as its consequence. Today the disease is present in almost every coffee producing country and causes crop losses of 30% but reaching up to 100% when attacks are severe. (Gaitán, Cristancho, Castro Caicedo, Rivillas, & Cadena Gomez, 2015)

Furthermore, current climate change patterns tend to cause more extreme climates in the future, which is threatening agricultural productivity in many areas of the world (Food and Agriculture Organization of the United Nations (FAO), 2017).

Geopolitical factors

The five top producing Countries Brazil, Vietnam, Indonesia, Colombia and Ethiopia collectively account for around 70% of the world's coffee production. Majorly Brazil and Vietnam as together they account for close to half of the world's production (Food and Agriculture Organization of the United Nations (FAO), 2017). While being significant factors in the coffee sector, these countries suffer from politically instability, and therefore the market responds to any issues from these countries, due to the potential drop in supplies from these countries (Futures Knowledge, 2014).

On the other hand, geopolitical decisions like a significant increase of the production of coffee as Vietnam has experienced in the 90's can cause an oversupply and drop the coffee price as its consequence (Futures Knowledge, 2014).

Speculations

Due to the fact that coffee is a highly traded commodity, the activities of traders can significantly affect the coffee prices. A rise in coffee trading activities usually results in a surge in the price of coffee, indicating to the market that there is an increase in the demand for coffee. In addition, the trading activities for other related commodities like oil could also influence green coffee prices (Futures Knowledge, 2014).

Global demand outlook

The production forecasts coming out of the major producing countries play also a role. Especially when ranges between high-end supply forecast and low-end supply forecast are wide, it causes uncertainty in the market place which results an increase of volatility in prices.

2.1.7 Environmental aspects

Traditional shade grown coffee is cultivated under a diverse canopy of native forest trees in dense to moderate shade. Though some of the forest understory is cleared for farming, a rich web of plant and animal life remains. As a result, shade grown coffee plantations provide corridors for migrating birds to move between forest fragments, attract and support economically valuable pollinators such as bees and bats, and provide ecosystem services such as filtering water and air, stabilizing soil during heavy rains, storing carbon and replenishing soil nutrients (Jha, et al., 2014).

In stark comparison, monocultures such as the sun-grown coffee plantations are known for a significantly less biodiversity and ecosystem services. Furthermore, deforestation, water pollution and an increased use of agrochemicals also often accompany intensified management (Donald, 2004). Vietnam, for example, in the space of a decade between 1990 and 2000 planted more than a million acres of sun-grown Robusta coffee on areas which where before blanketed by rainforest (Stein, 2002).

Although overall cultivated coffee area has decreased by 6% since 1990, the production has increased by 45%, which is an evidence of a general intensification of coffee production (Food and Agriculture Organization of the United Nations (FAO), 2017). Latest studies underline this evidence, as it reveals that global production of shade grown coffee has decreased from approximately 43% of total cultivated area to 24% within the last 20 years (Jha, et al., 2014). The following Figure 12 highlights the intensification through mainly sun-grown coffee production of the key countries such as Brazil, Vietnam and Indonesia where the most of Robusta coffee comes from.

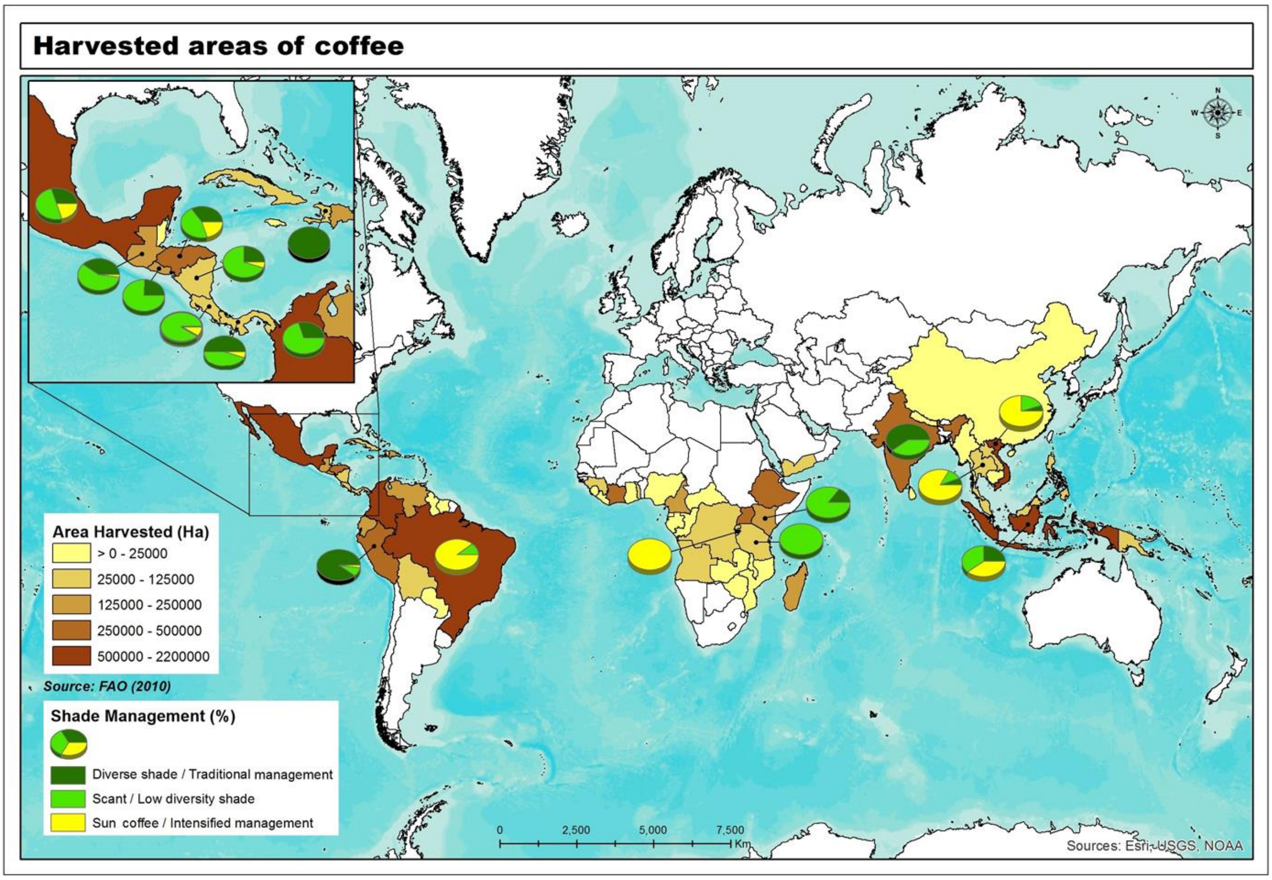

Figure 12: Shade management of the cultivated coffee area under different shade levels. Diverse shade has a close or nearly closed canopy (>40% cover) with 10 or more species of shade trees. Scant shade has a minimal but existing canopy (<40% cover) with usually 1 or 2 species of shade trees. Sun coffee has no shade trees in the production area, source: (FAO, 2010)

Furthermore, current climate change patterns lead to more extreme climates in the future, which is threatening agricultural productivity in many areas of the world (Food and Agriculture Organization of the United Nations (FAO), 2017). Studies in coffee farms in Mexico show that temperature, humidity and solar radiation fluctuations increase significantly as shade cover of coffee plantations decreases (Lin, 2007). In addition to the substantial positive environmental impacts, shade grown coffee can be an economically feasible way to protect this sensitive crop plant. However, the global production tends to shift towards an intensified sun-grown coffee cultivation.

2.2 Direct Trade of coffee

Following chapter describes the definition of Direct Trade in theory. It shows the benefits of each parties and explains the contrast to Fair Trade.

2.2.1 Direct Trading

In an increasingly globalized world the fairness of relationships between producers in developing countries and retailers in developed countries is being questioned. This questioning is especially active in the coffee trade, which has pioneered alternative trading relations such as Fairtrade and Direct Trade (Badiyan-Eyford, 2013). Small coffee producers operate in a volatile market and often have to deal with buyers that are mainly concerned with a price determined at the stock exchange. The producers lack the capacity and influence to challenge their relationship with these international trade structures. This leads many farmers to turn to their cooperatives who offer guaranteed deletion, however the remuneration is limited though (Federacion Nacional de Cafeteros, 2017).

Direct Trade, a still newly establishing approach, might be an alternative form of trade for the farmers. Direct Trade emerged out of the specialty coffee market and is a term used by coffee roasters who buy straight from the growers cutting out both the traditional middleman buyers and sellers (Figure 13) and also organisations that control certifications such as Fair Trade or Rainforest Alliance, for example (Ethical Coffee, 2016).

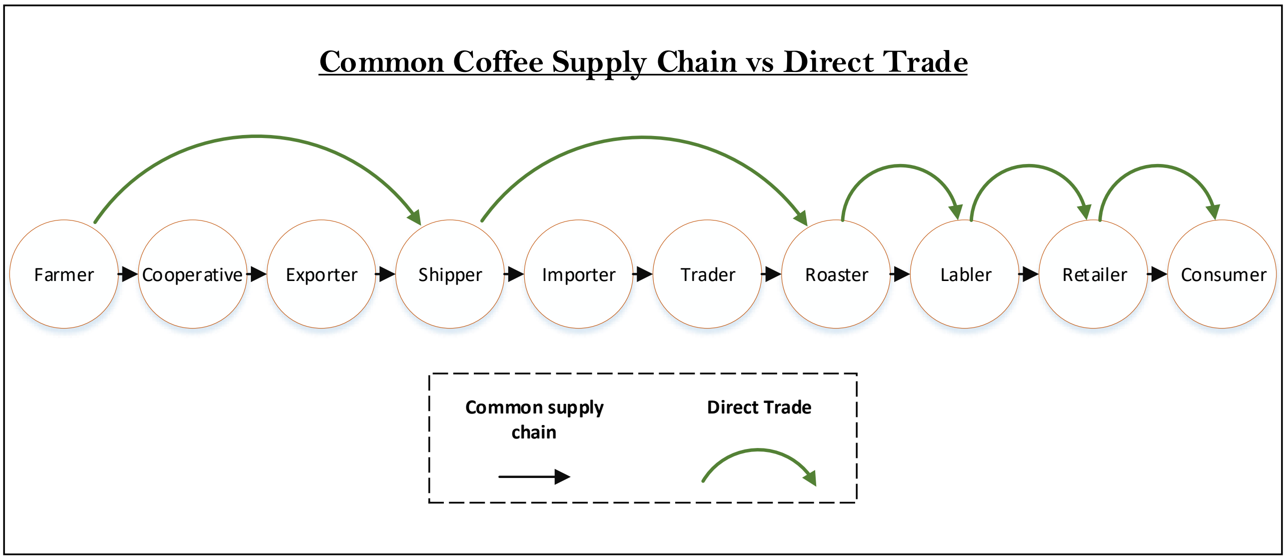

Figure 13: Common Coffee Supply Chain vs Direct Trade, sourece: own graphic

One of the largest and pioneering companies involved in the Direct Trade movement is Counter Culture Coffee (Leeson, 2013). Counter Culture used to be a big supporter of Fair Trade certified coffee, due to their shared corporate values in terms of fairness and equality. However, beside procuring ethically sourced coffee, Counter Culture had the need to find high quality coffee and producers that fit better with their individual company needs and goals. This was difficult to find, as Fair Trade had its focus more on economic, social and environmental issues and less on quality requirements. This led Counter Culture to break away from the strictures of Fair Trade and Direct Trade began to develop (Leeson, 2013). Today more and more roasters are using this model and yet it is in its infancy.

The detail of how Direct Trade plays out as well as the motivation of choosing this model can vary from one roaster to the other since there is no centrally regulated institution such as Fair Trade behind (Badiyan-Eyford, 2013). Some roasters are convinced about this alternative form of trading, because they are dissatisfied with the third-party certification programs (Ethical Coffee, 2016). When purchasing certified coffee, you can reasonably assume that the people who produced that coffee received a minimum wage. However, these certification programs are bound to additional costs which means that not all the extra money paid by consumers for the coffee goes to the farmers. Fair Trade for example pays the remunerations and possible premiums not to the farmers, but to the cooperatives and it’s on them to decide how to invest the premiums (Fairtrade Foundation, 2017). Researches reveal, that such premiums rarely go to the farmers account. A study of Colleen Haight uncovers how the biggest cooperative of Guatemala uses premiums paid for Fair Trade Coffee for its own professional infrastructure and extra office staff instead of forwarding to the farmers for a better wellbeing (Haight, 2011). Based on another study of Parrish et al. one can assume, that such practices are quite common. The study analyses the effectiveness of Fair Trade and concludes that Fair Trade’s contributions were more evident at the organization level, but have little impact at the individual farmer level (Parrish, Luzadis, & Bentley, 2005). Moreover, Farmers who are member of Fair Trade or other certification programs have additional costs such as annual certification fees. Thereby the question appears if the farmers really experience a financial benefit below the line and it shows indications that the push towards fair trade coffee production has had little to no impact on the goals the organization seeks to achieve. In case of Direct Trade, roasters negotiate directly with the farmers and provide them with an opportunity to receive higher prices. Farmers and roasters come to an agreement about what the crop is worth based on the quality of the cup. Thereby, a roaster is able to ensure that the whole agreed price goes directly to the farmer, whereby a significantly higher profit remains for the farmers.

Other roasters are using this alternative form of trading as they want to have more control over the quality of the coffee. Procuring the amount and quality of beans it requires to satisfy the growing demand for coffee in the world is proving gradually more difficult (Biswas-Tortajada & Biswas, 2015). The value placed on quality coffee has created an incentive structure for roasters to create trusting relationships and invest in the farmers by providing them with the tools for their own empowerment (Badiyan-Eyford, 2013). Once a relationship has been established between roaster and farmer, they can collaborate around the whole growing process, roasting process and taste. Coffee roasters can give feedback to the producers about the bean quality and the producer is thereby able to alter things accordingly for an improved next harvest. On the other hand, producers must be willing to receive feedback and improve the coffee he produces what might cause changes of his procedures and his habits. The producer needs to understand why changes are necessary and how these changes can benefit him. With such a shift of emphasis on quality the relationship becomes more balanced between roasters and producers as it empowers the farmers by providing them with the capacity to shape the relationships they are involved in (Badiyan-Eyford, 2013). This kind of relationship can lead to an improved quality of life for the growers and better coffee for the roasters.

While some roasters aren’t satisfied with the quality of Fair Trade certified coffee or with the lack of increase or transparency in Fair Trade premiums paid to farmers, others are using this practise of Direct Trade to have more control about aspects ranging from social issues to environmental concerns. Direct trading roasters usually start their relationship with a visit at the farm. This allows them to know the farmers in person, but also to get a picture about their practices and the state of affairs in terms of social or environmental aspects. According to the roasters core value, he is now able to decide whether the producer meets his personal requirements or not, whether he wants to start a relationship or if some adaptions are necessary for this step. However, trust and mutual respect are integral to Direct Trade because these relationships lack regulation and accountability to a third party (Badiyan-Eyford, 2013).

It can be said, that the lack of certification system that regulates the standards is the strength of Direct Trade, but also its Achilles heel at the same time. Each company who is direct trading with producers sets his own standards according to its core values. This requires trust and mutual respects between roaster and producer on the one hand (Badiyan-Eyford, 2013). On the other hand, as a consumer, one has to trust and believe in the company that they stick to the standards they are claiming. The study of Mc Gregor et al. concludes the problem of consumer-based regulatory standard-setting and its potential exploitation from buying companies as a major threat of Direct Trade (MacGregor, Ramasar, & Nicholas, 2017). However, in order to eliminate any potential distrust direct trading roasters usually work and communicate fully transparent and some roasters like Counter Culture Coffee even have their Direct Trade practices audited annually by an independent third-party (Counter Culture Coffee, 2015).

Another flip side of Direct Trade is the fact that a certain knowledge is necessary on the producer's side in order to produce high quality coffee and to negotiate with buyers. To that effect, roasters want to work with versed producers because this facilitates their own work (Leeson, 2013). These knowledge requirements lead to an exclusion of Direct Trade for many simple farmers with limited knowledge.

Melanie Leeson has done one of the first studies on the exploration of the impact of Direct Trade and is studied through the lens of the producers (Leeson, 2013). Leeson's study took place in Burundi where producers often work with washing stations and roasters buy their coffee from the washing stations. The conclusion of the study explains that the more a producer understands about the structure and organization of the coffee production chain, the less he feels powerless, especially in terms of control over one's own livelihood. The study also concludes that those producers who deal directly with buyers and experience intercultural exchange have a wider viewpoint as well as the understanding that there are different ways of achieving life and work goals. Finally, knowledgeable producers also feel more confident in their ability to assert what they want and need (Leeson, 2013).

2.2.2 Direct Trade vs Fair Trade

Both Direct Trade and Fair Trade are terms that apply to ways of purchasing coffee and other agricultural products abroad, with the aim to help the farmers as well as the environment by setting standards above the usual market usage. This leads to several similarities. Following listed aspects sourced from Blue Tiger Coffee Service are the main commonalities (Blue Tiger Coffee Service, 2017).

What are their commonalities?

- Serve to promote environmental protection, economic sustainability and the rights of laborers and farmers alike.
- Set standards that must be met by the grower to receive the designation of being either Direct Trade or Fair Trade certified.
- Set prices above the cost of production for the farmer
- Have environmental regulations regarding disposal of hazardous and organic waste, maintenance of natural resources, and the use of herbicides and pesticides.
- Address labour issues, ensuring workers are paid minimum wage and that health and safety standards are being met.

However, there are also many aspects which differentiates these two practises. Following Table 1 shows the main differences between Direct Trade and Fair Trade.

What are their differences?

Table 1: Comparison of Direct Trade and Fair Trade, source: (Blue Tiger Coffee Service, 2017)

Direct Trade	Fair Trade
Roaster buys directly from the farmer and pays him directly	Purchase takes place via third party such as cooperative
Roaster and Farmer know each other in person and are aware of their needs and expectations	Personal relationship not existing
Direct Trade standards are determined and regulated by the roasters themselves, who visit the farm regularly to ensure all standards are being met and determine the quality of the coffee.	Fair Trade standards are regulated by a non-profit third-party organization.
Roasters build strong relationships with all farmers who meet their standards, at no extra cost to the farmer.	Certification is only available to small, organized, democratic co-op farms, where the farmer must pay annual certification fees to be eligible.
Roasters are highly invested in the quality of the coffee, as well whether standards of economic, social and environmental sustainability are being met.	At this time, Fair Trade does not regulate the quality of the coffee, except to ensure the conditions under which it was grown meets their economic, social and environmental standards.

Following Figure 14 shows the buying procedure of Fair Trade and Direct Trade, its differences and consequences.

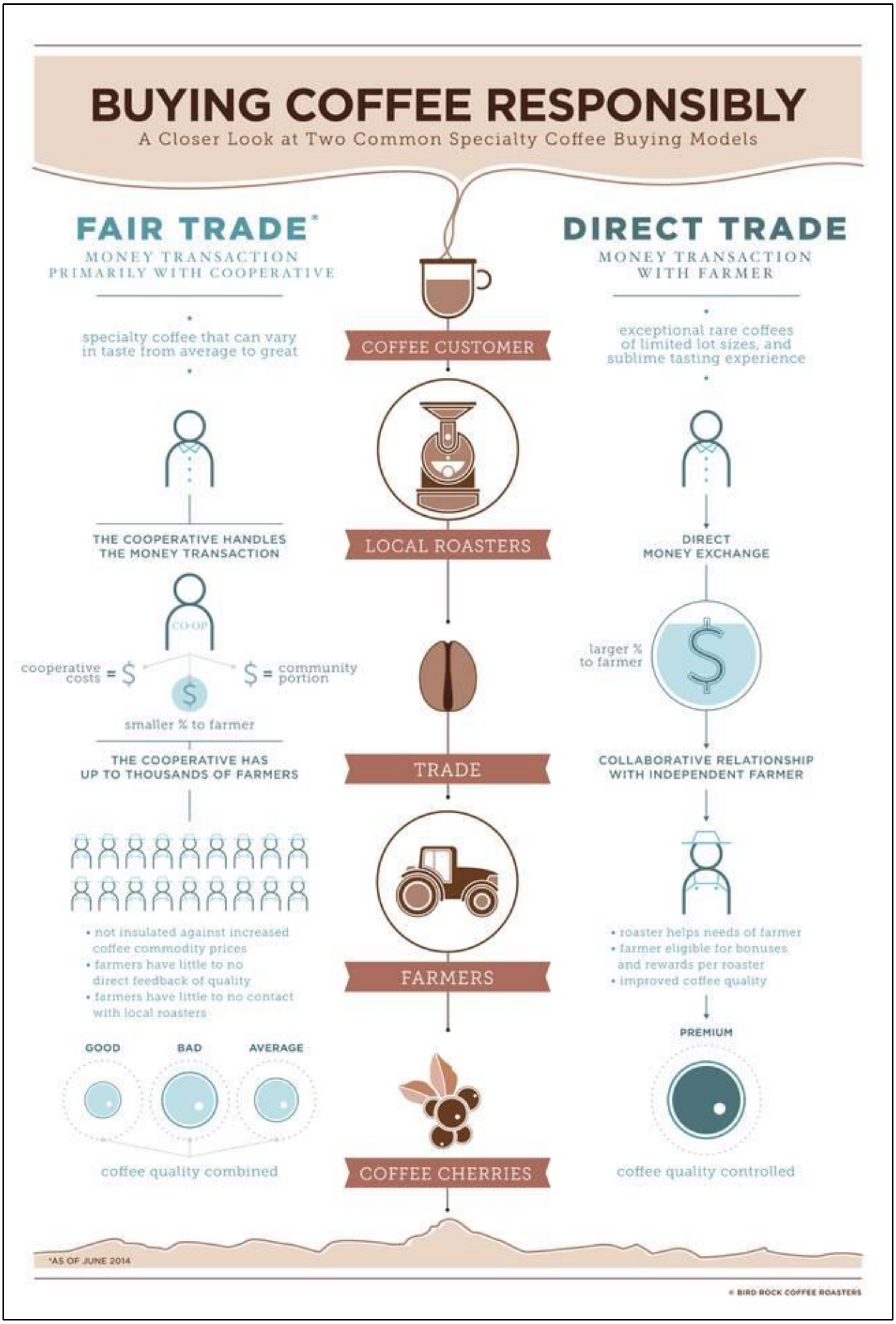

Figure 14: Infographic showing the buying procedure of Fair Trade and Direct Trade, source: (Bird Rock Coffee Roasters, 2014)

2.2.3 Potential of Colombian coffee

Colombia is known world-wide for a long-standing tradition of coffee and has always stood for quality and taste. Colombians pride themselves on their reputation for high-quality coffee beans, which result from rich volcanic soil and predominantly shade-grown cultivation. Also, the alternation of wet and dry seasons supports two harvests, one running from September to December and the other running from April to June (Cooperative De Caficultores De Antioquia, 2017).

The terrain precludes the possibility of significant mechanisation and as a result, Colombian coffee is harvested manually, predominantly at the peak of maturity, and cleaned to prevent mucilage from permeating the beans. This process differs from that of other major coffee-growing countries such as Brazil where coffee is produced on a massive scale at lower altitudes and flat landscapes. Moreover, Brazilian coffee is harvested mechanically, yielding what many believe to be a lower-quality product (Andrade, Overby, Rice, & Weisz, 2013).

Harvesting coffee manually in Colombia results in not only a higher-quality product, but also the broader involvement of coffee growers in the industry. Roughly 95% of Colombian coffee-growing families operate on small plots of land, averaging five acres each (Andrade, Overby, Rice, & Weisz, 2013). This characteristic distinguishes Colombian coffee production as essentially a family-run operation in which all the harvesting and post-harvest processing is carried out by the growers themselves.

However, a mayority of the more than 500'000 coffee growers across Colombia sell their crop to the Cooperatives (Andrade, Overby, Rice, & Weisz, 2013). Cooperatives commit to buying the coffee of their members, which is beneficial for the farmers as many of them do not have the necessary network to sell their coffee somewhere else (Cooperative De Caficultores De Antioquia, 2017). Although the founding of the cooperative is an ingenius and important milestone in the history of agriculture, the price they pay to the farmer is limited as they have to sell it further and wages fluctuate based on the commodity market price.

Current figures show that Colombia had a 12-month production (April 2016 – March 2017) of 14,65 million 60-kg bags, whereof 13 million bags are exported (Federacion Nacional de Cafeteros, 2017). In economic terms, this means that coffee represents 6% of the nation's GDP and is a driving force of the Colombian economy (Prins, 2016).

Coffee is the largest source of rural employment in the country and the significant production of coffee mainly goes to the cooperatives (Federacion Nacional de Cafeteros, 2017). It can be said that Colombia has an enormous potential for other promoting opportunities, such as direct trading. Admittedly, direct trading farmers are just a minority in the global market. Daviron and Ponte note that 17% of the global coffee imports in 2000 were direct sourced coffee from specialty coffee production (Daviron & Ponte, 2000). However, it is a practice which is becoming more common. As for Colombia, an increase in direct trading could lead to more independency of market prices for the farmers and a higher income and thereby result into a better livelihood and a strengthened Colombian economy.

3 Method

The aim of this piece is to explore the promotability of Colombian coffee in the context of Direct Trade and whether the necessary requirements exist for a successful implementation of Direct Trade and if not, what measures need to be taken to achieve this target. The necessary data was collected in an 11-week period between April and June 2017 in Colombia.

The following Figure 15 illustrates the procedural method of this work and is explained in more detail in this chapter.

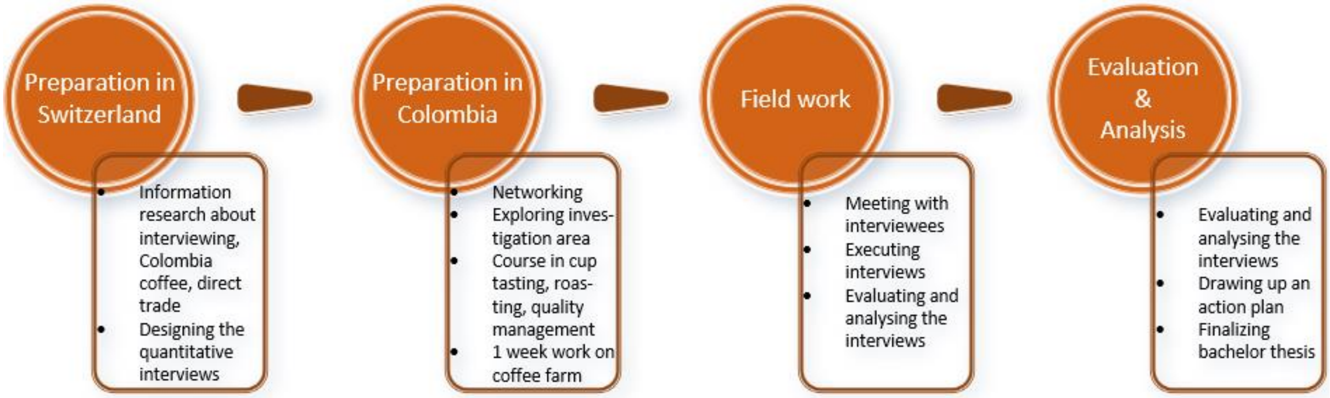

Figure 15: Illustration of procedural method, source: own graphic

Having an in-depth knowledge and understanding of the challenges of the coffee producers and the complexity within the value chain was an important basis for this study. This knowledge was partly acquired through literary research prior to the application of the fieldwork but also acquired directly, i.e. viva voce. In addition to the research, a course in cup tasting, roasting and quality management was graduated in the first weeks in Medellin, Colombia. Furthermore, an entire week on a coffee plantation was spent where the procedure from cultivation through harvesting till post-harvesting and drying was learned directly at first hand.

Beside the courses and the scholarly research, an intensified networking took place in order to meet coffee farmers and other key figures. Furthermore, the investigation area was explored within the first weeks, which is described more detailed in the following chapter 3.1.

3.1 Investigation area

For this thesis, the investigation area has been narrowed down to the department of Antioquia with its capital Medellin (Figure 16). Several farms throughout the department have been visited for this work.

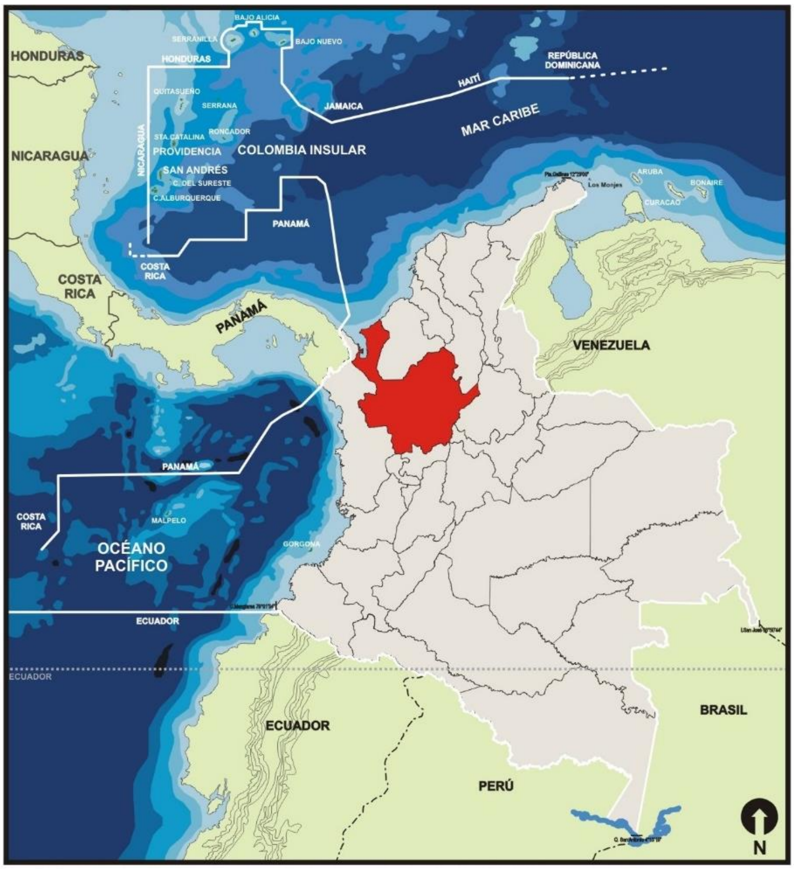

Figure 16: Colombian map with its Department Antioquia, source: (Sociedad Geográfica de Colombia, 2005)

Antioquia has an area of 63'612 km^2 (Gobernación de Antioquia Piensa en Grande, 2017). It is one of the 32 departments of Colombia, bordering to the Caribbean Sea as well as seven other departments (Sociedad Geográfica de Colombia, 2005). According to the newest census, Antioquia's population of 6'534'764 accounts for more than 13% of the whole Colombian population (49'364'592) and it is the second biggest department after the department Cundinamarca with its capital Bogota (Gobernación de Antioquia Piensa en Grande, 2017).

Antioquia is one of the economic engines of the country and is currently witnessing the highest exports of the last 5 years, which leads to a boost of its economy (Peckham, 2017). With a GDP of USD 39,3 billion it represents 13,9% of the country and is above the national average (Alsema, 2017). Antioquia's economy is based on natural resources such as gold, manufacturing industry (especially textile and chemicals) and a growing service sector (OECD, 2008).

Despite not belonging to the key sector in the department of Antioquia, coffee is a driving force in the nation's economy with a contribution of 6% to the Colombia's GDP, it's the main agricultural export product of the nation and an important part of Colombia's heritage (Prins, 2016). But more than that, coffee is the largest source of rural employment in the country. More than 500'000 coffee growers throughout Colombia fulfil a family tradition, one that has been passed down from generation to generation (Andrade, Overby, Rice, & Weisz, 2013).

3.2 Type of interview

Before meeting the interviewees, the type of interview and the questions had to be defined. This was done with the paper of Sonja Trachsel about methods of empirical social research (Trachsel, 2015). For the interviews with the farmers, intermediaries, cooperative and SENA, qualitative semi-structured interviews had been chosen as this type of interview allows a comparability within the same group of interviewees on the one hand. The interviewee is thereby able to respond in his own words without given answers and are not manipulated through the bias of the interviewer.

In addition to the qualitative semi-structured interviews, several informal interviews were conducted with other key figures within the value chain, such as coffee hunters and coffee shops.

3.3 Interviewees

During the Colombia trip, 9 formal semi-structured interviews were held. All interviewees are marked in the following map (Figure 17), with exception of the interview # 7 and # 8, which took place via skype as the companies were based in Europe.

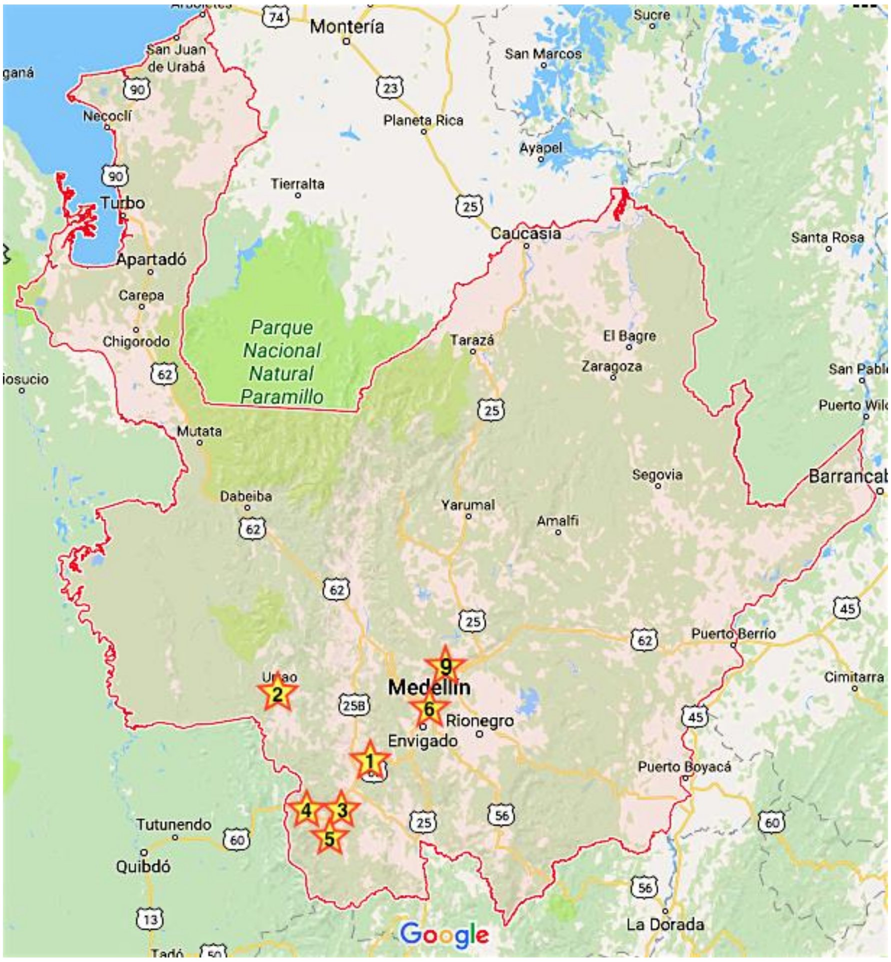

Figure 17:Location of the interviews within the Department of Antioquia, source: Google Maps

Five different coffee producers were visited and interviewed (Table 2). Three of the contacts were established through contacts before the trip. One contact was a recommendation while socializing and one contact was a recommendation by the interviewee of SENA (Servicio Nacional de Aprendizaje).

Table 2: List of interviewed farms

Interview	Name of farm	Location	Farm size
# 1	Finca Cocondo	Titiribi	14.7 ha
# 2	Café del Paraiso	Urrao	≈ 3 ha
# 3	Finca La Loma	Ciudad Bolivar	22 ha
# 4	Finca La Selva	Ciudad Bolivar	64 ha
# 5	Hacienda Las Mercedes	Ciudad Bolivar	130 ha

Furthermore, the biggest of the four cooperatives within the department of Antioquia was visited and interviewed (Table 3). The aim of this interview was to get a better understanding of the role of the cooperative within the value chain, but also to get an overall picture of the farmers.

Table 3: Interviewees of cooperative

Interview	Cooperative	Interviewee	Position
# 6	Cooperative de Caficultores de Antioquia	Gabriel F. Calad Velasquez	Project Manager
		Martha L. Ospina Alvarez	Quality Inspection Manager

Moreover, two different intermediaries were interviewed via Skype (Table 4). The aim of these interviews was to get an understanding of the requirements they set on the farmers for a successful business relationship.

Table 4: Interviewees of intermediaries

Interview	Company	Interviewee	Position
# 7	Algrano	Gilles Brunner	Sourcing & Partnerships
# 8	This Side Up	Lennart Clerkx	Director

Finally, a national coffee training institution was visited and interviewed (Table 5). The aim of this interview was to get an overarching depiction of the knowledge of the farmers as well as their prospective advancements in furthering education.

Table 5: Interview with training institution

Interview	Institute	Interviewee	Position
# 9	SENA Servicio Nacional de Aprendizaje	Andres F. Ruiz Marquez	Head of Coffee Instructor

In addition to the qualitative semi-structured interviews, several informal interviews were conducted with other key figures within the value chain, such as coffee hunters and coffee shops.

3.4 Execution and analysis of the interviews

The interviews with the farmers took place on their farm while the interviews with the Cooperative and with SENA took place in their office in Medellin. Meanwhile, interviews with the direct traders took place via Skype. All the interviews were held in Spanish beside the two interviews with the intermediaries that were conducted in German and English. The answers were typed on the laptop straight in the interview form.

The results of the interviews with the farmers were sub-classified and summarised into the subject areas ‘cultivation’, ‘biodiversity’, ‘computer skills and internet access’, ‘clients’ and ‘exporting licence’. The results of the interview with the cooperative were sub-classified and summarised into the subject areas ‘membership’, ‘benefits’, ‘buying procedure’ and ‘services used by farmers’. The results of the interviews with the intermediaries were sub-classified and summarised into the subject area ‘who they are’, ‘uniqueness’, ‘benefits for a producer’, ‘requirements’ and ‘current state of affairs’. The results of the interviews with SENA were sub-classified and summarised into the subject ‘who they are’, ‘offer and use’, ‘state of knowledge’ and ‘improvement of livelihood’. The results of the informal interviews with the coffee shops and coffee hunters were briefly summarised.

After finalising the interviews, the necessary requirements for successful Direct Trade and the results of the interviews were contrasted and analysed. According to the requirements which were not yet met, a plan of action with recommendations was then drawn up for the coffee farmers.

4 Results & Recommendations

Following chapter presents the results of the interviews as well as an action plan with recommendations given by the author according to the requirements that were not met yet.

4.1 Interviews

In the following chapter, the results and data of the interviews with the various persons are presented.

4.1.1 Interviews with coffee farmers

In the following sub-chapter, the qualitative interviews with the coffee farmers are presented. All interviews with the farmers can be found in the appendix.

Cultivation method and their challenges

The coffee plantations are mainly cultivated conventionally. According to Interviewee # 9 many producers believe that an organic cultivation method without chemical fertilizers is not possible or hardly possible as with every harvest a lot of nutrients are withdrawn from the system. In addition, they believe that the two main diseases in the cultivation of coffee, the coffee leaf rust (Hemileia *vastatrix*) and the coffee borer beetle (Hypothenemus *hampei*) are very difficult to battle without fungicides or pesticides, which is also covered by the study of Gaitán et al. Since these two diseases can severely affect the harvest and thus their livelihood, abandoning the use of chemicals is no option for many farmers, unless the plantation is located somewhere where they do not encounter these diseases. Farmers who use the organic method of growing their coffee do so due to a lack of human and financial resources rather than for reasons of sustainability. In circumstances where organic or environmental-friendly cultivation is implemented, a certification is also waived for cost reasons, unless you are a landowner like the Guerra family with more than 200 hectares of land, where the necessary resources for certifications such as Fairtrade, Rainforest Alliance or UTZ are also available. An exceptional anomaly is the producer # 1 who cultivates his coffee entirely organically, embedded in a forest with a very high biodiversity. He even produces his own fertilizers and combats the coffee borer beetle with self-made traps and the help of predators who are habitants of the forest.

Shade trees and biodiversity

The elevation heavily impacts the shading density of a plantation. In lower altitudes, where it gets very warm and strong sunshine can damage the plants, shade-trees are a necessary tool amongst the farmers. In higher altitudes, however, the lack of warmth compared to low altitudes results in the coffee shrubs not receiving the necessary heat required. Despite this, none of the plantations visited were a pure monoculture. Three of the visited plantations were shaded between 20-40% and large quantities of birds were observed. Two of the plantations were 100% shaded and with a correspondingly high biodiversity.

Computer skills and internet access

Four of the interviewed farmers indeed had access to the internet, however, these were anomalies as the majority of the farmers neither have a computer, nor were computer-literate. Many of them have their farm off the beaten track, so that, even if they would be capable to handle with internet, they don't have access to internet.

The lack of internet may be an obstacle, however, there are various other diverse platforms for the farmers to promote their own coffee but the opportunity for such platforms are eroded by the inaccessibility.

Clients

Virtually all interviewees are noted to have clients abroad, particularly in Europe and the United States – where coffee is the most consumed. They are well networked and maintain a healthy relationship with their clients. These clients are prioritised and thus given the better quality while the rest is sold to the cooperative. In these findings, producer #2 is the anomaly as their project consists of 16 young adults who run their own farm processing and roasting their own coffee to then sell in their own business in a small shop in the village square.

Exporting licence

None of the interviewees have an exporting licence and the main reason for this is the intensity of paperwork required to attain such license. Moreover, if a farmer finds a client abroad, the cooperative helps them with the whole exporting procedure. Therefore, for the majority of the farmers, there is no need for an exporting licence. However, producer # 5 is working on a licence in order to achieve a client relationship without any intermediaries in between.

Summary

The interviewees have their farm well managed and are well informed about their product. All of them are well educated and do have an astounding knowledge on coffee, especially about its cultivation. Furthermore, all producers harvest their cherries manually. Additionally, the producers have a high density of shade trees what leads to high biodiversity.

4.1.2 Interview with the Cooperative

This sub-chapter presents interviews conducted with the biggest of the four cooperatives of the department of Antioquia, Cooperativa de Caficultores de Antioquia. The interview can be found in the appendix.

Membership

The cooperative has currently 11'039 members. The Department of Antioquia is divided in quadrants where the four cooperatives are active. The choice of the cooperative is therefore depending on the location of the producer. Becoming a member is a very easy procedure that can be done with a few steps.

Benefits

Beside the guaranteed deletion of the crop there are further benefits for a cooperative member such as accurate billings, cash payment, various insurances, credits, discount on fertilizers and other equipment, various courses, analysis, support in exports, Newsletter, etc.

Buying procedure

When the farmer brings his crop to the cooperative, an example of each bag will be taken, mixed together and a physical quality check will be done. Physical check means that the coffee beans with defects are sorted out and its percentage to the total will be calculated as well as the percentage of the parchment accordingly deducted. Depending on that the price per kilo is calculated and paid cash to the farmer. Further sensorial analyses are not carried out due to lack of resources.

Services used by farmers

Services for detailed analyses of the producer’s crop are offered on demand, for free. This year, till date, only 100 Members out of more than 11’000 utilized this offer. In other words, less than 1% has a detailed knowledge about his own crop, what makes it nearly impossible finding a customer without knowing what profile and quality the farmer’s coffee has.

4.1.3 Informal interview with a Coffee Hunter

Coffee hunters, such as Rabih Sater, are always looking for the best coffee. Although they may have networked and connected with several farmers globally, it does not necessarily mean that they are consistently purchasing from the same farmer each year. A producer’s coffee can change drastically in terms of quality and cup taste from year to year. The change of climate and inconstant post-harvesting processes are the two main reasons for such a change. Following an informal interview, a statement by Rabih Sater presents a common mindset amongst coffee hunters: *“Once you buy coffee from a farmer he expects that you’re going to buy it the following years too. But if the quality isn’t the same anymore I won’t buy it. This is a point that many farmers do not understand, but I can’t afford buying bad coffee from a farmer, just because I bought something from him the previous year”.* The quote explains the relationship between a coffee hunter and a producer, highlighting that regardless of whether their relationship is satisfactory, the producer is obliged to deliver good quality products.

4.1.4 Interviews with other Intermediaries

There are many other intermediaries looking for profits in the coffee business. It is often considered debatable as to whether their role is necessary, as with every single intermediary the price for the end consumer gets higher and the traceability opaque. On the other hand, there are various platforms who also act as an intermediary, but in a very promotional way for the farmers. Two of those, Algrano and This Side Up, were interviewed. Both interviews can be found in the appendix.

Interview with Algrano

What is Algrano?

Algrano (www.algrano.com) is a platform founded by three Swiss start-up entrepreneurs that won the prestigious IT & Tech Innovation Award. It is a medium, akin to those of Airbnb and HomeAway, where coffee producers and coffee buyers such as roasters get linked together.

What makes Algrano unique?

Every coffee producer can create his own profile on the webpage and offer his current harvest to buyer around the world. The producer defines his own price per kilo. On top of that inevitable costs such as transport, shipping, customs, and the service charges of Algrano result the final price. Buyers, mainly roasters, can first order a sample of the coffee, and if they like it, they can buy the coffee directly from the producer without cost intense trips to the origin country, and yet they know exactly where the coffee comes from including the whole story behind. Moreover, farmer and roaster can communicate directly and always stay up to date.

What are the benefits for a producer?

Algrano acts as a middleman that connects coffee producers directly with roasters and gives a face to the farmers. This is an entire new path for producers without an according network finding new customers abroad. How The captivating aspect of this model is the full transparency within every single contractual partner as well as the potential for significantly higher income for their crop.

What are the requirements for a producer?

The sale of coffee over this platform requires access to internet, basic computer skills, mutual trust and knowledge on one’s own coffee.

How many Colombian producers do deal via Algrano so far?

Out of 359 farmers worldwide using Algrano so far, 52 of them are Colombian. This is a step in the right direction with a high potential for enhancement.

Interview with This Side Up

What is This Side Up?

This Side Up (www.thissideup.coffee) is a platform, founded by Lennart Clerkx in Amsterdam. Clerkx had the vision of giving a face to small scale farmers who don’t have the means and connections to reach the right buyers. It was founded to build trustful relationship with coffee farmers and give them a tool to connect to roasters.

What makes This Side Up unique?

Unlike traditional coffee hunters, Lennart believes in consumer loyalty meaning that he seeks long-term relationships, giving the farmers a face by presenting the whole story behind each relationship on his webpage. One of This Side Up’s core values is full transparency. All contact details of each farmer are visible on the page. Moreover, all costs per kilo are transparently shown with a ring chart right on the page, visible for every single visitor.

What are the benefits for a producer?

Beside acquiring new customers and achieving higher prices than usual, farmers get a face out there which is one of This Side Up’s core vision.

What are the requirements?

Lennart Clerkx himself choses high quality coffee from farmers of all over the world. Beside this, trust and a good communication are essential for a healthy relationship.

How many Colombian producers do deal via This Side Up so far?

Currently, This Side Up only offers coffee from 8 different farmers worldwide. One of these eight farmers is Colombian. The company is in its infancy and continuously growing.

4.1.5 Informal interviews with Coffee shops

As a result of urbanisation, many younger generations associate coffee and peasantry with primitive culture. However, in large cities like Medellin, a strong counter-movement is taking place. There are many specialty coffeeshops which exclusively offer Colombian coffee from the region. Not only does it reclaim a part of the Colombian culture, but it also raises awareness of the issue of coffee by providing quality, professionalism and basic education to their customers.

One of these examples is the Cafe Creador in Poblado, where an informal interview with the manager and Barista coach José Zapata pointed out that even though they sell their coffee with their own logo, they always inform the clients about the origin of the coffee and try to promote the producer with their available means.

Another example is the Cafe Rituales in Laureles where the guests are not only informed with passion but also offered various courses and even excursions to the coffee producer’s farm where they are buying their coffee from.

4.1.6 Interview with SENA (Servicio Nacional de Aprendizaje)

What is SENA?

SENA is a public institution ascribed to the Ministry of Labor of Colombia. They provide professional training and formation to workers, youths and adults within the areas of industry, trade, agriculture and cattle breeding with the mission to contribute to the country’s social, economic and technological development.

What does SENA offer to coffee farmers how do they use it?

One of their areas of specialty is coffee, where they offer a big variety of courses. Even though the courses are publicly available and free of charge, many farmers do not take the opportunity to use SENA’s professional services. The classes are rarely full. SENA would be happy to see more full classes and not only young students, but also elder farmers who are willing to improve themselves.

What's the state of knowledge of a common coffee farmer?

SENA reinforces the notion that plenty of farmers do not know much about their own crop. They learn how to produce coffee through generations and then they sell it to the cooperatives where quality is of secondary importance.

How can a farmer enhance his livelihood?

A farmer must increase the quality of their harvest in order to increase their earning potential as increasing the quantity of land is highly unlikely. For this to become feasible, one must understand how to distinguish between high and low-quality produce.

Beside increasing quality, SENA is convinced that farmers need to get out of their comfort zone and try to sell their crop on different sales channel beside the cooperative. Negotiating with Coffee Hunters, roasters or local coffee shops could be possible. Moreover, innovation and the use of social media is important but many older generation farmers are unable to use the internet due to inaccessibility and lack of basic IT skills.

4.2 Recommendation

On the basis of the results of the interviews, it seems as though there are various stages between harvest and sale where still a lot of opportunity for development. These aspects must be improved in order to achieve the requirements for a successful Direct Trade. Therefore, a plan of action for the producers has been drawn up, which is shown in the following Figure 18. These points are discussed in detail in this chapter.

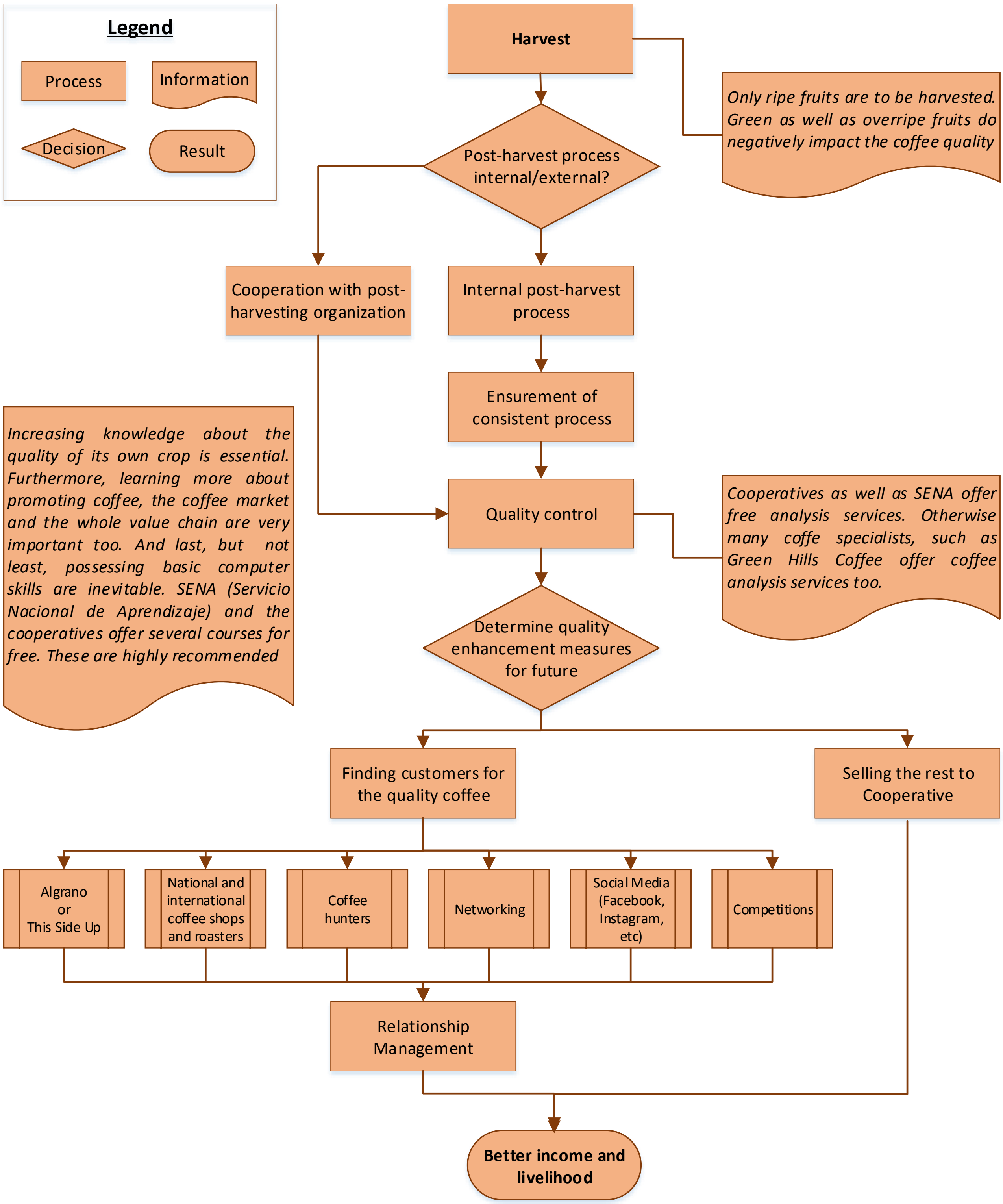

Figure 18: Plan of action for farmers, source: own graphic

4.2.1 Harvest

The two main factors in generating a higher income are quality and quantity. The production area of each producer is given with a strict capacity. Proper cultivation care for plants can produce a high-quality as well as high quantity of fruits. According to Gabriel Fernando Calad Velasquez of the Cooperativa de Caficultores de Antioquia, this knowledge has been passed down through generations for centuries and oral traditions are an integral part of the Colombian farming culture. Nevertheless, there is potential for improvement in the harvest itself. It is very important that only ripe fruits are harvested, as unripe and overripe fruits impact the flavour of coffee negatively (Coffee Circle, 2017). According to Martha Liliana Ospina Alvarez of the cooperative, there are still cases where unripe or overripe fruits are harvested. This is partially due to the harvesting procedure, in particular the wage system of the workers. During the harvest, workers – namely pickers – come from all over the country and they are paid per harvested kilo. This wage system ultimately leads to the partial harvesting of unsuitable fruits as they try to harvest as much as possible within a working day. In conclusion, either the wage system ought to be revised or the pickers have to be clearly instructed on which fruits should be harvested and which not.

4.2.2 Post-harvesting process

One of the most important phases is the post-harvesting process which can have a great influence on the cup in terms of quality and taste; a process, that is often totally undermined by the farmers according to Cristian Raigosa, roaster, cup taster, Barista as well as co-founder of Rituales Café (Raigosa, 2017).

As already explained in chapter 2.1.3 there are different washing and drying processes, each manipulating the coffee flavour, especially in terms of sweetness and acidity (E. Guerra, 2017). Furthermore, there are many different characteristic variations that should be considered when opting for a particular post-harvesting process (Raigosa, 2017). However, the majority of the farmers in Antioquia always use the same process, which is mainly the washed process and then either dried in marquesinas or machine dried with coal. One reason for the adoption of this method is the fact that it is the traditional form in which Colombian farmers have carried out their processes. Secondly, climate conditions disable sun-exposed processes like “natural” as rainfall occurs quite often in this tropical area.

Regardless, choosing the corresponding post-harvesting process to the harvest is essential. This can either be done by operating the whole post-harvest onseself, which is very common in Antioquia, but should be challenged as already mentioned. Another solution would be working together with centralised post-harvesting organisations such as “La Palma Y El Tucan”. Centralised post-harvesting is up-and-coming in South America, but already very popular in African countries like Ethiopia. This might appear unconventional to an Antioquian farmer as the majority of them are equipped with the necessary infrastructure to do the post-harvest process themselves. However, it is important to understand, that people working in centralised post-harvesting stations are experts in this process and they might increase one’s coffee quality significantly and thus lead to a higher income.

If a farmer decides to keep executing the post-harvesting process himself, maintaining high quality produce or even improve, it is key in order to sell his coffee to clients other than cooperatives. For this, one has to deal with the quality of his product. It’s very important to analyse the quality and profile of the yearly harvest. Cooperatives as well as SENA offer this service for partly free. Quality of coffee can change drastically from year to year and from lot to lot and needs to be understood. This change can be caused due to climate conditions, cultivation process, post-harvest process or roasting process (Ruiz Marquez, 2017). Although some variables are not determined by the farmers such as climate conditions, it is important, nevertheless, to understand the source of change in order to determine which quality enhancement measures could be done for the following harvest.

4.2.3 Acquisition

Even though the cooperatives are a great system and they are committed to the purchase of the farmer’s harvest, other sales channels should also be considered where higher prices per kilo can be achieved.

Significantly higher prices can be achieved through the means of foreign customers. In order to acquire these, one must also present themselves accordingly on international platforms. An alternative is the Platform Algrano or This Side Up which has already been described in chapter 4.1.4.

In addition, social media such as Facebook and Instagram should be used where a producer can present himself and draw attention to potential clients.

Foreign customers alone aren’t the only path in earning a higher income as there are also many opportunities on a national level or even a local scale. One of these possibilities are the many cafes in the cities like Medellin. There are many other specialty coffeeshops which value high quality coffee and promote it accordingly - especially in districts like Laureles or Poblado where the tourist figures are high, the coffee can be spread and promoted not only on a national but also international level.

Additionally, it is possible and even beneficial to contact coffee-hunters and offer samples. A co-operation with a coffee hunter may also be a unique option as many of them have customers from all over the world and thus also indirectly advertises their own coffee.

Furthermore, one should also participate in regional, national and international competitions such as the Cup of Excellence. Hereafter, the winning and the subordinate crops are sold at a significantly higher price than the common market price. Excessive advertising and a high-paying clientele are thereby guaranteed.

Lastly, a list of potential sales channels such as direct trading roasters has been prepared by the author of this work. The list can be found in the appendix. Each of the listed companies may be a potential customer and shall be contacted.

4.2.4 Education

Having a well-grounded knowledge of one's own coffee is essential. This includes far more than knowing the variety. General characteristics of the variety, crop characteristics, as well as suitable post-harvesting processes depending on the variety are only a few points. Such knowledge can be appropriated on the one hand through research. On the other hand, there are organizations like SENA or the cooperatives themselves, which regularly offer various topic-specific courses and are warmly recommended.

Regular exchanges with roasters or customers should also be maintained in order to better understand their needs and act accordingly.

Furthermore, it is essential to know the tastes of one’s own coffee. Therefore, it is crucial that each producer regularly drinks his own coffee in order to train his taste sensors, to clearly define the tastes of his own harvest and, above all, to distinguish differences between the different harvests or even the different lots. Also, attending a cup-tasting course is highly recommended.

Another vital ability in the modern ages is dealing with computers and smartphones. As explained in the previous chapter, all sales channels should be used for customer acquisition. Many potential customers can be reached with social media or mediums such as Algrano. Therefore, basic knowledge in this matter is essential for the handling of such channels. The inability to obtain a basic understanding of IT may not be an obstacle if a farmer could seek help from those who do.

5 Discussion & Conclusion

This chapter questions the results as well as the method of this study and finally, concludes the results of this study.

5.1 Discussion of results

This piece demonstrates once again that the field of coffee is very versatile and complex. In addition, there are many players in the value chain and the majority are driven by personal gain such as in terms of quality, as well as in terms of price and profit. Prices and margins can be further shifted from link to link within the value chain. Apart from the last link in the chain – the end consumer – where is no room for manoeuvre and must pay for what is offered. With Direct Trade and a shortened value chain, both ends of the chain, the producer as well as the consumer benefits. However, to shorten the chain, a certain awareness as well as consumers who take interest in the origin of the coffee is necessary, as well as innovative producers who are willing to enter new sales channels and market their coffee with today's marketing tools are essential.

Such a trend on the part of producer has been around for a while and a sales market is also present. Although some Colombian coffee producers have already put a foot in the sales market of Direct Trade, the majority in Colombia is still far from it. Although the majority of the interviewed farmers were already dealing directly with roasters, they do not reflect the average farmer of Colombia. The results of the interviews with the cooperative and SENA point out that to many producers, Direct Trade seems to be completely alien since they have been selling their coffee to the cooperatives for generations. Cooperatives are obligated to buy the members' crop, which is a great help for the farmers in order to guarantee selling their coffee. On the other hand, it does not allow for the finding of other costumers as many Colombian farmers chose the easier way by selling their crop to the cooperative. As a result, they become dependent on the cooperative and they miss the opportunity to earn a higher income for their crop. Furthermore, the quantity focused incentives of the cooperative leads to lack of focus on quality. Additionally, the lack of exchange with clients such as roasters leads to assumption that old conditioned habits in the whole production procedure remain the same. However, improvement in quality would be crucial to increase their income and is also an essential requirement for direct trading roasters. In order to adapt, culturally conditioned behaviour must undergo development.

The results of the interviews, especially with the cooperative and with SENA, lead to assumption that one of the key obstacles why many farmers don't choose another sales channel than cooperative is lack of education. Many coffee producers see themselves as powerless farmers and do not embed the vision of a company or a brand nor do they think long-term. This finding has also been detected in the study of Melanie Leeson. Furthermore, many of the farmers do not even know how their own coffee tastes, even less the quality and the profile of their coffee, even if they produce high quality coffee. Their routine of selling coffee to the cooperatives has influenced their lifestyles and many farmers chose to drink instant coffee from the supermarket in order not to touch their coffee and sell as much as possible to the cooperative what leads to a neglect of quality. Hearing from the biggest cooperative, that less than 1% of their 11'039 members utilised since January 2017 the free service of analysis of their own coffee was quite surprising. The overwhelming majority, 99% of the farmers, do not even know about the quality of their crop, how could they promote their own coffee? They are used to selling their coffee to the cooperatives where quality is of secondary importance. There are very few who are curious and innovative enough to investigate more about their product, which is essential if they want to sell their coffee somewhere else than to the cooperative.

Previously mentioned in the theory segment and underlined in the study of Leeson is the fact that knowledge about a farmer's own crop is crucial in order to deal with direct trading roasters, however, this is what farmers seem to lack. Interestingly, the infrastructure and the access to education to learn more about their own coffee would be there. The cooperatives offer a lot of courses about coffee. Also, SENA has a very professional infrastructure and an astonishing expertise about coffee and they offer many courses too, for free. Yet, many farmers do not take these opportunities to educate themselves. *"The Colombian coffee producers have to get out of their comfort-zone and become more innovative, instead of taking the line of least resistance and selling their coffee to the cooperatives without thinking a step further"* says Andres Felipe Ruiz Marquez, Head of Coffee Instructor at SENA.

Furthermore, having basic IT skills are crucial for Direct Trade. Especially if one wants to offer his coffee on mediums like Algrano it is indispensable as shown in the interview with Algrano and also stated by Andres Ruiz from SENA. The lack of computer skills disables many Colombian producers from using Algrano and other innovative opportunities to promote their coffee.

It can be said, that the combination of ignorance on the quality of one's own crop, old conditioned habits and lack of ability to use modern sales channels appears, to producers, make it nearly impossible to enter the world of Direct Trade.

The good thing about the Colombian coffee producers is the fact that all of them harvest their cherries manually. Thereby cherries can be picked exactly when the fruits are in a ripe stage. Additionally, producers in Colombia do have a high density of shade trees and thus lead to a significantly higher biodiversity than other countries like Brazil, as shown in Figure 12 in chapter 2.1.7. Both manual harvesting and high shade tree management are crucial advantages for the Colombian coffee production since many direct trading roasters do attach a lot of importance to.

5.2 Discussion of method

This chapter analysis and questions the method of this study and points out some aspects that were noticed retrospectively by the author.

Writing a thesis about such a complex theme like coffee requires an in-depth knowledge not only about Direct Trade, but also about the different players within the value chain and about coffee itself and especially about quality and what constitutes quality. Acquiring this knowledge by participating in different courses such as cup tasting, roasting and quality management was an important preparation and helped massively in understanding the complexity of coffee and Direct Trade in detail.

What needs to be questioned are the interviewees as well as the number of interviews. Most of the interviewed farmers were quite ambitious, well-versed, open-minded and were already dealing with clients abroad. However, these interviewees are not representative of the average coffee farmer of Colombia. According to the interviewed cooperative, coffee farmers having clients abroad are a minority in Colombia. Moreover, the number of interviews with the farmers were short. More data may have contributed to a more substantial finding. On the other hand, the interviews with the cooperative and with SENA were very beneficial in getting an overall picture about the current situation and the average coffee producer.

Finally, most of the interviews were held in Spanish making the language a limitation and may have influenced the result of this thesis.

5.3 Conclusion & future research suggestion

In conclusion, the potential for the implementation Direct Trade in Colombia is very high, due to ideal soil conditions, generally high-quality coffee, manually harvested cherries and a high density of shade trees and thus lead to a high biodiversity on the plantations compared to other countries such as Brazil. These are important selling points that many direct trading roasters attach importance to. However, the conditions for a successful Direct Trade are not met except for a few cases. This is, largely, not due to the quality – although here too there is some lack of know-how in terms quality management detectable – but rather the producers' lack of knowledge on their own produce, even if he might have extraordinary coffee. Furthermore, producers need to abandon old cultural habits and use further sales channels instead of cooperatives. To be able to benefit from this, modern innovative approaches are needed where computer skills and social media are indispensable. Potential customers need to be aware of the existence of a producer. Similarly, a producer must also draw attention to their crop. In order to achieve this, it is vital that a coffee farmer not only see himself as a simple producer, but also as a brand and accordingly behave and market himself.

As already mentioned above in the same chapter, there are several points which need improvement. If Colombian producers relieved themselves of culturally conditioned habits and implement the recommendations of the action plan from chapter 4.2, this could help many farmers in directly dealing with roasters and thus lead to a higher income, a better livelihood and a more balanced relationship between producer and buyer. An increase in the use of Direct Trade would not only benefit the producers, it would also supply the whole economy of this area with an additional boost.

The results of the study may apply to various other departments within Colombia as there are several situational similarities. Additionally, it is important to note that Antioquia is definitely not the biggest coffee producing department in Colombia. Greater coffee producing departments may result in further positive social and economic impacts.

Beside the recommendations published in this study further researches into the manipulation of traditional habits and the implementation of the newly establishing approach, Direct Trade, may prove beneficial for future adaptions. How can producers be made aware of the existence of Direct Trade? What can be done to encourage producers to adopt a new structure for a flourishing livelihood opposed to the selling of crops to the cooperatives? Future researches with such questions could be interesting and can build on the findings from this study.

List of references

Alsema, A. (2017, March 24). *Colombia Reports*. Retrieved September 5, 2017, from Mustafa Ardic: https://colombiareports.com/antioquia/

Andrade, R., Overby, D., Rice, J., & Weisz, S. (2013). *Coffee in Colombia: Waking Up to an Opportunity.* Wharton University of Pennsylvania, Pennsylvania.

Badiyan-Eyford, J. (2013). *Direct Trade Coffee: Prospects and Pitfalls .* Calgary.

Bird Rock Coffee Roasters. (2014, June). *Bird Rock Coffee Roasters*. Retrieved September 14, 2017, from Mustafa Ardic: https://www.aquaspresso.co.za/coffee-academy/fair-trade-vs-direct-trade-fairest/

Biswas-Tortajada, A., & Biswas, A. (2015). *Sustainability in Coffee Production, Creating Shared Value Chains in Colombia.* Routledge.

Blue Tiger Coffee Service. (2017). *Blue Tiger Coffee*. Retrieved September 13, 2017, from Mustafa Ardic: http://www.bluetigercoffee.com/direct-trade-vs-fair-trade/

Casa Brasil. (2015). *Casa Brasil Coffees*. Retrieved July 25, 2017, from Mustafa Ardic: http://www.casabrasilcoffees.com/learn/anatomy-of-the-coffee-fruit-and-bean/

Coffee Circle. (2017, July 24). *Coffee Circle*. Retrieved July 24, 2017 from Mustafa Ardic: https://www.coffeecircle.com/de/e/kaffee-anbau

Coffee Intelligence, LLC. (2015). *Coffee Chemistry*. Retrieved April 13, 2017, from Mustafa Ardic: https://www.coffeechemistry.com/general/agronomy/differences-arabica-and-robusta-coffee

Cooperative De Caficultores De Antioquia. (2017, July 18). *Cooperative De Caficultores De Antioquia*. Retrieved July 18, 2017, from Mustafa Ardic: http://cafedeantioquia.com/web/#actualidad

Counter Culture Coffee. (2015). *Counter Culture Coffee Transparancy Report.* Retrieved Oktober 10, 2017, from Mustafa Ardic https://counterculturecoffee.com/2015report/

Craves, J. (2006, February 8). *Coffee & Conservation*. Retrieved April 8, 2017, from Mustafa Ardic: http://www.coffeehabitat.com/2006/02/the_coffee_cris/

Daviron, B., & Ponte, S. (2000). *The Coffee Paradox: Global markets, commodity trade and the elusive promise of development.* Zed Books.

Donald, P. (2004, 2 1). Biodiversity Impacts of Some Agricultural Commodity Production Systems. *Conservation Biology*, pp. 17-38.

E. Guerra, J. C. (2017, April 10). Founder of Green Hills Coffee Colombia. (M. Ardic, Interviewer) Medellin, Antioquia, Colombia.

Ethical Coffee. (2016). *Ethical Coffee*. Retrieved September 5, 2017, from Mustafa Ardic: http://www.ethicalcoffee.net/direct.html

Fairtrade Foundation. (2012). *Fairtrade and Coffee: Commodity Briefing.* London: Fairtrade Foundation.

Fairtrade Foundation. (2017). *www.fairtrade.co.uk*. Retrieved April 10, 2017, from Mustafa Ardic: http://www.fairtrade.org.uk/en/farmers-and-workers/coffee

FAO. (2006). *Good Hygiene Practices along the coffee chain: a training resource for coffee producing countries.* FAO. Retrieved July 25, 2017, from Mustafa Ardic: http://www.ico.org/projects/Good-Hygiene-Practices/cnt/cnt_sp/sec_3/docs_3.2/Intro%20coffee%20drying.pdf

Federacion Nacional de Cafeteros. (2017, April). *Federacion Nacional de Cafeteros*. Retrieved September 4, 2017, from Mustafa Ardic: https://www.federaciondecafeteros.org/algrano-fnc-en/index.php/comments/colombian_coffee_production_rises_8.1_in_march/

Food and Agriculture Organization of the United Nations (FAO). (2017). *FAO Stat*. Retrieved April 18, 2017, from FAO Stat: http://fenix.fao.org/faostat/beta/en/#data/QC/visualize

Futures Knowledge. (2014, October 24). *Futures Knowledge*. Retrieved April 18, 2017, from Mustafa Ardic: https://www.futuresknowledge.com/news-and-analysis/softs/the-top-factors-that-move-the-price-of-coffee/

Gaitán, A., Cristancho, M., Castro Caicedo, B., Rivillas, C., & Cadena Gomez, G. (2015). *Compendium of Coffee Diseases and Pests.* The American Phytopathological Society.

Gobernación de Antioquia Piensa en Grande. (2017, September 25). *Gobernación de Antioquia Piensa en Grande*. Retrieved from Mustafa Ardic: http://antioquia.gov.co/index.php/antioquia/datos-de-antioquia

Haight, C. (2011). The Problem with Fair Trade Coffee. *Stanford Social Innovation Review, Vol. 9*, pp. 74-79.

International Coffee Organization ICO. (2016). *ICO Annual Review 2014/2015.*

Jha, S., Bacon, C., Philpott, S., Méndez, V., Läderach, P., & Rice, R. (2014, May). Shade Coffee: Update on a Disappearing Refuge for Biodiversity. (O. U. Press, Ed.) *BioScience*.

Kaffeezentrale. (2017). *Kaffeezentrale*. Retrieved April 12th, 2017, from Mustafa Ardic: https://www.kaffeezentrale.de/wissen/kaffeeanbau/arabica-robusta/

Leeson, M. (2013). *Burundi in the World of Direct Trade and Specialty Coffee.* Oslo, Norway.

Lin, B. (2007, May 07). Agroforestry management as an adaptive strategy against potential microclimate extremes in coffee agriculture. *Agricultural and Forest Meteorology*(Volume 144, Issues 1-2), pp. 85-94.

MacGregor, F., Ramasar, V., & Nicholas, K. (2017, April 19). Problems with Firm-Led Voluntary Sustainability Schemes: The Case of Direct Trade Coffee. *Sustainability, Vol. 9, Issue 4*.

National Coffee Association of U.S.A. (2017). *National Coffee Association USA*. Retrieved March 3, 2017, from Mustafa Ardic: http://www.ncausa.org

OECD. (2008). *OECD Review of Higher Education in Regional and City Development: Antioquia, Colombia.* OECD. Retrieved September 4, 2017, from Mustafa Ardic http://www.oecd.org/edu/executive.pdf

Parrish, B., Luzadis, V., & Bentley, W. (2005, July). What Tanzania's coffee farmers can teach the world: a performance-based look at the fair trade-free trade debate. *Sustainable Development Journal, Vol. 13*, pp. 177-189.

Peckham, R. (2017, March 22). Export Sectors Boost Antioquia’s Economy. *Medellin Herald*. Retrieved September 4, 2017, from Mustafa Ardic http://medellinherald.com/expcorn-2/economics/item/422-export-sectors-boost-antioquia%E2%80%99s-economy-banco-del-la-republica

Prins, C. (2016). *Colombia: low commodity prices weigh on economic growth and public finances.* Rabobank. Retrieved September 4, 2017, from Mustafa Ardic https://economics.rabobank.com/publications/2016/september/colombia-low-commodity-prices-weigh-on-economic-growth-and-public-finances/

Raigosa, C. (2017, June 2). Co-Founder of Rituales Café. (M. Ardic, Interviewer) Medellin, Antioquia, Colombia.

Rave Coffee. (2017). *Rave Coffee*. Retrieved July 25, 2017, from Mustafa Ardic: https://ravecoffee.co.uk/pages/coffee-processing-natural

Ronen, O. (2016, November 26). *LinkedIn*. Retrieved from Mustafa Ardic: https://www.linkedin.com/pulse/whats-honey-guide-coffee-beans-processing-ofra-ronen

Ruiz Marquez, A. F. (2017, May 11). Coffee Instructor of SENA. (M. Ardic, Interviewer)

Sociedad Geográfica de Colombia. (2005). *Escuela Nacional De Geografia*. Retrieved September 19, 2017, from Mustafa Ardic: http://www.sogeocol.edu.co/antioquia.htm

Solstice Roasters. (2014, October 7). *Solstice Roasters*. Retrieved July 25, 2017, from Mustafa Ardic: http://solsticeroasters.com/wet-vs-dry-processed-coffee-beans/

Starbucks Corporation. (2017). *Starbucks*. Retrieved April 18, 2017, from Mustafa Ardic: https://www.starbucks.com/about-us/company-information/starbucks-company-timeline

Stein, N. (2002, December 9). Crisis in a Coffee Cup. *Fortune Magazine*. Retrieved from http://archive.fortune.com/magazines/fortune/fortune_archive/2002/12/09/333463/index.htm

Trachsel, S. (2015). Methoden empirischer Sozialforschung.

Trading Economics. (2017, April 18). *Trading Economics*. Retrieved April 18, 2017, from Mustafa Ardic: http://www.tradingeconomics.com/commodity/coffee

Zettwoch, D. (2014). *coffeebyrproxy*. Retrieved July 18, 2017, from Mustafa Ardic: https://coffeebyproxy.files.wordpress.com/2014/04/bps-coffee-steps.jpg

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Appendix

Appendix A: Declaration of originality

Zürcher Hochschule für Angewandte Wissenschaften

Life Sciences und Facility Management

Erklärung betreffend das selbständige Verfassen einer Bachelorarbeit im Departement Life Sciences und Facility Management

Mit der Abgabe dieser Bachelorarbeit versichert der/die Studierende, dass er/sie die Arbeit selbständig und ohne fremde Hilfe verfasst hat.

Der/die unterzeichnende Studierende erklärt, dass alle verwendeten Quellen (auch Internetseiten) im Text oder Anhang korrekt ausgewiesen sind, d.h. dass die Bachelorarbeit keine Plagiate enthält, also keine Teile, die teilweise oder vollständig aus einem fremden Text oder einer fremden Arbeit unter Vorgabe der eigenen Urheberschaft bzw. ohne Quellenangabe übernommen worden sind.

Bei Verfehlungen aller Art treten Paragraph 39 und Paragraph 40 der Rahmenprüfungsordnung für die Bachelor- und Masterstudiengänge an der Zürcher Hochschule für Angewandte Wissenschaften vom 29. Januar 2008 sowie die Bestimmungen der Disziplinarmassnahmen der Hochschulordnung in Kraft.

Ort, Datum: Wädenswil, 26. Oktober 2017

Unterschrift:

Das Original dieses Formulars ist bei der ZHAW-Version aller abgegebenen Bachelorarbeiten im Anhang mit Original-Unterschriften und -Datum (keine Kopie) einzufügen.

Zürcher Fachhochschule

Appendix B: Potential Sales Channels for Colombian Coffee Producers

Company	homepage	Comment
Algrano	https://www.algrano.com	great platform to present and sell your own coffee
Farm To Roast	https://farmtoroast.com	Coffee Hunter connecting farmers with roasters
This Side Up	http://thissideup.coffee	Fully transparent and idealistic direct trader
Intelligentsia	https://www.intelligentsiacoffee.com	Sourcing coffee from all over the world
Gebana	https://www.gebana.com	Platform for market access of different agricultural products
Direct Coffee	https://directcoffee.net	Roaster buying coffee straight from farmers
Ona Coffee	https://directcoffee.net	Australian whole sale roaster based in Canberra
The Coffee Circle	https://www.coffeecircle.ch	German coffee roaster who buys straight from farmers. Currently mainly in Africa, but expanding worldwide
J. Hornig	https://www.jhornig.com	Austrian roaster direct trading with farmers worldwide
Achilles Coffee Roasters	http://achillescoffeeroasters.com	Californian roaster who deals directly with farmers
Fresh Coffee	http://freshcoffee.ch	Swiss roaster direct trading with farms all over the world
Haenowitz & Page	http://www.haenowitzpage.ch	Swiss roaster direct trading with farms all over the world
Martermühle	https://www.martermuehle.de	German roaster buying directly from farmers
Bird Rock Coffee	https://www.birdrockcoffee.com	US wholsale roaster buying coffee around the world
Apex	http://www.apex.coffee	Wholesale coffee company working with several roasters in Belgium
Velvet	http://cafevelvet.co	Café and roaster based in Brussels and in Medellin
Counter Culture Coffee	https://counterculturecoffee.com	One of the first coffee whole sale company sourcing directly from farms
Union Coffee	https://www.unionroasted.com	UK wholesale coffe company direct trading with farms
Tea and Stumptown Coffee	https://www.stumptowncoffee.com/coffee	big US roaster with several stores within US, direct sourcing
Coffee Collective	https://coffeecollective.dk	Roaster based in Denmark, sourcing directly from farmers
Four Barrel	https://www.fourbarrelcoffee.com	Roaster from San Francisco using direct trade
Verve Coffee Roasters	https://www.vervecoffee.com	Wholesale coffee roaster sourcing coffee directly around the world

Appendix C: Interview with Farmers

Interviewee

Contacto **Contact person**	Noltty Tatiana Holguin Carvajal
Número de teléfono **Telephone number**	00573502808344
Página web **Web page**	-
e-mail	tatix199@gmail.com

Finca

Nombre de la finca **Name of Coffee Farm**	Cafe del Paraiso
Nombre de la Familia **Name of Family**	A group of 16 youngsters
Direccion **Address**	Urrao
Altura **Altitude**	1800
Rodal (ha) **Area (ha)**	-
Cooperativa **Cooperative**	Cooperativa de Salgar

Coffee

Numero de plantas **Amount of coffee plants**	25000 (16000 small plants), but they also buy greens from farms around, very well managed farms withouth using pesticides,
tiempo de la cosecha **Harvest time**	throughout the year
Promedio cosecha **Average Harvest**	3 t thereof approx 50% used for roasting and selling their own coffee, the other 50% is sold to the cooperative due to lack of quality
Average Yield (t/ha)	-
Clase **Sorte**	Arabica
Variedad **Variety**	Castillo, Caturro, Variedad Colombia
Perfil taza **Cup Profile**	mild, sweet, sugar/panela, caramel, red fruits, In general between 83-88 points

Cultivation/Processing

Método de cultivo **Cultivation method (Bio, etc)**	Fincas only using fertilizers, but no pesticides, dont have problems with coffee borer beetle or coffee leaf rust
Certificaciones **Certificates**	no
gestion de la sombra **Shade Management**	Shade
Shade Trees	Cover (%) >50%

	Amount of Species >10 Species: Intercropping with Avacado, Platanos, Pineapple, Beans, Yuca, Orange, Lemon
Biodiversity	high biodiversity with very high cover of trees
Harvest	Manual
Proceso de lavar **Washing process**	Washed
proceso de secado **Drying process**	Beds
problemas principal en el cultivo **Main difficulties in cultivation**	very less problems, neither with Leaf Rust, nor with borer beetle

Market

Licencia de exportación **Exporting licence**	No, a lot of paperwork
Cliente **Clients**	They have a little "shop" at the Plaza de Urrao, where they sell all their self-roasted coffee

Direct Trading

Tiene acceso a Internet? **Do you have internet access?**	Yes, but only in town
Cómo son sus habilidades de informática? Sería capaz de crear y gestionar un perfil propio en una plataforma de negociación directa? **How are your Computer skills? Would you be able to create and manage an own Profile on a direct trading Platform?**	Yes, would be able to do that

Additional information

Comentarios adicionales **Additional comments**	An association of 16 youngsters between 17 and 25 years, studying at Sena and Managing their own farm. A project that has been realized with help of the government and the Federacion Nacional de Cafeteros. They roast their own coffee and sell it in their little shop. They have their own laboratory with roasting machine and selection With one lot they won a prize (87.26 Points with Caturro) They also buy coffee from a farm which won a prize with 97 points (Caturro) !!!

Interviewee

Contacto **Contact person**	Luis Emilio Velez
Número de teléfono **Telephone number**	0057 320 6818 17 59
Página web **Web page**	-
e-mail	l.velez@centromedicoa.co

Finca

Nombre de la finca **Name of Coffee Farm**	Finca Cocondo
Nombre de la Familia **Name of Family**	Velez Marquez
Direccion **Address**	Municipio: Titiribi Corregimiento: Antonio Jose Restrepo vereda: La Meseta
Altura **Altitude**	1500 - 1750
Rodal (ha) **Area (ha)**	14.7 ha cafe 1.3 ha cardamomo
Cooperativa **Cooperative**	Antioquia

Coffee

Numero de plantas **Amount of coffee plants**	59000
tiempo de la cosecha **Harvest time**	Sept - Jan
Promedio cosecha **Average Harvest**	40 t
Average Yield (t/ha)	2.72 t
Clase **Sorte**	Arabica
Variedad **Variety**	Bourbon, Castillo, Variedad Colombia, Mocca, Tabi, Geisha
Perfil taza **Cup Profile**	acida media, dulce (panela), chocolate

Cultivation/Processing

Método de cultivo **Cultivation method (Bio, etc)**	Organic / Permaculture
Certificaciones **Certificates**	Ecocert, Rainfores Alliance
Gestion de la sombra **Shade Management**	Shade
Shade Trees	Cover (%) 100%

	Amount of Species: Many Species: many
Biodiversity	totally in a forest with a very high Biodiversity
Harvest	Manual
Proceso de lavar **Washing process**	Washed
proceso de secado **Drying process**	African Beds
problemas principal en el cultivo **Main difficulties in cultivation**	everything very well managed

Market

Licencia de exportación **Exporting licence**	No
Cliente **Clients**	Austria, Germany, Netherlands, Italy, USA

Direct Trading

Tiene acceso a Internet? **Do you have internet access?**	Yes
Cómo son sus habilidades de informática?	si

Sería capaz de crear y gestionar un perfil propio en una plataforma de negociación directa? **How are your Computer skills? Would you be able to create and manage an own Profile on a direct trading Platform?**	

<u>Additional information</u>

Comentarios adicionales **Additional comments**	Most impressive Farm I have ever seen so far. Totally integrated in a forest with a very high biodiversity. He doesnt only works on vertically base, but also horizontally with kind of 4 different floors 1st Floor: the ground with grass and many different Leguminosas which cover the floor from direct sun exposure but also helps to get the nutritions from the air into the soil 2nd Floor : The coffee plants 3rd Floor: A huge variety of different Fruit Trees that provide the coffee with shade and generate an additional income 4rth Floor, the Trees of the forest itself which provide shade and a high diversity as well as habitat for many animals, especially birds and butterflies Luis and his Manager (Norbey) dont only understand the biology of the coffee plant, but also a lot about the soil. They prepare their own fertilizers with a mixture of animal manures, soil, fungus, compost, coal, sulfur, microorganisms and sugar. The prepared fertilizer stays in the tank for two months while the microorganisms can multiply themselves But the most astonishing thing was that they even extract the phosphor from a mixture of grinded stones and the Pergamino with a specific but simple burning method The only thing they buy from outside is sulfur, Sugar and the grinded stones. This year they plan to cultivate sugar cane too, in order to get independent from the sugar for their fertilizers.

Interviewee

Contacto **Contact person**	Juan Carlos Guerra
Número de teléfono **Telephone number**	0057 311 708 6581
Página web **Web page**	www.greenhillscoffee.co
e-mail	jguerra@greenhillscoffee.co

Finca

Nombre de la finca **Name of Coffee Farm**	Finca La Loma
Nombre de la Familia **Name of Family**	Alfonso Guerra
Direccion **Address**	Ciudad Bolivar
Altura **Altitude**	1600
Rodal (ha) **Area (ha)**	22 ha
Cooperativa **Cooperative**	De Los Andes

Coffee

Numero de plantas **Amount of coffee plants**	130.000
tiempo de la cosecha **Harvest time**	Always a bit, but main Harvest between October and November
Promedio cosecha **Average Harvest**	400 bags of 70 kg = 28 t / a
Yield (t/ha)	1,3 t / ha
Clase **Sorte**	Arabica
Variedad **Variety**	Caturro and Castillo 50/50
Perfil taza **Cup Profile**	high acidity, medium high body, balanced, citrus (orange), yellow fruits

Cultivation/Processing

Método de cultivo **Cultivation method (Bio, etc)**	Normal,
Certificaciones **Certificates**	Fairtrade, UTZ, Rainforest Alliance, 4C
gestion de la sombra **Shade Management**	low shade
Shade Trees	Cover (%) 20%

	Amount of Species >10 Species: Mainly Banana and Avocado, but many others too
Harvest	Manual
Biodiversity	High appearance of birds and butterflies and many different species.
Proceso de lavar **Washing process**	Natural X Honey X Washed X all of them, depending on clients request
proceso de secado **Drying process**	Mainly with coal, But he also has beds under a roof -> on demand
problemas principal en el cultivo **Main difficulties in cultivation**	Coffee borer beetle, Coffee leaf rust but well managed

Market

Licencia de exportación **Exporting licence**	Yes
Cliente **Clients**	Mainly sold to the cooperative, but also clients in USA, Belgium and England

Direct Trading

Tiene acceso a Internet? **Do you have internet access?**	Yes
Cómo son sus habilidades de informática? Sería capaz de crear y gestionar un perfil propio en una plataforma de negociación directa? **How are your Computer skills? Would you be able to create and manage an own Profile on a direct trading Platform?**	Yes, would be able to do that

Additional information

Comentarios adicionales **Additional comments**	Juan Carlos is a Q-Grader and he used to work for Nestle as a quality manager of Colombian coffee. He has a very profound knowledge about coffee. He likes to experiment with different processings in order to improve the quality of his coffee as well as to influence the flavor according to the requests of his clients Further plans: - direct exporting without cooperative - eventually cultivating bees

Interviewee

Contacto **Contact person**	Juan Carlos Guerra
Número de teléfono **Telephone number**	0057 311 708 6581
Página web **Web page**	www.greenhillscoffee.co
e-mail	jguerra(at)greenhillscoffee.co

Finca

Nombre de la finca **Name of Coffee Farm**	Finca La Selva
Nombre de la Familia **Name of Family**	Alfonso Guerra
Direccion **Address**	Ciudad Bolivar
Altura **Altitude**	1400
Rodal (ha) **Area (ha)**	64
Cooperativa **Cooperative**	De Los Andes

Coffee

Numero de plantas **Amount of coffee plants**	350 000
tiempo de la cosecha **Harvest time**	Oct - Nov
Promedio cosecha **Average Harvest**	250 bags 70 kg -> 17,500 kg 1,75 t
Average Yield (t/ha)	273 kg / ha very low production
Clase **Sorte**	Arabica
Variedad **Variety**	Castillo and Maragoipi
Perfil taza **Cup Profile**	Sweet (sugar cane), low acidity, medium body, phosphoric acidity

Cultivation/Processing

Método de cultivo **Cultivation method (Bio, etc)**	Normal
Certificaciones **Certificates**	4C
gestion de la sombra **Shade Management**	Shade
Shade Trees	Cover (%) 100%

	Amount of Species >10
Biodiversity	coffe trees completely covered by forest with a very natural and high biodiversity
Harvest	Manual
Proceso de lavar **Washing process**	Natural X Honey X Washed X all of them, depending on clients request
proceso de secado **Drying process**	Mainly with coal, But he also has sun beds -> on demand
problemas principal en el cultivo **Main difficulties in cultivation**	Coffee borer beetle, coffee leaf rust

Market

Licencia de exportación **Exporting licence**	Yes
Cliente **Clients**	Mainly sold to the cooperative, but also clients in USA, Belgium and England

Direct Trading

Tiene acceso a Internet? **Do you have internet access?**	Yes
Cómo son sus habilidades de informática?	Yes, would be able to do that

Sería capaz de crear y gestionar un perfil propio en una plataforma de negociación directa? **How are your Computer skills? Would you be able to create and manage an own Profile on a direct trading Platform?**	

Additional information

Comentarios adicionales **Additional comments**	Juan Carlos is a Q-Grader and he used to work for Nestle as a quality manager of Colombian coffee. He has a very profound knowledge about coffee. He likes to experiment with different processings in order to improve the quality of his coffee as well as to influence the flavor according to the requests of his clients

Interviewee

Contacto **Contact person**	Juan Carlos Guerra
Número de teléfono **Telephone number**	0057 311 708 6581
Página web **Web page**	www.greenhillscoffee.co
e-mail	jguerra(at)greenhillscoffee.co

Finca

Nombre de la finca **Name of Coffee Farm**	Finca Las Mercedes
Nombre de la Familia **Name of Family**	Alfonso Guerra
Direccion **Address**	Ciudad Bolivar
Altura **Altitude**	1800
Rodal (ha) **Area (ha)**	130
Cooperativa **Cooperative**	De Los Andes

Coffee

Numero de plantas **Amount of coffee plants**	780k (thereof 234,000 new plants) 546,000 flowering
tiempo de la cosecha **Harvest time**	Always a bit, but main Harvest between October and November
Promedio cosecha **Average Harvest**	2150 of 70 kg 150,5 t / a

Average Yield (t//ha)	1,2 t/ha
Variedad **Variety**	Mainly Caturra (approx 80%) Bourbon, Castillo, Colombia, Tipica, Maragogipe Geisha, Hava
Perfil taza **Cup Profile**	high acidity, medium high body, balanced, citrus (orange), yellow fruits

Cultivation/Processing

Método de cultivo **Cultivation method (Bio, etc)**	Normal, partly inter-cropping with beans and with Lulo-Fruit (5000 plants)
Certificaciones **Certificates**	Fairtrade, UTZ, Rainforest Alliance, 4C
gestion de la sombra **Shade Management**	low shade
Shade Trees	Cover (%) 20% Amount of Species >10 Species: Mainly Banana and Avocado, but many others too
Biodiversity	High appearance of birds and butterflies and many different species.
Harvest	Manual
Proceso de lavar **Washing process**	Natural X Honey X

	Washed X all of them, depending on clients request
proceso de secado **Drying process**	Mainly with coal, But he also has beds under a roof -> on demand
problemas principal en el cultivo **Main difficulties in cultivation**	Coffee borer beetle, Coffee leaf rust but well managed

Market

Licencia de exportación **Exporting licence**	Yes
Cliente **Clients**	Mainly sold to the cooperative, but also clients in USA, Belgium and England

Direct Trading

Tiene acceso a Internet? **Do you have internet access?**	Yes
Cómo son sus habilidades de informática? Sería capaz de crear y gestionar un perfil propio en una plataforma de negociación directa? **How are your Computer skills? Would you be able to create and manage an own Profile on a direct trading Platform?**	Yes, would be able to do that

Additional information

Comentarios adicionales **Additional comments**	Juan Carlos is a Q-Grader and he used to work for Nestle as a quality manager of Colombian coffee. He has a very profound knowledge about coffee. He likes to experiment with different processings in order to improve the quality of his coffee as well as to influence the flavor according to the requests of his clients The Farm Las Mercedes is well managed. The Farm Manager Antonio has a very good relationship to the employees and the pickers Further plans: - direct exporting without cooperative - eventually cultivating bees

Appendix D: Interview with Cooperative

Date: 20 June 2017

Cooperativa	Cooperativa de Caficultores de Antioquia
Número de teléfono **Telephone number**	0057 314 897 43 59
Página web **Web page**	www.cafedeantioquia.com
e-mail	comunicaciones@cafedeantioquia.com

Interviewee

Nombre **Name**	Martha Liliana Ospina Alvarez / Gabriel Fer- nando Calad Velasquez
Posición en la cooperativa **Position within the cooperativa**	Quality Inspection Manager / Project Manager

Kooperative-Information

Número de productores / miembros **Amount of Producers / Member**	Currently 11039 coffee growers
Ano de fundación **Founding year**	2000

Coffee

Qué información se registra sobre el café que recibe de los productores?	analaysis of quality physical, factor, pasilla, pergamino,

which information do you register about the coffee you receive from the producers?	

Cafeteros

Cómo se convierte un productor en miembro? **How does a producer become member?**	• Photocopy of the identity card of the farmer and his spouse • Photocopy of identity card or Smart Card Coffee. • Photocopy of the structure of the farm in SICA.
Cuáles son los beneficios de ser miembro de la cooperativa? **What are the benefits of being a member at the cooperative?**	• Strengthening Gremial • Give permanence to the company, which guarantees coffee marketing and price regulation • Exact weight • Fair price • Accurate billing • Cash payment **Services:** Marketing Coffee, fertilizer sales and Enmiedas, Discount 1.5%, several lines of credit, School Kit, Life insurance, Help of death, educational aid, hospital income, serious illness, marquees, Protective equipment, field schools, soil analysis, Grameras, clean field: container collection, Mechanical pulping, Bodegas de agrochemicals, workshops qualities of coffee, laboratories coffee, courses cooperativism, children cooperativismo, coffee farmers Women: empowerment for democracy and participation, radio Program : Coffee Farmer Cooperative Horizonte, website, Newsletter Doña Pepa, Café Paisa and text messages.
Usted les ofrecen el servicio para analizar la calidad de su café? Y si sí, cuesta algo? Y cuántos cafeteros están usando este servicio? **Do you offer them the service to analyse the quality of their coffee? and if yes, does it cost something? And how many cafeteros are using this service?**	analysis physical, sensorial, cup profile, its a service for free 100 farmers used this service till today
Tengo la impresión que la mayoría de los cafeteros no son capaces de utilizar las tecnologías modernas como la computadora, los smartphones o las	Yes, many farmers are from elder generations who are not able to use such things. Another phenomena is, that not all of

medias sociales **I have the impression that the majority of the farmers are not able to use modern technologies such as computer, smart phones or social media**	their kids want to get involved in the coffee business. Many of them want to live and work in town instead of living a life of a farmer. This could lead to a lost of our identity. Luckily there is also a counter-movement taking place where youngster are really interested in coffee.

Buy/Sell

Cómo usted calcula el precio diario del café para los productores? **How do you set the daily price of the coffee for the producers?**	• Performance factor base 94 kilos of dry parchment sack of 70 kilograms. • load sacks price = (94 kilos / performance factor in kilos) X base / load price • The bonus for specialty coffees will be for lower factors 93.33 • cup discounts and discounts for higher bit rates 5% are maintained. • the price of grain Pasillas and lower the total load value dry parchment coffee is included.
Qué precios diferentes tiene referible a la calidad o certificaciones? **what different prices do you have in terms of quality or certifications?**	Factor, quality, physical humidity certifications
Quiénes son sus clientes? **who are your clients who buy the coffee?**	expocafe, clients asking directly, private clients,
Usted busca en el extranjeroa directamente en el lugar? **Do you search for clients abroad directly on the spot**	no, we don't have the capacity for this
Qué sucede con el beneficio cuando se vende el café por un precio más alto que usted pagó al cafetero? **what happens with the profit when you sell the coffee for a higher price then you paid to the farmer?**	will be paid back to the farmer
Si un cafetero tiene un cliente (por ejemplo en Europa) que quiere comprar su café, ¿cómo los ayuda con el negocio ? **If a farmer has a client (for example in Europa) who wants to buy his coffee, how do you help them with deal?**	with all the process and they cover only the costs, all the additional gain is for the farmer

Qué puede hacer un productor para obtener un mejor precio por su café, además de aumentar la cantidad y reducir los defectos? **What can a producer do to get a better price for his coffee, beside increasing the quantity and reducing the defects?**	Most farmers take care a lot to the cultivation, but they also need to focus more on harvest and post-harvest period. There are still cases – even if just little - where farmers pick unripen fruits. This affects the cup negatively

Appendix E: Interview with other intermediaries

Interview mit Gilles Brunner von Algrano, 23. März 2017

Fragen zu Algrano

Wie gross ist Algrano heute?	5 Mitarbeiter
Wer bezahlt euch?	
Wer definiert den Verkaufspreis	Kaufpreis des Kaffees, Exportkosten, Transportkosten, Zoll, Fracht, Servicegebühr von Algrano
Kann der Produzent den Preis selber definieren	ja
Wieviel Kaffee (pro Monat oder Jahr) wird momentan im Schnitt über Alagrano gehandelt	-
Sind alle Kunden Roasters? oder gibt es auch andere Kundengruppen	Hauptsächlich Roasters
Momentan 359 Produzenten, 517 Röster, 68 Länder. Wie ist momentan das Verhältnis zwischen Angebot (Producers) und Nachfrage (Roasters) bei Algrano?	Eher viele Produzenten, Sales muss noch deutlich gesteigert werden
Ihr habt bereits 52 Produzenten in Kolumbien, ist das korrekt/aktuell? Brasilien 160 und kleines Land wie Nicaragua schon 40, wie kommt das?	In Nicaragua und Brasilien angefangen, Kolumbien erst letzten Jahr bereist und präsentiert. Zur Zeit nutzen 52 Kolumbianische Produzenten Algrano Vertrauenswürdige Kontaktperson fehlt noch in Kolumbien
Was sind die Kriterien damit ein Produzent bei Algrano aufgenommen wird?	• Internet Zugange • Fähigkeit mit Computer umzugehen • Wissen über dessen eigenes Produkt
Was sind die Voraussetzungen damit Direct Trade funktioniert?	• Vertrauen • Finanzielles Polster für eine um paar Wochen verzögerte Bezahlung nach Lieferung der Ware • Internetzugang und Nutzer-Skills
Was sind die Kriterien bezüglich Qualität	Anfangs nur sehr hohe qualität, mittlerweile auch "normale" Qualität
Achtet ihr auf Zertifikate und/oder Labels?	
Wie werden die Produzenten akquiriert?	Präsentationen im Land, aber auch viel Mund-zu-Mund Propaganda
Welche eigenschaften muss eure Kontaktperson im jeweiligen Land haben, damit er für euch den Export abwickeln kann?	• Skills zur Qualitätssicherung • finanzielle Mittel um • Exportlizenz • Gewillt sein, seine Kosten transparent zu zeigen
Wie läuft das genau ab, wenn Produzent über Algrano verkaufen will?	Je nach Land unterschiedlich, wenn Kontaktperson vor Ort vorhanden, dann wird ihm Samples zugestellt, er überprüft diese auf Qualität und tritt in Kontakt mit dem Produzent. Profil wird erstellt und Preise für den Kaffee werden definiert
Was ist der Mehrwert für den Bauer wenn er über Algrano Direct traded?	• Neue Kanäle um neue Kunden zu gewinnen • Volle Transparenz • Höhere Einkommensmöglichkeiten
Ca. Wieviele Tage/Wochen nach Ablieferung der Ware erhält der Produzent normaler-	Ein paar Wochen

weise sein Geld?	
Wieviel kriegt er effektiv mehr pro kg verkauften Kaffee? Hast du ein Beispiel wieviel er normalerweise pro Kg kriegen würde, und wieviel er kriegt durch den Direct Trade via algrano	Den Preis pro Kilo definiert der Produzent selber. Wir beraten ihn lediglich mit unseren Erfahrungswerten. Je nach Qualität kann das wesentlich mehr sein, als wenn er es z.B. an die Kooperative verkauft
Wie habt ihr die Röster bislang akquiriert?	Viel über Mund-zu-Mund
Was sind zukünftigen die Ziele von Algrano	expandieren

<u>Fragen zur Bachelorarbeit</u>

Was interessiert euch an den Produzenten in Kolumbien?	Internetzugang und Skills diese auch zu Nutzen

Interview with Lennart Clerkx, founder of "This Side Up", 2nd May 2017

<u>About This Side Up</u>

How large is This Side Up today? employees	just lennart
How is the price of the coffee defined?	its a dialogue with the producers together looking at the costs etc. and calculating the price
How much coffee is currently traded with	equiv. of 2 container

This Side Up?	
Are all your clients roasters? Or anything else?	roaster or cafes that are interested
Are all your producers farmers or do you also work with cooperatives?	with cooperatives too, if the farmers dont have the necessary equipment for the post-harvesting process
How is your current relation/ratio between offer and demand?	definitely more offer
What are your requirements to the producers to become a partner with This Side Up?	I want to feel that they are not doing it for money but also in a larger picture it has to feel right for a longterm relationship it all starts with a sample and then talking
What are the requirements for a successful direct trade	trust and good communication
Is there a minimum amount of Harvest needed for the producers?	there is no minimum
What are your requirements regarding quality?	subjectively in terms on taste, base has to be high
How do you deal with quality differences that can vary from year to year?	we always invest last year was the first year where they had the first real quality change. We go in research, try to find a way to bring the best out of the coffee and figure out where the changes come from.
Do you care about certificates/labels of the producers?	no, it's an extra
How do you acquire producers?	lot of requests, sending sample, quality check, dialogue
How do you acquire your customers?	not doing a lot of marketing
How do you organize the whole transportation between producer and port of Rotterdam?	by Lennart himself
Beside a better price, what are other added values for the producers?	better price, a face to the small holders
If a customer orders coffee via TSU, when does the producer receives the money?	payment in advance or sometimes 50% in advance
How much does the producer effectively gets more per kg? Do you have a current example?	see webpage, full transparency
Who are your competitors in DT?	all coffee importers
How do you distinguish yourself from your competitors?	with full transparency

Appendix F: Interview with SENA (Servicio Nacional de Aprendizaje)

Interview with Andres Felipe Ruiz Marquez, 11th May 2017

What is SENA?	We are a public institution ascribed to the Ministry of Labor of Colombia We provide professional training and formation to workers, youths and adults within the areas of industry, trade, agriculture and cattle breeding. Our mission is offering comprehensive professional training for people in productive activities that contribute to the country's social, economical and technological development.
What is your function here at SENA	One of our areas we are specialized in is Coffee. I am the head of the Instructors in coffee.
What do you offer in terms of coffee	We offer a big variety of courses in different disciplines such as Barismo, production, cup tasting, analysis, etc.
Are your courses affordable in terms of charges?	Our courses are publicly available and free of charge.
Are you personally happy with the attendance of your courses	I would be happy to see more full classes with enthusiastic students, not only young aged but also elder farmers We try our best to improve the knowledge of Colombian coffee farmers, we have very well equipped labs and experienced instructor, and yet there are many farmers who do not take this opportunity to improve themselves.
I have the feeling that the great majority of the coffee farmers sell their coffee to the cooperatives.	Yes this is true, unfortunatelly. Nothing against the cooperatives. The cooperative is a great invention and a big help for those farmers who don't have other opportunities to sell their coffee. But at the same time, the coops kind of stimulates the laziness of the farmers. It is way easier to sell your coffee to the coop instead of trying to sell it for a higher price through other channels. The coffee producers have to get out of their comfort-zone and become more innovative, instead of taking the line of least resistance and selling their coffee to the cooperatives without thinking a step further
I was surprised that the coffee producers usually don't drink their own coffee. Instead of they drink instant coffee from the supermarket.	We Colombians have this cultural attitude that we always give the best to our clients and keep the bad quality for ourselves. That's why Colombian farmers usually don't drink their own coffee which is actually very unclever. How do you wanna know the taste and quality of your own coffee if you never drink your own coffee? Drinking your own coffee is very essential in order to distinguish the difference of quality between each harvest and also between each lot.

I have the feeling that many farmers don't know much about their own coffee. So I guess you agree with me?	Unfortunately yes. Lots of farmers don't know much about their own crop. They learned how to produce coffee and they do it the way how they always did. And then they sell it to the co-ops where quality is of secondary importance.
What do you think how a producer can earn more money with his coffee, without buying more land and increasing the productivity?	Well, the production area and accordingly the harvest is given. But what's very important is increasing quality. Only with an increased quality a producer can charge more for his hard work. But for this, one has to understand how to distinguish quality And the second point is the sales channel. As I said, coops are good, but they have their given prices. So if they wanna charge more for their good coffee, they have to find other customers such as coffee hunters or roasters. But also its important being innovative and using social media. But many farmers are from elderly generations and don't even know how to handle a computer or social media.
If a client from abroad wants to buy a farmers coffee, he wants to know more details about quality, flavor, points, etc. Do you also offer such analysis for farmers?	This is another frustrating issue. Yes we do, but many farmers do not take this opportunities to use our service.
What is your personal aim or wish for the Colombian coffee farmers.	Well I or lets say we are here to improve the Colombian coffee production and become more competitive with the rest of the world. Even though we already have very good quality, the farmers are not aware of this. I wished that farmers would educate themselves in order to improve the quality of coffee but also to have a better income and livelihood. That's why we SENA exist, but we can't force them. So we are always trying our best to make the farmers aware that its finally in their own hands but we are here to serve them with pleasure.

Appendix G: Poster

Zürcher Hochschule für Angewandte Wissenschaften
Life Sciences und Facility Management
IUNR Institut für Umwelt und Natürliche Ressourcen

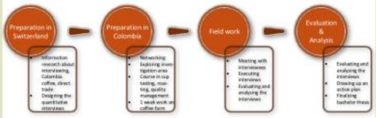
Promoting chances of Colombian coffee in the department of Antioquia, Colombia

Bachelor dissertation of Mustafa Ardic, 2017
Bachelor degree programme in Environmental Engineering (UI13)

Direct Trade is the latest form of sourcing coffee, where roasters buy directly from producers, cutting out several middlemen as well as organisations that control certifications such as Fair Trade. The lack of intermediaries leads to mutual benefits such as transparency, fair pricing or healthy and balanced relationships. The aim of this dissertation is to explore the promotability of Direct Trade as an alternative form of trade for Colombian coffee producers. What conditions must be fulfilled to achieve a sucessful Direct Trade? Are these conditions given? And if not, what measures need to be taken to promote Direct Trade in Colombia?

Method

In order to explore the promotability of Direct Trade with Colombian coffee several interviews with coffee farmers as well as other key figures within the coffee value chain were conducted. The necessary data was collected during 11 weeks in the department of Antioquia, Colombia. The following Figure illustrates the procedural method of this work.



Results

Potential for Direct Trade

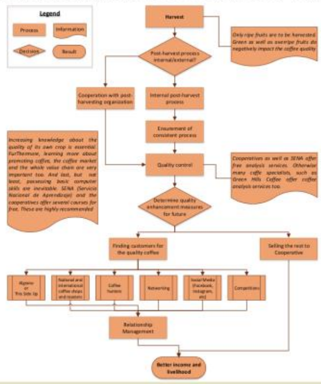
- Ideal soil conditions
- Manually harvested cherries
- High density of shade trees
- High biodiversity
- Generally high quality coffee

Requirements	Fullfilled?
Knowledgeable producers	✗
High Quality of coffee	✓
Ability to use computer/ internet/social media	✗

The combination of lack of knowledge and inability to use modern sales channels via internet make it for many producers nearly impossible to enter the world of Direct Trade. Several measures need to be taken in order to achieve the requirements.

Action plan

Based on the results a plan of action has been drawn up for the producers in order to achieve the requirements for a successful Direct Trade.



Conclusion

This dissertation highlights that the potential for Direct Trade in Colombia is very high due to ideal climate conditions, high quality of coffee, manually harvested cherries and a high biodiversity within the plantations compared to other countries. These are important selling points that many direct trading roasters attach importance to. However, the current situation also fails at the conditions for a successful Direct Trade. The main reason for this is the producers' lack of knowledge on their own crop. Furthermore, in order to benefit from the Direct Trade model, modern innovative approaches are needed where computer skills and social media are indispensable. An implement of the recommendations presented in the action plan could help many farmers in directly dealing with roasters and thus lead to a higher income, a better livelihood and a more balanced and trustful relationship between producer and buyer.

List of references
- Photos: own photographies
- map of Colombia: Sociedad Geográfica de Colombia, 2005
- Badiyan-Eyford, J. (2013). *Direct Trade Coffee: Prospects and Pitfalls*
- Leeson, M. (2013). *Burundi in the World of Direct Trade and Specialty Coffee*