



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative



Value Chain Analysis: COFFEE

Feed the Future Ethiopia Value Chain Activity

Partnering with the Agricultural Growth Program

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EXECUTIVE SUMMARY

Ethiopia, the birthplace of coffee, has a strong international reputation for coffee quality and unlike other major coffee exporters, a robust tradition of coffee consumption and large domestic market. In 2016, Ethiopia was the fifth largest coffee producer in the world and the tenth ranking exporter, with the European Union, Saudi Arabia, and the United States as the top three destinations for Ethiopian coffee.

Coffee regularly rank first or second among Ethiopia's exports by value and in 2016 accounted for nearly a quarter of foreign exchange earnings. In a country with consistent large trade deficits, this makes coffee an economic and political priority. Additionally, with 95 percent of production generated by smallholders, coffee's performance also has broad implications for poverty alleviation. The government has a strong role in the sector, primarily through the Ethiopian Commodity Exchange (ECX), a grading, warehousing, and auctioning body through which most coffee is legally required to be traded. In 2017, ECX was liberalized in response to the industry's concerns about limited traceability and a lengthy value chain. Consequently, the analysis in this report is of a value chain in transition.

Last year, more than 95 percent of Ethiopian coffee was produced by smallholders. Production has been stagnating for the past eight years with yields flat because improved input use is very low, and less than 5 percent of producers use fertilizer or pesticides.

The value chain, if ECX's changes have their intended impact, is structured as follows: smallholders sell to wet or dry processors, who are also traders, either directly or through aggregators. Smallholders also manually husk a small amount of dried coffee for home consumption or local market sale. Cooperatives, which mostly provide coffee through Voluntary Sustainability Standards (VSS) such as organic or Fair Trade, process their members' coffee and export directly. Likewise, large commercial farms with processing facilities may export directly. The bulk of coffee, however, is purchased from smallholders by wet (19 percent) or dry (81 percent) processors who then sell to roasters and exporters, mostly in Addis Ababa, through the ECX. These sales may or may not be through a broker. Some of these processors may sell informally to retail coffee markets, which sell for home or small coffee shop consumption.

This value chain analysis concludes with key recommendations for potential project activity interventions:

- **Develop, pilot, and scale up coffee outgrower schemes.** Addresses low input use, high marketing costs, and limited access to finance, and are consistent with the priorities of the government and exporters.
- **Establish nursery and tree rehabilitation service businesses.** Addresses unmet demand for improved seedlings as well as limited pruning and grafting.
- **Target technical support to smallholder coffee producers to promote specialty coffee.** Develop smallholder technical support packages to improve productivity and quality to meet specific buyer requirements.
- **Address cooperative and FCU profit sharing model for VSS coffee.** The current model limits the share of premiums that go to producers, limiting their incentive for participation.
- **Host coffee practice and innovation competitions.** Coffee research capacity is low and there is the need for productivity and quality-enhancing innovations.

1. INTRODUCTION & METHODOLOGY

This value chain update aims to provide a concise description of the coffee value chain in Ethiopia, including key constraints and opportunities. The update builds off of rather than duplicates recent work done on the coffee value chain in Ethiopia. Most notably it draws from the International Food Policy Research Institute (IFPRI) 2015 study titled *Coffee Value Chains on the Move: Evidence from Smallholder Coffee Farmers in Ethiopia*, and the 2015 World Bank managed AgriFin report titled *Overview of the Global Coffee Sector Supply Chain*. This coffee value chain update is based on a literature review as well as 20 structured key informant interviews and two focus group discussions conducted with coffee stakeholders over three weeks of fieldwork in Ethiopia from August to September 2017.¹ Unless otherwise noted, the data presented in the following tables was drawn from Fintrac interviews.

Note that this analysis is taking place the same year significant value chain changes are in progress because of recent coffee-specific policy changes made by the ECX (Section 3.2). These changes will take time to manifest themselves completely throughout the value chain and therefore this analysis is of a value chain in transition.

This coffee value chain update proceeds as follows. First, we analyze market and trade dynamics to provide an overview of growth opportunities for the commodity. Second, we describe the different levels of the value chain, including key players, and analyze how well they are functioning. We also estimate their gross margins and income distributions. Third, we assess the legal, regulatory, and institutional dynamics, which can serve to incentivize or disincentive investment in the value chain. Finally, we make practical recommendations to improve the value chain.

2. MARKET ANALYSIS OF THE COMMODITY

2.1 OVERVIEW OF THE MARKET

Ethiopia, the birthplace of coffee, is well-regarded around the world for the unique and diverse taste profiles of its Arabica coffee beans. However, despite Ethiopia's reputation for quality coffee, the sector has been viewed as underperforming with inefficient marketing and yields lower than global competitors.² Nevertheless, coffee has been the country's first or second ranked export earning commodity for the last five years, bringing in an average of 24 percent of Ethiopia's desperately needed foreign exchange earnings.³ Furthermore, coffee is an important part of Ethiopian culture and domestic coffee consumption is high.

The Ethiopian coffee market is influenced by both the global and domestic markets. Despite the government's efforts to encourage exports, including regulations that coffee of export quality must be exported, 54 percent of Ethiopia's coffee production was consumed domestically last year.⁴ As Figure 1 shows, domestic retail, export prices, and global prices for the same types of coffee are only loosely related and exporters state that ECX has a larger role in influencing prices than the global market. Ethiopian export prices show seasonal volatility with prices lower at harvest time around November. Domestic retail prices on the other hand do not show such seasonal volatility because sale of dry coffee is banned during harvest time to promote more profitable wet coffee. From July 2015 to March 2017, export prices were 25 percent higher than global prices for comparable coffee while domestic prices were 19 percent higher than global prices.

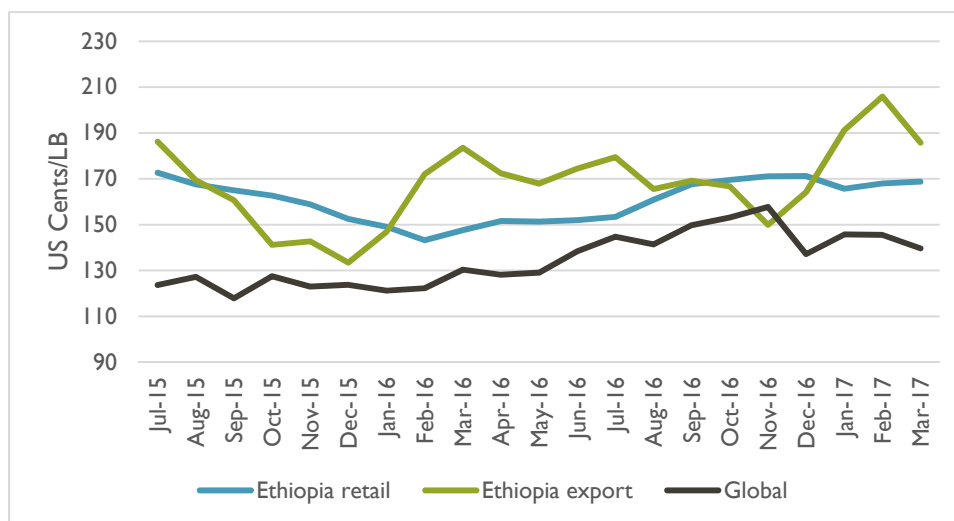
¹ The three weeks was used for interviews across multiple value chains.

² International Food Policy Research Institute (IFPRI), 2015, *Coffee value chains on the move: Evidence from smallholder farmers in Ethiopia*.

³ Comtrade, Data Downloaded September 2017.

⁴ International Coffee Organization (ICO), Data Downloaded September 2017.

Figure 1: Ethiopian Retail, Export, and Global Prices – Monthly Averages, July 2015 to March 2017



Sources: Central Statistical Agency, Data Downloaded August 2017, International Coffee Organization (ICO), Data Downloaded September 2017, and Ministry of Trade (MoT), Received October 2017.

Globally, domestic consumption in exporting countries has a bigger long-term effect on the global market than diseases or weather, which affect supply by season. In the past 20 years, domestic consumption of coffee in coffee producing countries has doubled, leading to competition for exporters. Global prices for Brazilian Naturals, the Arabica category of coffee Ethiopia produces, increased by 23 percent between 2007 and 2016, but within 2016 itself, the price varied by 40 percent. These intra-year price fluctuations are generally caused by weather, pests, and diseases affecting supply or supply projections.⁵

While Europe and North America have been the traditional destinations for most of the world's coffee, the Asian market is growing rapidly. In particular, the Philippines and China have each doubled their imports in the past five years.⁶ This increased demand has largely been met in the last 20 years by the emergence of Vietnam as the world's second largest coffee producer and by the doubling of production from the world's largest producer, Brazil.⁷ However, the uncertain effects of climate change in coffee producing areas, including Ethiopia, threaten future supply challenges.

2.2 PRODUCTION

In Ethiopia, coffee is cultivated by about 5 million farmers on an average of 0.12 hectares of land.⁸ In 2016/2017, Ethiopia was the world's fifth largest producer of coffee, producing about 400,000 MT. However, due to flat yields, production has remained stagnant over the last eight years after having doubled in the previous decade.⁹ Yields are still better than other African coffee producing countries such as Kenya, Rwanda, and Tanzania, but yields are significantly lower than many Latin American producers and have remained flat for the past 20 years.¹⁰ FTFE VCA baseline data from 2017 estimates Ethiopian coffee farmers produce 383 kilograms per hectare.

⁵ Agrifin, 2015, Overview of the Global Coffee Sector Supply Chain & International Coffee Organization (ICO), Data Downloaded September 2017.

⁶ United States Department of Agriculture (USDA), 2017, Ethiopia Coffee Annual.

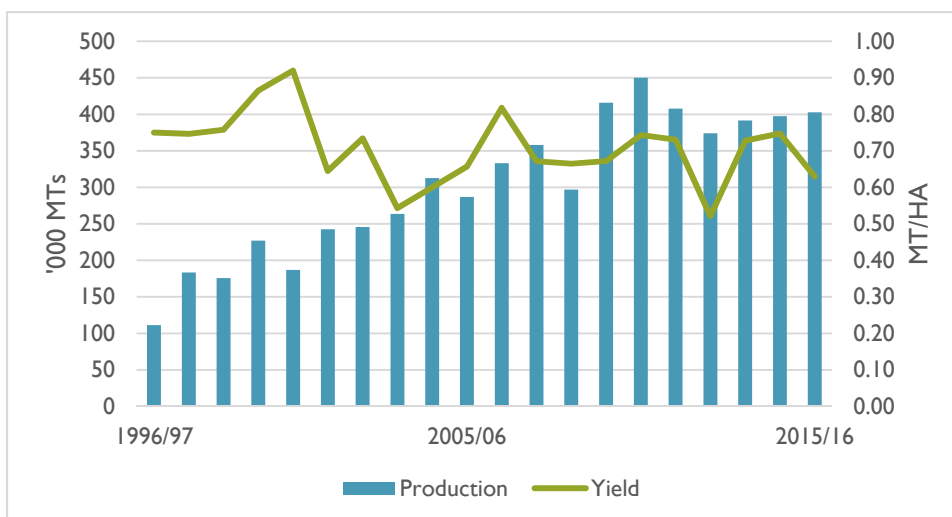
⁷ International Coffee Organization (ICO), Data Downloaded September 2017.

⁸ Central Statistical Agency, Data Downloaded August 2017.

⁹ International Coffee Organization (ICO), Data Downloaded August 2017

¹⁰ International Food Policy Research Institute (IFPRI), 2015, Coffee value chains on the move: Evidence from smallholders in Ethiopia.

Figure 2: Coffee Production and Yields in Ethiopia, 1996/97 to 2015/16

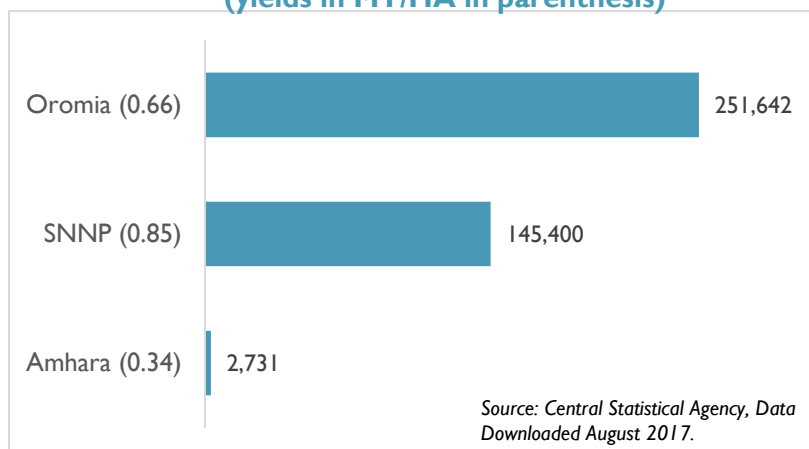


Source: International Coffee Organization (ICO), Data Downloaded September 2017 and FAOSTAT, Data Downloaded September 2017.

Yields could be doubled through improved input application, especially fertilizer, which would bring them in line with Brazil and closer to the ambitious target laid out in the second Agricultural Growth and Plan (AGP II) of increasing production to 1 million tons by 2020.¹¹ Ethiopia has very low rates of modern input use in coffee and much of its coffee is de-facto organic. This is important because coffee planting areas have recently come into competition with *chat* production, which is more profitable and provides a more stable income.¹² Coffee producers also report competition with food crops, including false banana.

Between 2012 and 2016, 63 percent of Ethiopia’s coffee was produced in Oromia and 36 percent in SNNPR. The two regions differ in the structure of their coffee production. In Oromia, average coffee holdings are about three times larger at about 0.22 hectares compared to 0.08 hectares in SNNPR. Consequently, there are nearly a million more coffee farmers in SNNPR, yet the total coffee area is only a little over half that of Oromia. SNNPR has higher yields and is home to the highest grade of coffee Ethiopia produces, Yirgacheffe. However producer prices are about a third higher in Oromia than in SNNPR, possibly because of differences in marketing costs associated with differences in farm sizes.¹³

Figure 3: Average Annual Coffee Production in MT, by Region, 2012-2016 (yields in MT/HA in parenthesis)



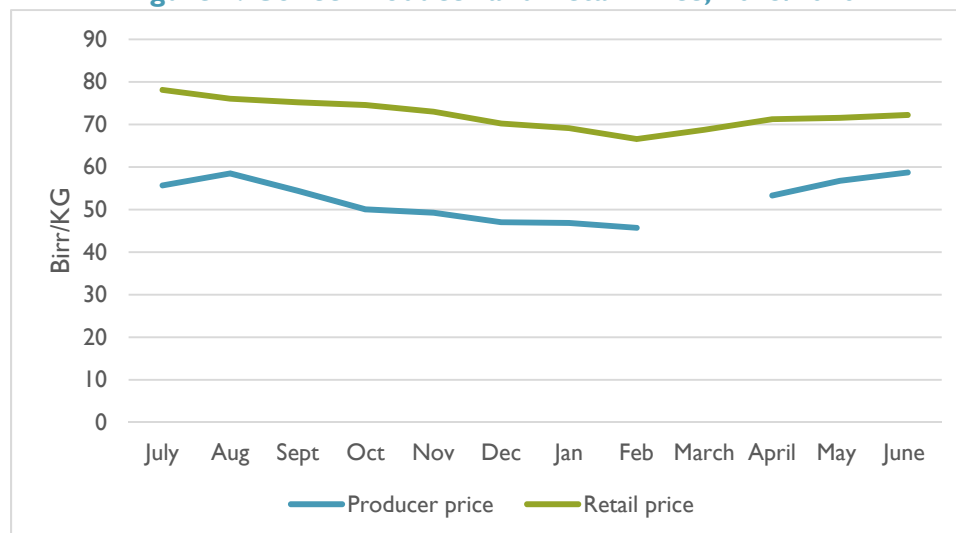
¹¹ United States Department of Agriculture (USDA), 2017, Ethiopia Coffee Annual.

¹² Amamo, A., 2014, Coffee Production and Marketing in Ethiopia.

¹³ Central Statistical Agency, Data Downloaded August 2017.

The main coffee harvest season is between October and January. This is reflected in producer prices for 2015/2016, which were lowest during this time. Retail prices reflected this seasonality as well, but the trend is less pronounced. Generally, dry processed coffee is slower to reach the market than wet processed as producers store a portion for later sales.

Figure 4: Coffee Producer and Retail Price, 2015/2016



Source: Central Statistical Agency, Data Downloaded August 2017.

Arabica coffee beans are primarily produced in Latin America, as well as Ethiopia, and are used in high-end brewed coffee and espresso. Robusta beans, mostly from Asia, are used as a filler and in soluble instant coffee mixes such as Nescafe. In 2016, 63 percent of the world's coffee production was Arabica while 37 percent was Robusta. As of July, 2017, Arabica prices were between 23 and 45 percent higher than Robusta prices, depending on type.¹⁴

2.3 TRADE

Global coffee trade is dominated by large multinational trade houses such as Neumann, Ecom, and Olam, which have offices in exporting and importing countries. Nine such trade houses account for 60-70 percent of the world's coffee trade. The rapidly expanding specialty roaster segment has deconsolidated coffee trade somewhat, as they may buy directly or through smaller importers. Many specialty roasters also buy from these large trade houses.¹⁵

Coffee is usually traded unroasted (roasted coffee has limited shelf life) and then sold to roasters with quality guaranteed by the supplier through a contract. Delivery of beans as per quality and timing requirements is vitally important for roasters. If the coffee does not meet the pre-negotiated quality specification, the supplier is obligated to find another batch that does. Coffee sold on advance credit can complicate this approval on delivery model.¹⁶

Pricing

Global coffee prices are linked to the futures markets. The New York market prefers Arabica, whereas London goes for Robusta. Coffee prices are based on the differential between this price for a standard average grade and the actual grade of the coffee being traded. Futures are intended to hedge against price

¹⁴ International Coffee Organization (ICO), Data Download August 2017.

¹⁵ Agrifin, 2015, Overview of the Global Coffee Sector Supply Chain.

¹⁶ Ibid.

risks for Arabica or Robusta coffee. However, supply changes of one particular type of coffee can still affect prices independent of the coffee futures price. Another pricing model fixes the formula by which the price will relate to the future price upon delivery.¹⁷

The Ethiopian government mandates that export quality coffee to not be sold locally, resulting in lower quality coffee on the local market. However, the domestic prices are often higher than the export because of high demand, high costs associated with multiple intermediaries and logistics, and the value of foreign currency, and because domestic roasters producing quality coffee have to discard a significant portion of beans to get the quality they want. Exporters may potentially take a loss to earn valuable foreign currency, depreciating export prices.

Specialty Coffee

Specialty coffee includes single origin, flavored, Voluntary Sustainability Standards (VSS), and other types that differ from mainstream roasted and ground coffee. VSS coffee makes up 18 percent of the global market and includes certifications such as Organic, Fair Trade, Utz, and Rainforest Alliance. Organic coffee is of particular interest for Ethiopia, where an estimated 95 percent of coffee is de-facto organic. However, global demand for organic coffee is viewed as limited because price premiums decrease when global supply increases.¹⁸ Additionally, certification and implementation costs for organic coffee are high. Overall Ethiopia lags well behind other coffee producing countries with only about 5 percent of its coffee production VSS certified. This segment has been dominated by cooperatives in Ethiopia, and VSS coffee makes up between 72 and 83 percent of cooperatives exports.¹⁹

Ethiopian Exports

In 2016, Ethiopia ranked tenth in the world in coffee exports with about 3 percent of the export market, exporting nearly 160,000 tons in 2016. The European Union is the largest importer of Ethiopian coffee, followed by Saudi Arabia, the US, and Japan. The US and EU markets import higher shares of more expensive washed coffee whereas Japan and Saudi Arabia import lower-priced dried coffee. Coffee exported to neighboring Sudan is usually ungraded and sold at much lower price than to the other top five import markets.²⁰ Only 0.03 percent of Ethiopia's coffee exports are roasted compared to 0.3 percent for the top five coffee exporting countries.²¹

Table 1: Top 5 Destinations for Ethiopian Coffee Exports, 2012-2016
(price USD/KG in parenthesis)

2012		2013		2014		2015		2016	
Top 5	MT	Top 5	MT	Top 5	MT	Top 5	MT	Top 5	MT
EU	116,061 (4.25)	EU	110,147 (3.46)	EU	119,492 (4.17)	EU	107,985 (4.35)	EU	61,198 (4.48)
Saudi Arabia	28,575 (4.51)	Saudi Arabia	33,125 (3.67)	Saudi Arabia	35,654 (4.32)	Saudi Arabia	44,358 (3.56)	Saudi Arabia	31,205 (3.95)
Japan	15,729 (3.93)	Japan	29,429 (3.15)	Japan	30,597 (4.10)	USA	24,640 (6.12)	USA	15,620 (6.72)
USA	11,198 (5.94)	USA	15,801 (4.66)	USA	19,856 (5.30)	Japan	20,293 (3.84)	Japan	14,148 (4.05)
Sudan	8,477 (3.15)	Sudan	9,842 (2.44)	Sudan	8,241 (3.02)	Sudan	11,081 (2.87)	S. Korea	9,712 (5.20)

Source: Comtrade, Data Downloaded August 2017.

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Minten, B. et al., 2018, Tracking the Quality Premium of Certified Coffee: Evidence from Ethiopia.

²⁰ International Food Policy Research Institute (IFPRI), 2014, Structure and Performance of Ethiopia's Coffee Export Sector.

²¹ Comtrade, Data Download August 2017.

Global Imports & Exports

From 2012 and 2016, Ethiopia was between the 9th and 5th biggest exporter in the world, as shown in the figures to the right. Over that period, Brazil and Vietnam held the top two export positions and accounted for half of the world's coffee exports over that period. Globally, the EU dominates coffee imports with about half of all imports, and the US in second with less than 20 percent.

2.4 CONSUMPTION

Globally, the bulk (75 percent) of coffee consumed can be categorized as mainstream roasted and ground. In addition to specialty coffee, there is also soluble coffee. Unlike roasted coffee, soluble coffee is often manufactured in and exported from coffee producing countries but does not appear to occur in Ethiopia.²² Ethiopia is the largest coffee consuming country in Africa and has a long tradition of coffee consumption. Currently the country consumes a little over half of its production. Ethiopians consume coffee in their homes, at thousands of roadside coffee stands, and increasingly in urban areas at modern cafes. Coffee consumed at home or at roadside coffee stands is roasted by hand and served with sugar in small cups, similar to Turkish coffee. The government mandates that export quality coffee not be sold locally, resulting in lower quality coffee on the local market. There is some smuggling of export grade coffee to the local market because of the premium domestic prices and increasing demand, but the exact quantity is unknown. Nearly all coffee consumed in Ethiopia is dry processed.

Figure 5: Top Five Coffee Exporters, 2012-2016

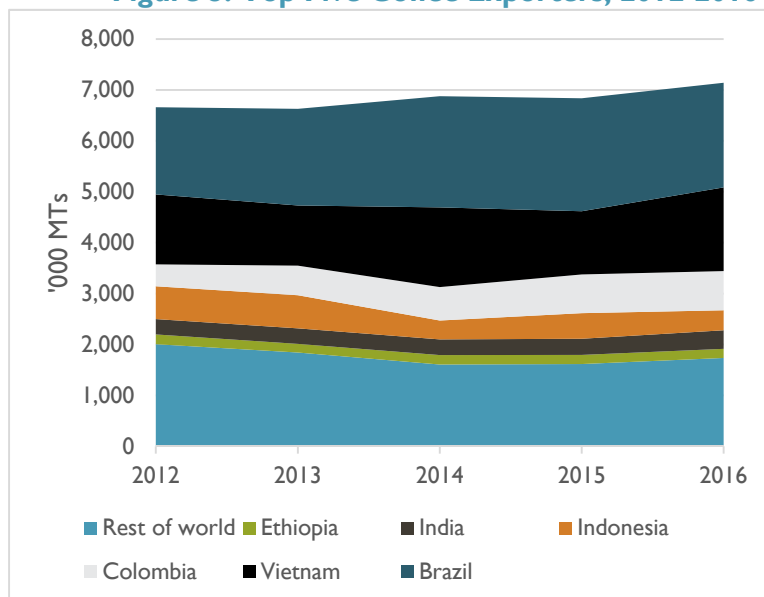
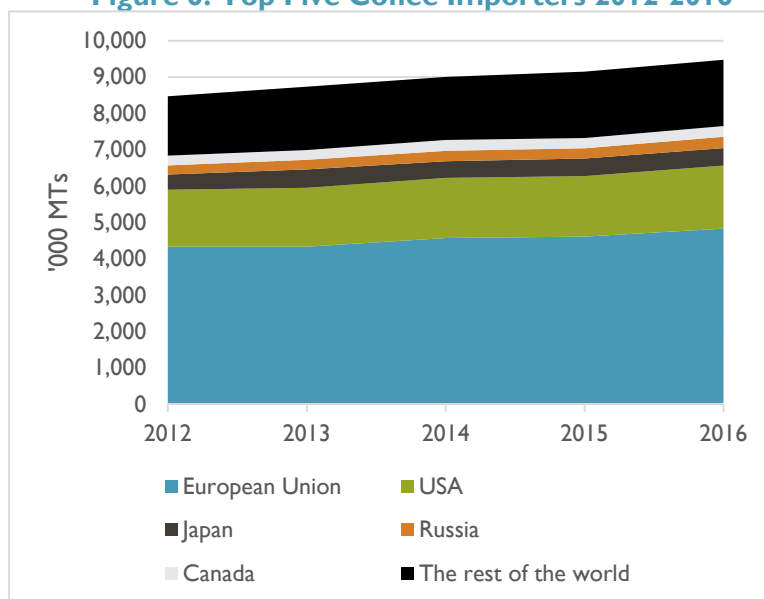


Figure 6: Top Five Coffee Importers 2012-2016



Source: International Coffee Organization (ICO), Data Downloaded August 2017.

²² Agrifin, 2015, Overview of the Global Coffee Sector Supply Chain.

2.5 GRADES & STANDARDS

There is no universal global coffee grading system so each country has its own standards. There are, however, some common criteria described below.²³

- Bean size – this is measured based on the size of holes beans can pass through in a grading screen. Measured in increments of 1/64 inches.
- Wet or dry processing – wet processing is preferred in American and EU markets because of taste consistency and usually earns a higher price. However, some buyers prefer dry processing for a more distinctive taste.
- Number of defects per sample, and number of permissible defects per sample.
- Bean shape and color.
- Region and elevation.
- Botanical variety.
- Cup quality.

The ECX provides a formal grade to all Ethiopian coffee. These parameters fall under two categories: raw value and cup quality value. Parameters and points assigned to each are shown below for washed (wet processed) coffee.²⁴

Raw Value (40 percent)

- Primary defects (count) - 10 pts
- Secondary defects (percent weight) – 10 pts
- Shape and make (small to very good) – 5 pts
- Color – 5 pts
- Odor – 10 pts

Cup Quality (60 percent)

- Cup cleanness – 15 pts
- Acidity – 15 pts
- Body – 15 pts
- Flavor – 15 pts

Based on this scoring, washed coffee is assigned a grade from 1-5, and dry coffee is graded from 1 to 9. Coffees receiving the best grades (1-3) undergo a specialty assessment based on various cup characteristics including flavor, body, and aftertaste. In addition to this 1-5 grade, a regional designation is attached to coffee descriptions. Grades also determine whether or not the coffee is export quality in which case it must legally be exported rather than consumed domestically. Below are some examples of grades and their descriptions.

Table 2: Examples of ECX Grades and Descriptions

Grade	Description
WYCA2	Washed coffee from Yirgachefe grade 2 (A denotes that it has Yirgachefe signature flavor)
WSB5	Washed coffee from Sidama, grade 5 (B denotes specific woredas or zones)
UHRC3	Unwashed coffee from Herar, grade 3 (C denotes specific woredas or zones)

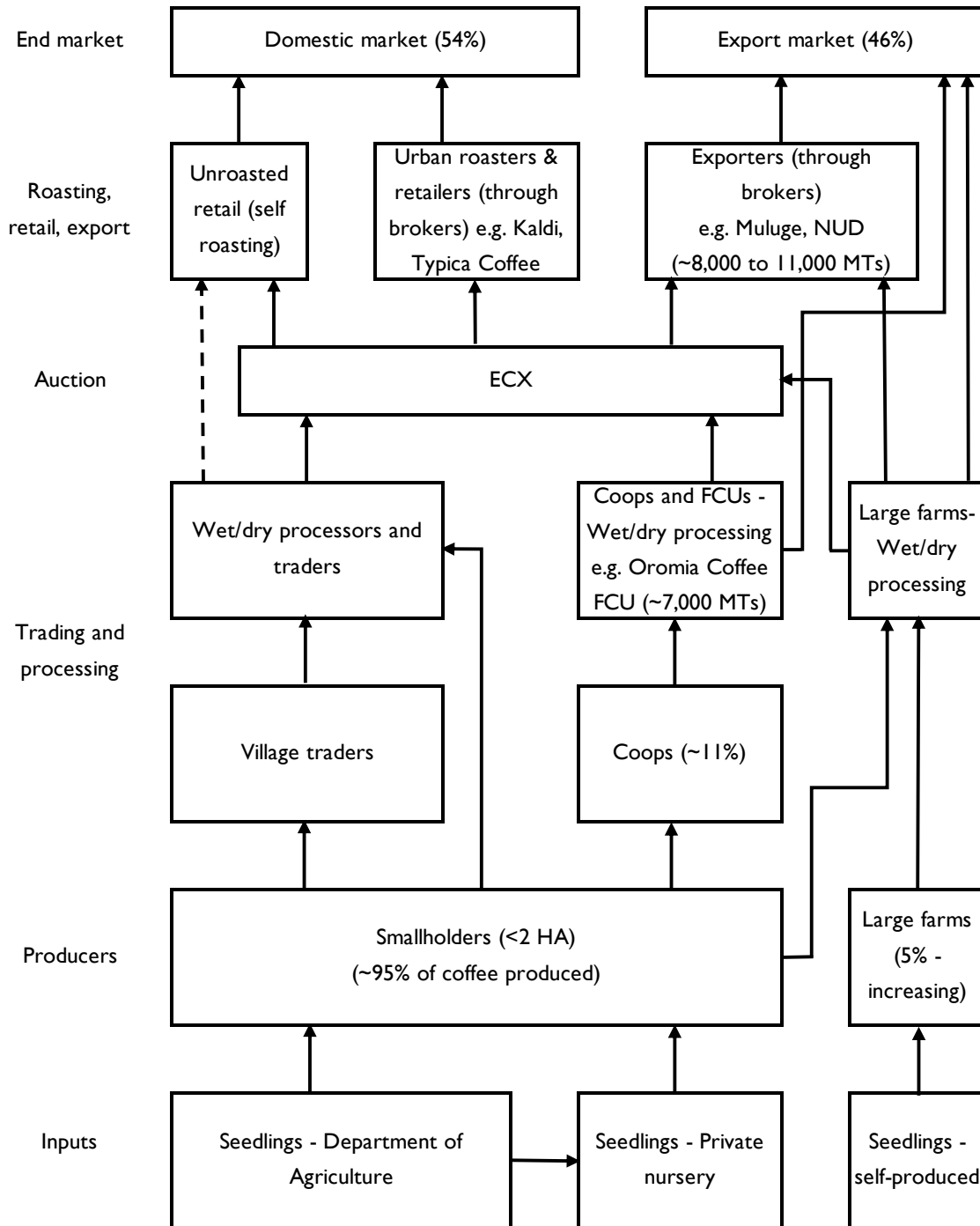
Source: Ethiopia Commodity Exchange (ECX), 2015, Coffee Contracts.

²³ See for example: Food and Agriculture Organization (FAO), Unknown, Grading and Classification of Green Coffee.

²⁴ Ethiopia Commodity Exchange (ECX), 2015, Coffee Contracts.

3. VALUE CHAIN ACTORS & MARGINS ANALYSIS

Figure 7: Coffee Value Chain Map



3.1 PRODUCERS

Coffee cultivation in Ethiopia can be divided into four different farming systems: forest, semi forest, garden, and plantation. Forest coffee is grown wild whereas semi-forest involves minimum care. The most common type is garden coffee, which are small plantings of coffee near a producer's home that may be intercropped with other crops or trees. Plantation coffee involves larger scale cultivation with modern methods.²⁵

Table 3: Coffee Systems Share of Production and Yields

Coffee System	Share of national production (percent)	Yield (KG/HA)
Forest	10	250
Semi-forest	35	450
Garden	50	750
Plantation/commercial	5	900
Research (on-farm)	NA	1,550
Research (on-station)	NA	2,150

Source: International Food Policy Research Institute (IFPRI), 2014, *Structure and Performance of Ethiopia's Coffee Export Sector* and Kufa, T, 2017, *What Make Ethiopian Coffees Special: A View from Coffee Research*.

Seedlings

Farmers appear to be aware of the benefits of improved seedlings, especially their disease resistance. However, in 2014, only 58 percent of those looking to buy new seedlings purchased improved seedlings. Lack of availability was the main reason, as 39 percent of farmers looking to buy seedlings were unable to buy them and 48 percent found them too expensive or lacked the money. Most (75 percent) farmers report buying seedlings at the woreda level or from model farmers who themselves likely received seeds from the DoA.²⁶ There are also smaller private nurseries that multiply discounted government seeds. They report unmet demand for seedlings but are unable to access the capital to expand.

Intervention opportunity:

Create nursery business program and train operators to provide tree rehabilitation services including pruning.

Some respondents said the supply of seeds and seedlings available from the local DoA is not always sufficient and is sometimes late. One government nursery reported they had delays in producing seedlings because the budget was slow to be released and sometimes they missed planting season altogether. Additionally, the budget is said not to be enough to meet demand.

Farmers wishing to purchase seedlings through the government must register by demonstrating to extension agents they are ready to plant them by showing the holes in the ground. Since government seedlings are discounted over privately supplied seedlings (1 birr per seedling compared to 2 privately), this is worthwhile for some.

Whether because of these challenges getting seedlings or not, two cooperatives pointed out issues with aging trees. One said the coffee beans they buy are getting smaller as producers' trees get older. Another pointed out that the flavor and aroma of beans gets worse as trees get older, but not enough farmers are aware of this and do not replace their trees soon enough.

Cultivation & Harvest

Besides seedlings, input use in coffee in Ethiopia is extremely low with fertilizer, herbicide, and pesticide use at 2.5, 1.5, and 0.4 percent, respectively. The implication of this is that 95 percent of Ethiopia's coffee

²⁵ International Food Policy Research Institute (IFPRI), 2014, *Structure and Performance of Ethiopia's Coffee Export Sector*.

²⁶ Ibid.

is produced organically, even if only a small fraction is certified. Compost, made by cooperatives or producers from the pulp of cherries, is used by less than 10 percent of coffee producers.²⁷ This compost may be made at the cooperative or individual farm level.

Application of improved farm management techniques such as mulching, pruning, and tilling varies according to the 2015 IFPRI study, with 77 percent of producers reporting tilling, 45 percent mulching, and 37 percent pruning. However, these figures represent steep increases over 10 years prior.²⁸ Producers report weeding about twice a season.

The 2015 IFPRI study reported that diseases (coffee berry disease and coffee wilt) were considered a big problem by 36 percent of farmers and that diseases are expected to increase with climate change.²⁹ However, farmers interviewed for this study did not report any serious coffee pest or disease issues.

Coffee harvest season runs from October to December with the peak season in November. Harvesting may take the entire harvest season for a producer, as coffee does not ripen all at one time. Most farmers interviewed report they practice selective harvesting, only picking individual coffee cherries when they are ripe. However some buyers complain they have a problem of red and green cherries being mixed. Selectively harvesting and processing small quantities of coffee is labor intensive for smallholders, especially for wet processed coffee which must be taken for processing within 24 hours of harvest. There may be an understandable tendency among smallholders to harvest a large enough quantity to make it worth their time and to meet buyer requirements, even if some is not quite ripe. Coffee is often harvested by the whole family (men, women, and children) as well as hired labor. Men are primarily responsible for selling the coffee.

Labor shortages during harvest are an issue, especially for larger farms. Migrant laborers from southern SNNPR earn between 50 and 70 birr per day during harvest season. In Oromia, in order to favor local laborers, laborers from other regions are banned, exacerbating labor shortages during harvest.

Postharvest & Marketing

After harvest, coffee producers quickly transport the portion of coffee cherry they do not intend to process at home to private or cooperative processing stations. Horse or donkey-pulled carts are commonly used by smallholders for transporting coffee. The buyer will check for quality, notably unripe or overripe cherries, and ask the producer to remove them. Coffee cherries are processed in one of two ways: washed or sun-dried. Washed coffee is viewed as having a more uniform and reliable flavor than sun-dried coffee and commands a higher price. In IFPRI's 2015 study, nearly 70 percent of producers reported making more money with washed cherries than dry but 76 percent prefer selling dry.³⁰ Dry processing allows producers to store the coffee in their home and spread out the income over the season. Additionally, producers dry beans that have been rejected at time of sale, which is most commonly because they are unripe.

In focus groups, the producers shared that they did not risk loss during storage but some suspect flavor and odor might change if stored too long or exposed to moisture or heat. About a third of exported cherries are washed, but on the domestic market, a much lower percentage are washed and therefore the percentage sold washed is lower at 19 percent.³¹

Cooperatives and farmer cooperative unions (FCUs) have marketing arrangements to share profits from stored beans with producers. For producers from one organic cooperative these shares were 2.55 birr

²⁷ International Food Policy Research Institute (IFPRI), 2015, Coffee value chains on the move: Evidence from smallholder farmers in Ethiopia.

²⁸ Ibid.

²⁹ Ibid.

³⁰ Ibid.

³¹ Ibid.

Washed & Dried Processing

The purpose of either washed or dry processing method is to remove the skin, parchment, and pulp to reveal the green coffee bean. **Washing** requires proper equipment and therefore is not done at the household level by smallholder producers but instead by cooperatives and private washing stations. The skin of the cherry is first removed leaving the mucilage and bean, which is then soaked in water for about 24 hours to ferment. The beans are then fed through channels to remove the remaining mucilage, rinsed, and then dried in the sun for a day or two. Table 4 shows that coffee cherries maintain only 20 percent of their original weight going through the washing process and only 16 percent after hulling.

Dry processing is usually done by producers on wooden platforms, mats, or sometimes on the bare ground and occurs over a period of several days to weeks. Inadequate drying of both washed and dried coffee is sometimes a problem. Previously most dried coffee in Ethiopia was dried on the ground, which can contaminate taste. However, this practice has been reduced dramatically in recent years. Once dried, the beans must be hulled at a hulling station to remove the outer cherry. Smallholders also hull limited quantities manually for home consumption or sale at local markets. Table 4 shows the weight loss coffee undergoes during processing. The drying stage (from fresh to parchment) reduces weight to 34 percent of harvested weight. Hulling further reduces weight to 16 percent.

Table 4: Coffee Processing Weight Loss (percent weight remaining)

Processing	Fresh cherry to parchment	Parchment to clean	Fresh to clean bean
Wet	19.7	80.5	15.9
Dry	34	47.8	16.2

Source: Sualeh, A. & Jafer Dawid, 2014, *Relationship of Fruit and Bean Sizes and Processing Methods on the Conversion Ratios of Arabic Coffee (Coffea arabica) Cultivars*.

per kilogram from cooperative sales and 2.8 birr per kilogram from FCUs. Whereas some farmers in one cooperative appreciated this system, farmers at other cooperatives complained that these payments are not transparent, that sales may take as long as a year, and that payments after sale are not prompt.

Table 5 shows that coffee the smallholder farmers interviewed for this study sold only wet or dry with no other distinction for quality. On the other hand, a large commercial farmer processed his own coffee and sold directly to international buyers at different grade levels (and not just as wet or dry). Interviews with farmers, cooperatives, and traders revealed that while traders and cooperatives sell different grades, they usually do not pay producers different prices for different grades. This finding is confirmed by IFPRI's study, which found that less than 10 percent of farmers received a premium for quality. Thirty two farmers interviewed for this study, wished for a price incentive for higher quality, admitting that they have little motivation to improve the quality of their coffee.

Table 5: Coffee Producer Prices for 2016/2016 in Birr/KG³²

Farmer type & location	Grade	Sold (low)	Sold (high)
Smallholders, SNNPR	Wet ³³ (organic)	8	11
	Dry	17.5	17.5
Smallholders, Oromia	Wet ³⁴	6	10
	Dry	12	24
Commercial farm, Oromia	First grade - Export	117	117
	Second grade – Export	117	117

³² If high and low prices are the same, only one price was given by the respondent.

³³ Prices include 5.35 total profit share.

³⁴ Prices exclude profit share (unknown amount).

Table 5: Coffee Producer Prices for 2016/2016 in Birr/KG³²

Farmer type & location	Grade	Sold (low)	Sold (high)
	ECX grade 2	70	70
	ECX grade 3	65	65

As mentioned, some smallholder farmers report that they dry and sell their rejected wet beans. Note that dried prices are for beans whose weight has already been reduced to about 34 percent of the red cherry weight at sales. Therefore 17.5 birr per kilogram for dry cherry is equivalent to 5.95 birr per kilogram for red cherry (using the factors from Table 4).

Coffee producers in Ethiopia get a relatively small share of export prices compared to producers in other countries. Ethiopian producers only get about 59 percent of FOB price of coffee compared to 88 percent in Brazil, 95 percent in Vietnam, 74 percent in Colombia, and 76 percent for Honduras. However all of these countries have significantly higher farmer sizes than Ethiopia, which likely accounts for at least part of this higher share for their producers due to more efficient marketing.³⁵

Cooperatives & FCUs

As of 2012, 36 percent of smallholders in Ethiopia were members of an agricultural cooperative with 22 percent of cooperative members being women.³⁶ In general, agricultural cooperatives provide three main services: access to inputs (92 percent of cooperatives); credit (71 percent); and marketing (47 percent). Many provide these services to members and non-members alike. Access to inputs is the main motivation for joining a cooperative for 79 percent of members because they receive priority access to inputs.³⁷ Cooperatives earn revenue through membership fees and margins or commissions on services provided. Eighty percent of cooperatives were affiliated with a farmer cooperative union (FCU), or an apex body to facilitate and coordinate services amongst primary member cooperatives.³⁸ FCUs distribute inputs and credits to primary cooperatives and aggregate their production for marketing.

In coffee, a key service provided by cooperatives and FCUs such as Oromia Coffee FCU and Limu Inara FCU is wet processing, storing, and marketing their members' coffee. While cooperatives transact about 11 percent of the coffee produced in Ethiopia, they account for 33 percent of the washed coffee.³⁹ One FCU has 68 wet pulping stations across its 400-member cooperatives. It also has hulling, cleaning, and bagging equipment for both the wet and dry processed coffee it buys from its members. Some cooperatives also multiply seedlings with seeds received from their local DA and sell to their members. Organic cooperatives also provide technical assistance to members on improved cultivation methods.

Cooperatives are able to export directly, allowing for traceability and since their producers are already organized, cooperatives are the unit through which VSS such as Fair Trade and Organic are usually implemented. In fact, the majority of the coffee sold through cooperatives is VSS certified (Section 2.3). Recent research has shown that only a third of the export premium, and even less than of the consumer premium, actually reaches producers in Ethiopia. At least part of this is explained by the 70:30 rule. Unions keep 30 percent of profit from a sale and pass 70 percent on to the primary cooperative, which in turn keeps 30 percent and passes 70 percent on to the producer. This implies that, by this rule, only 49 percent of the premium reaches farmers. The authors of the publication speculate that the remainder may be used for community projects by the primary cooperative which are part of some VSS. Part also may be used to

³⁵ Agrifin, 2015, Overview of the Global Coffee Sector Supply Chain.

³⁶ International Food Policy Research Institute (IFPRI), 2013, Agricultural Cooperatives in Ethiopia: results of the 2012 ATA Baseline Survey.

³⁷ Ibid.

³⁸ Ibid.

³⁹ International Food Policy Research Institute (IFPRI), 2015, Coffee value chains on the move: Evidence from smallholder farmers in Ethiopia.

pay off union or cooperative debt. This 33 percent premium is at least partially eroded by the higher costs of producing coffee meeting these standards as well as the cost of acquiring certification.⁴⁰

Cooperatives and FCUs report that they do not understand ECX's grade criteria and how they can achieve higher grades. FCUs exporting directly report that ECX's grades do not necessarily align with those of their international buyers because sometimes a buyer will pay more for a lower ECX grade and less for a higher ECX grade.

Table 6: Coffee Grades and Prices for Cooperatives and FCUs in Birr/KG ⁴¹

Type & Location	Grade	Buy (Low)	Buy (High)	Sell (Low)	Sell (High)
Cooperative in SNNPR	ECX grade 2	7	10	70.59	85.29
	ECX grade 3	7	10	67.65	70.59
	ECX grade 4	7	10	Not yet sold	Not yet sold
FCU in Oromia	Wet	9	12	119	148
	Dry	21	23	81	92

3.2 ETHIOPIAN COMMODITY EXCHANGE (ECX)

The ECX, under the Ministry of Trade, was established in 2008 to improve agricultural market transparency and efficiency, especially in coffee. All coffee is mandated to be graded by and traded through ECX, except coffee exported directly by cooperatives and producers themselves (plantations). Coffee exported directly by cooperatives and plantations themselves is only a small percentage of coffee trade at about 12 percent and even this must be inspected by the Coffee Liquoring Unit (CLU) of the Coffee and Tea Development and Marketing Authority (CTDMA) before export.⁴² ECX does not itself buy and sell coffee but instead is a platform through which paying members can transact using a bid system and standardized contracts for quality, payment, delivery, and other trade parameters. ECX guarantees payment and they charge a commission of 0.008 percent per transaction.

As part of the ECX's establishment, Primary Coffee Transaction Centers (PCTCs) were also established in communities near coffee producers. Coffee producers not selling through their cooperatives were to sell through brokers who were registered at these PCTCs.

In 2017, ECX underwent significant reforms aimed at improving traceability and shortening the coffee value chain. Highlights are described below:

- Previously coffee sellers had to deposit their beans in ECX's nine regional warehouses where they were stored in lots by grade. Buyers did not know which farm their coffee was coming from beyond the regional designation and were unable to buy based on any other criteria than ECX's grade. Under the new policy, buyers and sellers will be able to buy directly without offloading at ECX's warehouses. Warehoused coffee will now add the name of the supplier in addition to the region and grade. If a trader supplies, the names of individual farmers will not be recorded. Together these steps are intended to improve traceability, which was a major complaint of buyers.
- Producers no longer have to sell through the PCTCs that were established in coffee producing communities and they can sell directly to traders who are also processors. Producers themselves can also now deposit coffee directly in ECX, without going through traders or brokers as was previously required. Likewise, processors can also sell directly through the ECX. The minimum

Intervention opportunity:

Target technical support based on new traceable grades.

⁴⁰ Minton, B. et al., 2018, Tracking the Quality Premium of Certified Coffee: Evidence from Ethiopia.

⁴¹ If high and low prices are the same, only one price was given by the respondent.

⁴² Ibid.

quantity for a producer is 20 bags (60 kilograms each) of washed or 20 bags (85 kilograms each) of dry beans. For traders and cooperatives, the minimum is 60 bags washed or dry. This is intended to address complaints of a long supply chain.

- The results of grading for each criterion will be made clear on the receipt, in an attempt to address a common complaint by sellers not understanding the grades chosen for their coffee.

While there is some optimism in the coffee industry about ECX's new reforms, it remains to be seen how well implementation will address the industry's concerns. In most cases traceability may not reach the farm level, given small farm sizes requiring aggregation for processing and marketing. Nevertheless, traders may now be incentivized to build stronger relationships with producers and to procure product that meets their buyers' specific preferences. Another common complaint not addressed explicitly is that there are delays with trucks sometimes having to wait outside ECX warehouses for up to two weeks before their supply is inspected and paperwork completed. One ECX warehouse attributed these delays to storage shortages. In this case, delays should be ameliorated to an extent through the ability to sell without offloading into ECX's warehouses.

ECX views its grades as adding information to facilitate trade. Now with buyers being able to inspect individual batches, the value added of the grading becomes less clear. Key informants shared that the grade ECX assigned to their coffee was not always consistent with buyer prices and at times, buyers paid more for lower grades. This obviously undermines the grade and creates confusion among suppliers. Throughout the value chain, respondents expressed a lack of understanding on grading and a desire for feedback from ECX on how they assign grades.

Intervention opportunity:

Campaign to educate coffee value chain on ECXs grading criteria.

Some sellers expressed concern that ECX had not changed the regulation whereby suppliers who did not sell within 20 days of warehousing are penalized. This gives purchasing brokers market power as they can wait until the end of that period to purchase and then offer the seller a below market rate that the seller must accept to avoid penalty.

3.3 TRADERS

The trading system is in transition due to ECX's 2017 reforms.

Old trading system. Previously 56 percent farmers not marketing through cooperatives sold their red cherry mostly at the PCTCs with about 34 percent selling at village traders premises or wet mills. Only 21 percent sold at the PCTCs while 44 percent sold at their regular village market, and 26 percent at village traders.⁴³ Village traders did not have storage facilities and just performed a logistical role, bringing coffee from producers and market places to processors (wet mills for red cherry, hullers for dry). After processing, licensed brokers brought the beans to one of ECX's nine regional warehouses for inspection, grading, and sale. Brokers, working on behalf of buyers in Addis, then bought the coffee and transported it to their customer.

New envisioned system. The envisioned trading system removes the requirement for producers to sell through the PCTCs. Given the above figures showing that 44 percent of producers sold their red cherry and 79 percent sold their dry cherry outside these PCTCs, it is unclear how big of a change removing this requirement will have on the value chain. The idea is to shorten the value chain by having smallholder producers to sell directly to processors in their vicinity. If no processors are nearby, producers can sell to village traders working for processors who will then handle transport. Additionally, the requirement to use a broker at ECX has been removed. Processors themselves can sell to buyers

⁴³ International Food Policy Research Institute (IFPRI), 2015, Coffee value chains on the move: Evidence from smallholder farmers in Ethiopia.

directly through ECX as can the large coffee producers that process their own coffee. Buyers also are no longer obligated to buy through brokers.

As of 2010, there were 637 washing stations with a capacity of 102,000 tons per year.⁴⁴ This number is reported to have increased rapidly in recent years, with most washing stations in Yirgacheffe and Sidama.⁴⁵ In 2010, there were 488 dry coffee processing plants with 273-ton capacity.⁴⁶ Given the flat production trend since 2010 and the increase in washing stations, it is unlikely this figure has increased significantly.

As mentioned, larger coffee producers have their own wet and dry processing facilities and sell clean coffee directly to buyers. They also act as traders, buying and processing dried and red cherries from smallholders. Three such large producers reported that their own production accounted for about 10 percent of the total coffee they processed traded, which ranged from 65 to 375 tons per year. They offer credit to producers as a way of competing with cooperatives. This is repayable in cash or in kind. One large producer in Jimma reported no issues in accessing finance for working capital from Dashen Bank and the Commercial Bank of Ethiopia. They do not have formal contracts with their suppliers but expect to going forward in order to comply with the new traceability requirements.

There are also processors who do not have their own farms. One large processor in Jimma with annual volume over 10,000 tons buys primarily from village traders, financing them in the morning to deliver that afternoon. After delivery, the balance is cleared with cash.

Large commercial producers exporting directly do not own facilities for final cleaning and bagging so they rely on rentals. One large producers/exporter interviewed said there is a long wait to use the rental facility, the cost is high, and he has concern his coffee could be mixed with others. Processors then transport to ECX in trucks for sale.

Coffee prices for traders and processors the past season are shown in Table 7. One trader/processor purchases wet cherry at a single price and sorts it themselves. The other two buy at three different grade levels – red (ripe), red mixed with green (unripe), and low quality which contain other defects. As with producers and cooperatives, all traders interviewed reported a lack of understanding of ECX's grading system and wished for feedback on how their coffee was graded.

Table 7: Coffee Grades and Prices for Processors in Birr/KG, August 2017

Type and Location	Grade	Buy (Low)	Buy (High)	Sell (Low)	Sell (High)
Two processors/ Farmers in Hawassa	Red	12	14		
	Mixed w/green	11	13		
	Low quality	9	11		
	Grade 2 ECX			65	88
Processor/farmer in Jimma	Wet	9	14	67	74
	Dry	23	30	47	68
	Floater ⁴⁷			45	50
Processor in Jimma	1 st grade – wet	11	15	77	85
	2 nd grade – wet	11	15	67	81
	3 rd grade – wet	11	15	64	70
	6 th grade – dry	23.5	35	57	
	7 th grade - dry	23.5	35	55	
	Floater			45	64

⁴⁴ USAID, 2010, Ethiopia Coffee Industry Value Chain Analysis.

⁴⁵ International Food Policy Research Institute (IFPRI), 2015, Coffee value chains on the move: Evidence from smallholder farmers in Ethiopia.

⁴⁶ USAID, 2010, Ethiopia Coffee Industry Value Chain Analysis.

⁴⁷ Floaters are lower density beans identified and removed during washing.

The IFPRI study reports 85 percent of farmers cite harvesting (and the mixing of red and green cherry) as one of their key quality challenges, a finding verified through focus groups for this assessment. Speculatively, this issue may still persist because farmers have the option to dry and sell rejected mixed cherry and the inconvenience of precise selective picking may not be worth the premium for some.

3.4 ROASTERS & RETAILERS

A significant but unknown share of coffee is purchased from local markets and roasted at home. There are also thousands of small coffee stands throughout the country that serve traditional Ethiopian coffee. The small coffee stands source their coffee from these retail markets. The retailers may purchase directly from trader/processors or farmers, skipping the ECX requirement, or legally through ECX through brokers who transport the coffee to them. Some vendors sort and charge more money while others sell as is. For example, in Hawassa one retailer sold Yirgecheffe for 87 birr per kilogram. At a neighboring booth, the retailer had the same Yirgecheffe coffee but cleaner with fewer broken and small beans and charged an 8 birr premium over her neighboring competitor.

Table 8: Retail Market Coffee Prices (Birr/KG)

Type and location	Grade	Buy	Sell
Retailer, SNNPR	Yirgecheffe	83	87
	Amaro	81	85
	Cheapest	76	80
Retailer, SNNPR	Yirgecheffe	93	95

In Addis Ababa, there are a growing number of roasters and cafes who buy through contracts with brokers at ECX. The largest chain, Kaldi's, now has over 30 locations in Addis. Domestic roasters face the challenge of finding high-quality coffee because of ECX's mandate that the best coffee be exported. Additionally, because of high domestic demand and limited supply because of this export requirement, they also face high prices which sometimes exceed export prices. High prices are exacerbated by the need to sort local-grade beans in order to get international quality brewed coffee or espresso. One roaster reports that this adds 50 percent to his costs. His purchase costs are shown in Table 9.

Table 9: Roaster Coffee Prices (Birr/KG)

Type and location	Grade	Buy	Sell
Roaster, Addis Ababa	Local 1	87	20 percent net margin
	Local 2	72.5	
	Local 3	65.7	

3.5 EXPORTERS

There are more than 200 coffee exporters in Ethiopia who account for about two-thirds of its exports and one-third of total coffee purchases.⁴⁸ Ethiopia's exporters were a loud voice for the ECX policy changes to improve traceability which they view as their primary concern. Cooperatives have been able to take advantage of VSS premiums and commercial farms have taken advantage of single origin premiums, but exporters had been required to purchase coffee strictly as a commodity and therefore have missed out on these more lucrative markets. While exporters are optimistic about the ECX reforms to improve traceability, there is still concern on how effectively the changes will be implemented.

Like roasters, exporters buy from ECX often through brokers who transport the coffee to them via truck. Exporters send overseas buyers a pre-shipment sample. If the buyer likes the sample, then they negotiate a price, and request a full shipment. One large exporter said that their price was more often based on the ECX price than then the world price. However sometimes international buyers say the quality of the shipment does not match that of the sample. The most common quality complaint is too much moisture.

⁴⁸ Authors calculation based on discussion with Coffee Exporters Association.

Exporters say ECX-related delays are to blame for some quality issues. In any case, when there is discrepancy between sample and shipment, the buyer renegotiates payment with the supplier, reducing payment to account for the lower quality.

There are also integrated plantations that export directly that account for about 5 percent of total production. These are more likely to work with a single buyer and the buyer comes to the farm to sample the coffee and negotiate terms, including price.

Table 10 shows export prices for a large exporter and export prices for a commercial farmer exporting directly. The grade - organic Yirgacheffe 1 - earned the exporter a 29 percent premium over non-organic. Ungraded and grade 5 are dry processed coffee and their price is significantly lower.

Table 10: Select Export Prices April 18, 2017, Birr/KG

Type and location	Grade	Buy price	Export price (Birr/KG)
Large exporter, Addis Ababa	Jimma UG	12-15 percent margin	45.92
	Guji 1		161.47
	Harrar UG		119.08
	Kaffa forest 3		136.24
	Kochere 1		171.56
	Lekempt 5		56.51
	Limu		121.10
	Roasted and ground 2		146.33
	Roasted and ground none		146.33
	Yirgacheffe 1		162.48
	Yirgacheffe 1 – Organic		209.40
	Yirgacheffe 2		132.20
	Commercial farm, Oromia		Jimma 1
Jimma 2			117.00

3.6 SUPPORTING ORGANIZATIONS

Extension agents. In the IFRPI study, 46 percent of producers categorized extension agents as “very available” and 48 percent said the services were “very good.”⁴⁹ In focus groups for this study, some farmers expressed contrary views and shared that extension agents were not engaged and the agents favored better off farmers. Producers and buyers both expressed concern about farmers’ knowledge of good agricultural practices affecting yield and quality. One issue, and it is widely acknowledged by the government, is the complete lack of kebele-level coffee specialists and even at the regional level, coffee expertise is limited.

Intervention opportunity:

Develop, pilot and scale up coffee outgrower schemes.

Coffee Exporters Association. The Coffee Exporters Association has 146 members who account for more than 85 percent of exports. They charge a 20 birr per ton membership fee. The association helps its members with government relations and with key actors along the coffee value chain. The association was also big proponent of the new ECX policy. Currently their priorities are advocating with the government to release more land for large coffee farmers, including outgrower schemes. There is also a Coffee Roasters Association and a Coffee Producers Association. The Coffee Exporters Association is advocating for the establishment of a whole of industry coffee association as in their view representation of the coffee sector interests is too fragmented.

⁴⁹ International Food Policy Research Institute (IFPRI), 2015, Coffee value chains on the move: Evidence from smallholder farmers in Ethiopia.

Coffee and Tea Development and Marketing Authority. Established in 2016 under the Ministry of Agriculture and Natural Resources (MoANR). They are responsible for leading the MoANR's coffee work, both production and marketing and for coordinating sector activities. The latter is through quarterly marketing meetings with producers, traders and exporters. Like the Coffee Exporter Association, one of their priorities is to increase the number of commercial coffee farms and outgrower schemes. Another priority is to make Jimma Agricultural Research Center into a strong national coffee research institute.

Jimma Agricultural Research Center. The Jimma Agricultural Research Center focuses on developing new varieties for Ethiopia's different agro-ecologies. To date, they have developed 40 varieties, including six hybrids. They also conduct research on production, disease management, and postharvest practices and disseminate lessons learned. The research center disseminates its new varieties and the related technology packages in two ways. The first is through demo centers and trials with selected farmers near its research center and sub-centers. The other is delivering the full package of the technology to MoANR for dissemination to the larger farming community through its extension networks. The Center is also working on using coffee pulp to make fuel pellets.

Intervention opportunity:

Crowd source technologies and practices for coffee through a coffee innovation contest.

The Center has five sub-centers in coffee producing areas and collaborates with several other sub-centers operated by the Agricultural Research Institute around the country. A key constraint they face and view as a weakness country wide is the scarcity of coffee researchers and limited incentives to retain qualified researchers.

3.7 VALUE CHAIN MARGINS SUMMARY

Table 11 summarizes margins by different levels of the value chain, separated where possible by wet and dry coffee. The table shows averages by across grades as there are too many different grades to compare. Additionally, for comparison, prices are also given in final, clean price using the conversion factors from Table 4. Prices and margins should be viewed as illustrative rather than representative as the sample size is limited. Cooperative and FCU margins are high but a portion of these are redistributed to members. Also note that the FCU prices are export not domestic. Note too that traders/processors show negative margins and retailers margins are likely too low. Given the public attention to the long value chain that ECX reform is attempting to address (and common hesitancy of all businesses to reveal margins), there may be some exaggeration on the buy price. Additionally, traders/processors may have different conversion rates for wet and dry coffee than were found in the research used here.

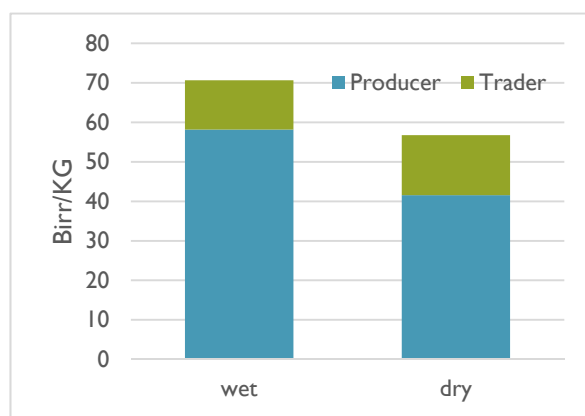
Table 11: Summary of Buy and Sell Prices and Margin (Birr/KG)

Level	Type	Buy actual	Buy clean	Sell actual	Sell clean	Clean margin
Producer	Wet			8.00	50.33	
	Wet – Organic			9.50	59.77	
	Dry			17.75	37.13	
Commercial Producer	Wet			67.50	67.50	
Commercial Producer				117.00	117.00	
Coop	Wet - Organic	8.50	53.48	77.94	96.79	43.31
FCU	Wet	10.50	66.06	133.50	133.50	67.44
FCU	Dry	22.00	46.02	86.50	86.50	40.48
Trader/ Processor	Wet	12.21	76.85	73.80	73.80	-3.05

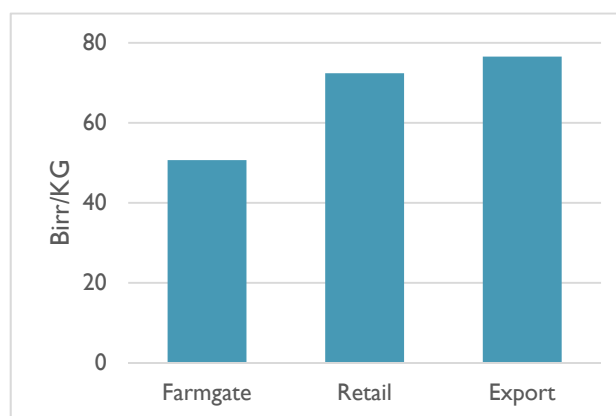
Table 11: Summary of Buy and Sell Prices and Margin (Birr/KG)

Level	Type	Buy actual	Buy clean	Sell actual	Sell clean	Clean margin
Trader/ Processor	Dry	27.88	58.31	56.75	56.75	-1.56
Local retailer		83.25	83.25	86.75	86.75	3.50
Roaster		75.07	75.07			20 percent net
Exporter				122.95	122.95	12-15 percent net
Exporter	Organic			209.40	209.40	12-15 percent net

Figure 7 shows the farmer and trader/processor sale price for wet and dry processed coffee. It shows that the farm-gate price for wet processed coffee is about 40 percent higher than for dried coffee with these differences staying relatively similar for traders/processors as well. Using national survey data, figure 8 shows that for 2015/2016 for both wet and dry coffee, farm-gate prices were 66 percent of export prices and 70 percent of retail prices.

Figure 7: Wet and Dry Processed Coffee: Producer and Processor Prices 2016/2017


Source: Fintrac, August-September 2017, Field Research and Data Collection.

Figure 8: Farm-gate, Retail and Export Prices for all Coffee, 2015/2016


Sources: Central Statistical Agency (CSA), Data Download August 2017 and Ministry of Trade (MoT), Data Received October 2017.

4. ENABLING ENVIRONMENT

4.1 ACCESSING INPUTS

Fertilizer, pesticide, and herbicide use for coffee plantations is low, with less than 5 percent of farmers reporting using any one of the three in 2015. Improved seedlings are widely used but are largely government controlled and plagued by delays and shortages.

4.2 ACCESSING FINANCE

Throughout the value chain, interest rates are high, between 12-24 percent per year, with the higher end of the range from microfinance institutions where smallholders sometimes borrow. Limited crop insurance is available in parts of Oromia but administrative costs are high and currently crop insurance must be subsidized to be affordable for smallholders. Some cooperatives also offer finance to their members, offering advanced payment for their coffee harvests three or four months in advance. FCUs may serve as a guarantor for their member primary cooperatives so that they can access finance.

In order to encourage exports and generate foreign exchange, collateral requirements for exporters are set much lower than for domestic roasters at 10 percent compared to 90 percent. Since exports account for roughly half of all coffee produced in Ethiopia, this means that a good deal of finance makes its way down the value chain. Traders extend advanced payments to producers and may be able to purchase their production at below market prices because of this debt obligation. On the other hand, roasters and those further down the value chain struggle to access finance because of the high collateral requirements. In fact, one roaster is operating at less than 50 percent of capacity in part because of collateral-related financial constraints.

4.3 OPERATING A BUSINESS

For the coffee industry in Ethiopia, the primary factor impacting the business environment is the ECX. Another issue is the strong preferential treatment given to coffee exports over domestically consumed coffee. The preferential treatment includes: easier access to finance for exporters; direct marketing for exporters; requirement to market wet processed coffee before dried coffee; ban of export quality coffee from the domestic market; and tax-free exports.

These actions are understandable given the country's foreign currency shortage. Nevertheless, they serve to distort the market, increasing the cost of and reducing the supply of domestically produced and traded coffee. Demand is relatively inelastic given Ethiopia's strong coffee drinking heritage. As a result, domestically produced coffee retails at almost the same prices as exported coffee even though the quality is by law significantly lower. Volatile and unpredictable prices also pose problems for some coffee value chain participants. This unpredictability is caused by the interaction not only of global prices and production factors, as in most coffee producing countries, but also strong domestic demand and the government regulatory environment.

4.4 LINKING TO MARKETS

Access to markets is limited for coffee farmers in Ethiopia, especially in Sidama (Table 12), because of poor roads. The combination of small farm size with long distance from markets compounds coffee marketing costs.

Table 12: Coffee Farmers Access to Infrastructure and Institutional Services, 2014

Distance to nearest (minutes)	Sidama	Yirga-chefe	Jimma	Nekemte	Harar	Total
Dry season road	11.6	11.0	19.9	18.6	26.9	17.4
All weather road	89.5	38.7	40.1	45.8	57.1	51.4
Woreda center	131.7	102.0	123.0	121.5	98.1	119.1
Coffee coop	57.4	56.9	82.4	55.8	61.2	62.8
Coop with inputs	101.0	65.2	55.4	49.4	51.3	60.6

Source: IFPRI, 2015, *Coffee value chains on the move: Evidence from smallholder farmers in Ethiopia*.

4.5 TRADING ACROSS BORDERS

As discussed in Section 4.3, the government has made many concessions to coffee exporters to promote it as a source of foreign exchange. Nevertheless, exporters still have to deal with the added cost of having to transport their coffee to Djibouti for export. As of 2013, transport costs to the Port of Djibouti added seven Birr per KG for exported coffee.⁵⁰ In addition, according to the World Bank's Logistics Performance Index (LPI), Ethiopia ranks 126 out of 160 countries scored for trade logistics performance. Table 10 below shows that Ethiopia performs the best in customs (defined as "the efficiency of customs and border management clearance") and the worst at timeliness (defined as "the frequency with which shipments reach consignees within scheduled or expected delivery times").⁵¹ One exporter complained that certifying exports is costly and requires going to multiple offices for documentation. Additionally, inspection capacity is low which causes delays.

Table 13: Ethiopia's Ranking on the Logistics Performance Index 2016 (out of 160 countries)

Customs	International shipments	Logistics competence	Infrastructure	Tracking & tracing	Timeliness	Overall LPI
80	102	117	133	133	149	126

Source: World Bank, Data Downloaded October 2017.

Ethiopia's stark trade imbalance and consequential inflated value of foreign currency increases the cost of inputs. One FCU said that jute sacks, used to store and transport processed coffee, must be imported and are four times more expensive than in other countries. Likewise, some coffee processing equipment including for wet processing is imported and costs are high because of scarce foreign currency.

⁵⁰ Beshah, B. & D Kitaw, 2013, *Quality and Value Chain Analyses of Ethiopian Coffee*.

⁵¹ World Bank, Data Downloaded October 2017.

5. RECOMMENDATIONS

Recommendation 1: Develop, pilot, and scale up coffee outgrower schemes.

Feasibility	Medium
Potential impact	High
Resources required	Medium
Rationale	Ethiopian coffee farm sizes are small, aggregation costs high, and improved input use low. Productivity has stagnated. Recent changes with ECX allow for farmers to directly market their produce through ECX if they have enough and can process it. Demand for single origin coffee has increased. Finally, the government and industry are both hoping to expand outgrower schemes.
Activities	With partners below, identify smallholders willing to participate and identify lead firms that are already vertically integrated, i.e. have a farm, processing facilities, and export capabilities, and who are willing to participate. Develop pilot scheme strategies. Factors to consider include credit, crop, technical support, and input provision and the role of FTFE VCA in facilitating access to them. Additionally, work with government to develop a policy whereby land concessions would be linked to outgrower scheme potential.
Potential partners	CTDMA, Ethiopian Exporter Association, lead firms, MFIs

Recommendation 2: Create nursery business program and train operators to provide tree rehabilitation services including pruning and possibly grafting.

Feasibility	High
Potential impact	Medium
Resources required	Medium
Rationale	Seedlings are often not available or available late. Pruning is practiced by less than half of farmers and grafting does not appear common. As a result, trees are underperforming. Existing private seedling providers lack the capital to expand and meet demand and government nurseries are slow.
Activities	Start with existing nursery operators and later identify potential nursery operators in underserved areas. Provide technical training on pruning, grafting, and other coffee services as well as business training. Facilitate access to finance as appropriate.
Potential partners	MoANR, MFIs

Recommendation 3: Target technical support to smallholder coffee producers to promote specialty coffee.

Feasibility	Medium
Potential impact	Medium
Resources required	Medium
Rationale	Coffee extension capacity is limited and coffee productivity is lagging. Additionally, smallholders are rarely offered a premium for quality, limiting their profit and incentive to produce high-quality cherry.
Activities	Identify buyers looking to buy specialty coffee directly from producers. Develop smallholder technical support packages to improve productivity and quality to meet specific buyer requirements. Ensure that quality premiums reach producers by building capacity of the buying washing or drying stations to grade coffee based on explicit buyer requirements.
Potential partners	ECX, traders, processors, MoANR

Recommendation 4: Address cooperative and FCU profit sharing model with respect to Voluntary Sustainability Standards (VSS) coffee.

Feasibility	Medium
Potential impact	Medium
Resources required	Low
Rationale	The share of VSS certified coffee in Ethiopia is well below global averages. This is a lost opportunity Ethiopia's coffee farmers to receive higher prices. One likely reason is Ethiopia's cooperative model. The cooperative system is responsible for most VSS coffee. Profits are shared 30:70 between the FSU and the cooperative, and then 30:70 again between the cooperative and the producer. The result is the producer only ends up with 49 percent of the profit. Since VSS adds significant cost at the production level, this share is reduced further. The current systems results in producers getting little premium for VSS.
Activities	Document the premiums and costs at FCU, cooperative, and producer levels for key VSS certifications (organic, Fair Trade, Utz, Rainforest Alliance). Based on results, work with the Federal Cooperative Agency to create a new policy for VSS coffee that rewards and incentives producers more appropriately.
Potential partners	Federal Cooperative Agency

Recommendation 5: Crowd source new coffee production and postharvest technologies and practices for coffee through annual innovation contests.

Feasibility	Medium/low
Potential impact	Medium
Resources required	Medium
Rationale	Coffee research is limited by lack of resources and expertise.
Activities	Identify technologies that improve production and postharvest practices for coffee. Consider a contest, innovation challenge, or call for concept notes. Have a panel of relevant experts evaluate the technologies and publicize results. For potentially commercial products, assist the inventor in finding a partner to bring to market. For public goods, hand off to Jimma Agricultural Research Center to test and disseminate.
Potential partners	Jimma Agricultural Research Center; Coffee Associations