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Understanding the Coffee Value Chain In Guatemala: A Case Study

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How is the coffee value chain structured? Who is able to access it and how is value distributed along the chain? What obstacles, bottlenecks or broken links exist that prevent small farmers from gaining a reliable income growing coffee? We went to Huehuetenango, the largest coffee producing region in Guatemala, to find out. There we interviewed four small producers, a cooperative, a local intermediary, two medium and two large producers, one local roaster, one transport services representative, two exporters, a federation of cooperatives and two experts from the government coffee office. Although the information we gathered is based on a small number of interviews, our study does provide a unique snapshot of the coffee value chain. The scenarios represent the four most prevalent cases in the Guatemalan coffee market with price estimates based on the 2006-2007 harvest averages. Prices reported for each sales outlet are dependent on the actual time of the transaction, in a context of market fluctuations and frequent delays in payments. Despite the drawbacks, this study provides the main elements of coffee price formation. By providing both a quantitative decomposition of the price margin and an analysis of the competitive structure of the market along four value chains, one Fair Trade and three non-Fair Trade, our study also clearly illustrates who makes money and why small farmers struggle to earn a living growing coffee in Guatemala.

How Coffee is Traded

Before being exported, coffee follows many different marketing channels that vary depending on producer and product characteristics. Although fresh coffee berries may be sold to intermediaries, exporters, or cooperatives, typically they are processed into parchment (dried beans) by the farmer before sale. Parchment coffee is sold to an intermediary, a cooperative, or directly to an exporter. After the parchment skin is removed, green coffee may be sold to a retailer, but most is exported. Any combination of these marketing channels is possible in Guatemala.

According to the 2002/2003 agricultural census, Guatemala had 171,334 coffee producers, with nearly 20 percent located in Huehuetenango. The four largest producers accounted for 50 percent of Huehuetenango's production while those with less than nine acres produced less than one percent. Small producers could join one of 300 associations or cooperatives.

At this time fifteen processing mills were operating in Guatemala, although none were located in Huehuetenango. These mills also acted as exporters in addition to selecting, processing, labeling and trading coffee. The large exporters did have offices in Huehuetenango and bought coffee from medium farmers and intermediaries. Benefits derived from certification and quality differentials were available for larger producers and organized smaller producers as these groups had direct relationships with clients in other countries and were able to negotiate prices due to specialty characteristics. These direct relationships also allowed them to speculate and use financial instruments available in the international coffee market.

In general, there are two types of intermediaries. The first type works for a large international company such as Nestle, Sara Lee, Folgers or Philip Morris. Intermediaries are given cash to buy parchment coffee and bring it to the processing mills operated by these firms. This coffee is primarily medium to low quality and used to make instant coffee. The second type of intermediary buys from small farmers and sells to the exporter offering the best price. Most of his profits come from volume and to a lesser extent on quality differentiation and speculation. These intermediaries, or 'coyotes', need access to cash and a truck. We documented as many as ten intermediaries in the Huehuetenango region who often made daily visits to the small farmers during the peak harvest season.

Exporters keep between eleven and fifteen dollars per 100 pounds of green coffee. Exporters profit from the difference between these fifteen dollars and the expenditures they accrue due to storage and from parchment removal. Exporters obtain certifications and create direct relationships between producers and importers to get higher differentials for their clients, and therefore, increase incentives to sell coffee through them. Exporters find new clients at world fairs, Guatemalan National Coffee Association (ANACAFE) events and through current client referrals. Forty-three percent of total exports in Guatemala were made to the USA followed by 42 percent to Europe. According to ANACAFE, in 2003-2004, Guatemala was the fifth largest exporter of Arabica coffee after Brazil, Vietnam, Colombia and Mexico.

Certification is quite common in high quality coffee such as the Arabica Strictly Hard Bean that is produced in high altitude in Huehuetenango. Fair Trade (FT) is a certification granted at the cooperative level only. The US NGO, Transfair, certifies cooperatives in Guatemala by requiring practices that promote empowerment, economic development, social responsibility and environmental stewardship. In exchange, a certified cooperative can sell its coffee to FT certified importers that are required to pay a minimum price and a small social premium. Note, however, that there is a much larger supply of FT coffee than demand, thus cooperatives typically cannot sell more than 20 percent of their coffee as FT. Other common certifications include organic, Rainforest Alliance, Utz Kapeh, Bird Friendly, and C.A.F.E. (Starbucks). All certifications other than Fair Trade impose requirements that affect production costs, in exchange for which producers receive a price premium.

Four Typical Value Chains

In order to provide a detailed description of the coffee value chain we use information gathered from our interviews to calculate sale prices for the four most prevalent scenarios. Table 2 presents the prices for the amount of coffee needed to have 100 pounds of roasted coffee at the end of the value chain. So 156 pounds of parchment coffee becomes 125 pounds of green coffee, which in turn produces 100 pounds of roasted coffee. A small farmer is defined as one who sells less than 8,000 pounds of parchment coffee and a large producer as one who sells more than 20,000 pounds of high quality green coffee through the online "Cup of Excellence" auction administered by ANACAFE. Values reported in the last four rows are averages given by representatives of these different agents (including roasters and retailers in the US).

Understanding the different value chains represented in Table 2 is easier by starting with the market price or New-York exchange (NYBOT) price. Since coffee prices vary over time, in addition to quality and value chain, for this example we use the July 4th, 2007 NYBOT price of US$1.11 per pound. In terms of quality, we use five cents per pound of green coffee

Table 1. How Coffee Moves from Producer to Importer

Seller	Buyer	State of coffee
Farmer	Cooperative	Parchment
Farmer	Intermediary	Parchment
Farmer	Exporter	Parchment
Cooperative	Fed. of co-ops	Parchment
Cooperative	Exporter	Parchment
Intermediary	Exporter	Parchment
Fed. of co-ops	Importer	Green
Exporter	Importer	Green

as the price differential for Strictly Hard Bean (SHB) above the NYBOT reference quality. Fair Trade (FT) coffee sells at a pre-determined price, irrespective of its quality. The FT price is defined as the maximum of the NYBOT price and a floor price, plus a social premium of five cents per pound. For many years the FT floor price has been $1.21 per pound. Hence, on July 4, 2007, the FT price would have been the floor price plus five cents, or $1.26 per pound, while non-Fair Trade coffee would sell at $1.11 per pound for the NYBOT reference quality and $1.16 per pound for SHB quality.

Table 2: Prices along four typical coffee value chains, in US dollars

Transaction	State of Coffee	Quantity lbs	Price in US dollars: Small organized FT	Small non organized	Medium certified	Large cup of excellence
Production Cost	Parchment	156	102	102	117	
Payment to producer	Parchment	156	120	114	114	214
Purchase by exporter	Green	125	129	126	139	233
Sold on NYBOT	Green	125	148	145	158	
Purchased by warehouse	Green	125		358	303	328
by intermediary	Green	125		378	498	539
by retailer	Roasted	100	525	415	515	
by final consumer	Roasted	100	900	799	899	

Small producers who are members of a FT certified cooperative will typically be able to sell 20 percent of their harvest as FT and the remainder at the NYBOT price. The market value of 125 pounds of SHB green coffee is thus $148. In contrast, for a small non-organized farmer, who cannot be FT certified, the market value of 125 pounds of SHB green coffee is $145. Medium farmers do not have access to the FT label, but often have other certifications whose premiums range 7-20 cents per pound. Using an average of 10 cents per pound we calculate the market value of 125 pounds of SHB produced by medium certified producers as $158.

Cooperatives sell coffee directly to large exporters who charge $10-15 per 100 pounds of green coffee. If charged $15, or 15 cents per pound, the cooperative receives $129 for 125 pounds of green coffee sold to the exporter. Deducting 7 cents per pound in fees leaves the cooperative member with a payment of $120 for 156 pounds of parchment. In contrast, small independent producers sell to local intermediaries who then sell to exporters. Applying the 15 cents per pound margin to exporters, and 10 cents per pound margin to the intermediaries, a producer sells 156 pounds of parchment for $114, and intermediaries sell the equivalent 125 pounds of green for $126. Finally, when medium producers sell directly to exporters, they are subject to taxes and fees. Medium and large producers have to pay 12% in sales tax, 1% in ANACAFE fees and 5% in income tax which amounts to 20 cents per pound in taxes and fees. The medium producer thus sells 125 pounds of green coffee to the exporter for $139, but keeps a net of $114, after taxes and fees. Note that cooperatives are exempt from taxes and local intermediaries pay neither taxes nor fees.

A large producer sells their highest quality coffee through the online “Cup of Excellence” auction. Prices typically reached $233 for 125 pounds of green coffee. Taking out the exporter fee of 15 cents per pound leaves the producer with $214. Any remaining production is sold like that of a medium sized certified producer.

From this investigation into the formation of price along the value chain it is clear that small organized producers are able to capture a slightly higher price than small non-organized or medium certified producers. A large ‘cup of excellence’ producer, however, captures significantly higher value than all other types

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of growers.

What we learned

In Guatemala small farmers are at the beginning of a complex value chain populated by numerous cooperatives, certifications, intermediary buyers and sellers, processing mills, multi-national companies, exporters, an online auction, the "Cup of Excellence", and larger farmers. In order to be successful in this highly competitive market they must be savvy and knowledgeable producers, marketers and sellers. Unfortunately, the current conditions prevailing in the existing value chain makes it nearly impossible for them to achieve success.

One roadblock is a small farmer's frequent need for immediate cash to cover the cost of unexpected shocks. Although cooperatives offer a seemingly higher price by rewarding coffee quality, payment is often delayed until a sale is made to a buyer further along the value chain. Intermediaries, on the other hand, pay cash on the spot, but do not recognize quality and often charge high transactions costs. Thus when a small farmer needs cash and sells a 100 pound bag to an intermediary, he forgoes some potentially good income, which if repeated in the season and over the years keeps him on a low income profile.

Access to the differentiated coffee market is another difficulty faced by small farmers. Certifications are costly and technically demanding, notably the organic certification. The FT certification does not impose production costs, but it is cumbersome and provides almost no benefit, even when the NYBOT is low, because of general over-certification and excess supply. As one farmer reported, "I do not think about Fair Trade when deciding where to sell my coffee because the premium is usually very low. It is better to compare where to sell at a higher price or wait for the right time. Also, I do not know about the premium until coffee is exported, which is usually weeks after I have made the choice where to sell it."

A third issue is their inability to capture the quality premium. Small farmers cannot directly climb up the value chain and sell green coffee as they lack access to technology and economy of scale to further process their coffee. Furthermore, intermediaries and processing mills tend to mix all coffees received in small quantities, only to sell them as low quality coffee. Hence, unless they are members of sufficiently large and well organized cooperatives, small producers cannot extract the full value of their high quality coffee, which considerably reduces the incentive for them to improve coffee quality.

In the end, the quality coffee market is probably too difficult for individual small farmers to benefit from it, even though on the production side, they are best placed to produce very high quality coffee. The solution is likely strong cooperatives, themselves federated in second level organizations that put the small farmer's production at par with the large farmer's production. These cooperatives, however, need the technical and managerial capacity and capital investment required to compete on the international market.

Further Reading

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