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Research Report

The Efficiency of Fair Trade Coffee

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The Efficiency of Fair Trade Coffee¹

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The Fair Trade (FT) movement has created great expectations in the development community that trade could be made more equitable for poor rural producers. It also proved to be hugely popular with coffee drinkers around the world. While consumers have been offered an array of different “ethical” labels (organic, bird-friendly, etc.), FT coffee remains unique in that it primarily aims at improving the *price* that producers receive through the existing market chains, not at altering the *process* through which a commodity is produced that would define a new commodity that bundles a good and a social or environmental service (Berndt, 20007).



.../... Significant numbers of coffee drinkers are willing to pay a higher price in the expectation that it will result in higher revenues for poor and deserving producers (Arnot, Boxall, and Cash, 2006; Elfenbein and McManus, 2010). Worldwide sales of FT coffee reached \$1.6 billion in 2010. But do higher prices really result in higher incomes for smallholders? There has been controversy on this, with Smith (2009) arguing that benefits have been large while others like Berndt (2007) arguing that they have been small. Using data from a large Central American association of coffee cooperatives, we measured the price premium effectively paid to member cooperatives for FT coffee, comparing coffee of the exact same quality sold with and without the FT label (de Janvry, McIntosh, and Sadoulet, 2011). We show that markets cannot be used to transfer rents through the price mechanism if the quantity and quality sold are not correspondingly controlled. This is a basic economic law of how markets work. Based on this logic, this brief reveals the reasons why producers have not reaped the full benefits nominally offered by FT.

► Elusive price premium

FT contracts are quoted as a premium over the New York Coffee Exchange "C" market price. Measuring the correct effective FT premium requires that we know the counterfactual price that each lot of FT coffee *would have received* had it been sold on the traditional market. To do this, we used data on all coffee acquisitions and sales of a large association exporting FT coffee over the period 1997-2008. Each year the association receives coffee from about 100 cooperatives and individual members. Its entire production is certified to be sold as FT. Despite the potential to sell all its coffee as FT, the association in a typical year is only able to sell some 20-25% of its total output as FT. Within a single year (and even within a single delivery) a given cooperative's delivery may be split into

different lots and these lots are then sold to different buyers some as FT and others as non-FT. The differential in price for these two sales gives us a clean measure of the premium earned on the FT market as they are of the exact same quality.

Our estimations show that, in 2001-04, the years of the coffee crisis (see Figure 1), the nominal premium was quite significant, reaching an average of 62¢/lb over a market price of 63¢/lb. But that premium fell to 6¢/lb over a market price of \$1.26/lb in 2006-08. (These estimated premiums are approximately 10¢/lb below the expected value due to the fact that the quality of the coffee sold as FT is higher than the coffee that sells at the NY "C" price.) Despite these fluctuations, as long as there is unconstrained demand and a positive premium, the association clearly should sell no coffee on the traditional market. Yet, its share of coffee sold as FT never exceeded 30%. Why was this the case?

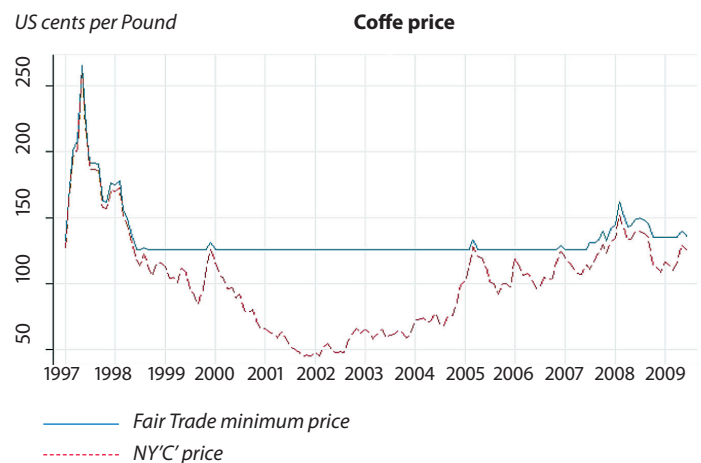


Figure 1. Market and Fair Trade prices, 1997 to 2009

The relationship shown in Figure 2 between the measured FT premium and the share of certified coffee sold as FT cannot be explained by any supply-side story and is only consistent with the process of entry into the FT market by other producers. The share of coffee that was sold as FT was particularly low in years where the premium

was high. In 2002, for example, the premium was more than 60¢/lb and yet the amount sold as FT was only 13%. As the premium fell over the past five years, the share of coffee sold as FT has again risen, reaching 27% in 2008-09, while the nominal premium at times has dipped below 5¢. This negative correlation between premiums and sales shares is consistent with static demand combined with an increasing global FT supply. Thus, while certified to sell its entire stock as FT, the association's ability to move coffee through the FT channel was restricted as other producers entered the certification mechanism, but improved as producers exited. For an individual FT coffee producer, certification gives the right to sell as FT, but no guarantee that any particular quantity produced will find effective demand under FT. As expected from market response, the higher the premium, the higher entry, and the lower the share that any particular producer can sell through the FT outlet.

or the market price, whichever is higher, a fixed floor can insulate the producer from highly volatile world coffee prices. Indeed, the NY "C" market price has remained below the FT floor for most of the 20 years since FT was established. Given smallholders' persistent problems of access to credit and insurance, this component of FT gives them a strong encouragement to become FT certified.

Becoming certified requires that a producer cooperative satisfy a variety of standards, such as transparent and democratic management. In general, certification inspectors identify cooperatives that already satisfy these criteria rather than inducing others to change behavior in order to qualify. Local certification agencies are typically paid based on the number of certifications performed, a demand-driven process that creates incentives to over-certify. Indeed, the global coffee production capacity certified to be sold as FT has been estimated to be two to five times larger than the FT market.

In theory, in return for incurring the costs of certification, gaining access to a floor price is remunerative in years when the market price is below the FT floor. In practice, however, the certifier can guarantee a price, but not a quantity: it cannot commit that certified output will, in fact, be bought on the FT market. Massive over-certification of production relative to effective demand means that, even though there is no decline in the FT price a coffee grower can receive for his or her product, there is a decrease in the share of total output that the grower is able to sell at the FT price. Despite having to pay to certify the entire output of the cooperative as FT, certified producers have the opportunity of selling under the FT label only a limited share of their total certified production. In some cases, the premium received on coffee sold through the FT channel may be entirely absorbed by certification costs. The result is that producers may be least able to benefit from a price floor when it is most needed.

Over-certification is not the only mecha-



Figure 2. Fair Trade premium (inverted U curve) and share of certified production sold as FT

► Over-certification and unrewarded quality

A core feature of the FT contract is the floor price. This varies by regions of the world, and was set for Central America at \$1.21/lb until June 2008, when it was raised to \$1.25/lb, with organic coffee receiving an extra premium of 15¢/lb until June 2007 and 20¢/lb thereafter. Since producers are to be paid no less than the floor price

nism through which a price premium is extracted from producers. We also found that there exists an inverse relation between the market price and the quality of coffee sold as FT: when international market prices are low FT quality is superior to non-FT coffee, but the average quality is the same when market prices are high. The coffee market is one where quality increasingly determines prices, and there are potentially large profits for those producing better quality coffee. FT pricing, however, does not recognize quality (Henderson, 2008). The quality invariance of the FT floor price implies that FT buyers can obtain any quality that would sell on the traditional market at a price equal to or lower than the FT price they offer. Producers will want to sell on whichever market gives them the highest price, and buyers will obtain the highest quality coffee that their price can command. This is again the way competitive markets are expected to behave in extracting any rent from producers. An increase in the nominal FT premium will increase the quality of coffee that moves through the FT channel, but it may not increase the profits for producers relative to what they would have gotten on the traditional market. Unrewarded quality becomes an additional instrument through which effective FT premiums (i.e., FT premiums received on the share of production that can effectively be sold on the FT market) are dissipated.

▶ Assessing the net premium and household welfare gains

Using the rigorously estimated FT premium where split deliveries give an exact counterfactual to the FT treatment, we assessed the welfare gains to farmers by simulating alternative price schemes for the 1997-2009 period. We also take into account the roles of over-certification and cost of certification in extracting from producers the nominal FT premium. This was done for producers on a per-pound sold basis and, using information on average farm household coffee

production, on a per household basis.

First on a per-pound basis. We see in Figure 3 that the high nominal premium in the 2001-03 period of low NY'C' prices (on average 60cts/lb during the period) fell sharply to 4-5 cts/lb during the 2005-08 period. Taking into account rent extraction via quality reduces the premium by about 10 cts/lb. Further taking into account dissipation via over-certification, the effective premium falls to an average of 10 cts/lb during the 2001-03 period. With a conservative certification cost of 3 cts/lb, the premium is reduced to 7 cts/lb at the peak of the coffee crisis, and to a zero or negative value in the 2005-08 period of favorable market prices. Price premiums can thus be positive but modest under crisis conditions, and vanish under favorable market conditions, even though altruistic coffee consumers continue to pay a premium on the FT coffee they purchase. This premium simply does not reach the intended producers of the coffee they drink. It is dissipated in the coffee value chain.

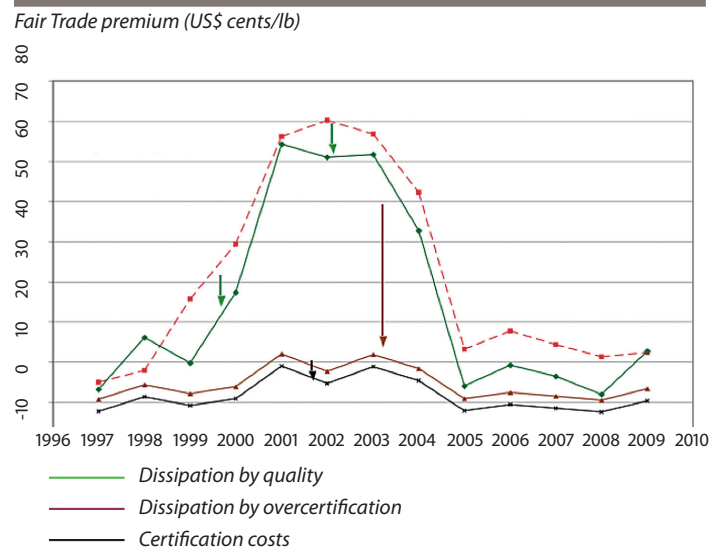


Figure 3. FT premium and dissipation by quality, over-certification, and certification costs

Second, on a per-farm household basis. Using a nationally representative household survey, we assessed the welfare value of these economic impacts by combining them to the sales and revenues of a typical Guatemalan smallholder coffee farmer. Among coffee

.../... producing households, median coffee sales for 2006, the year of the survey, were 910 pounds of parchment coffee, which corresponds to roughly 725 pounds of green coffee. The whole FT average effective premium of 1.6¢/lb for that year were transferred through to producers, the producer's income would have increased by about \$11 over the course of a year, relative to a median reported coffee sales value of \$206. However, the data also suggest that producers receive around 28¢/lb in a year where the NY "C" was just over a dollar, so if an analogous share of the FT premium is passed through (28%), this average annual benefit would fall to \$3. Taking the actual 2006 effective premium of -0.5¢, the median Guatemalan farmer would have lost approximately \$3.65 by participating in FT that particular year.

► Are there other ways?

These results are based on a single organization within a single country, so it is natural to question the extent to which they are representative of FT non-organic coffee markets as a whole. Our estimates of the effective premium comprise three basic quantities: the nominal FT premium, the share of certified coffee sold as FT, and the per-unit costs of certification. Because of the internal diversity and second-tier certification of our study institution, we had the ability to look at price variation within seasons, within sub-cooperatives, and even within specific lots across FT and non-FT sales. The average share sold as FT by our study institution (22%) is close to the average of the independent estimates of the global sales share (26%) and so it appears that this institution is broadly representative of the overall market. Our per-unit certification cost (3¢/lb) is based on a large cooperative recertifying, and therefore if anything under-estimates the cost of an average-sized cooperative considering the decision to undertake certification.

These findings suggest that the FT market did not deliver to producers the expected large

benefits derived from willingness to donate by millions of altruistic coffee consumers because the system codifies prices while leaving quantity and quality as free parameters. Given this and the lack of coordination between the party permitting entry to the mechanism on the supply side (the certifiers) and the party that honors the contracts (the intermediary buyers), benefits to producers are competed away in ways that are not transparent to donors. This is what basic economic theory tells us competitive markets should do. Hence, data only confirm what economic theory predicts, with no surprise to economists.

Can there be other ways? One way to resolve these problems would be to increase the centralization of the FT system, attempting to specify all three terms of the contract simultaneously: approved certified sellers restricted to what the FT market can absorb (using restrictive targeting criteria such as a poverty line or an environmental standard), quality-adjusted prices not inferior to a floor level, and a social premium added to the price paid. The other way would consist in stepping back to a more decentralized set of fair trade agreements. Buyers, such as a particular coffee shop or an NGO, would contract dyadically with well-identified producers, with known counterfactual prices, no free entry, and full transparency in the link between price paid by the consumer and transfer received by "the hands that picked your coffee". Cost of these dyadic arrangements may however be prohibitive relative to the benefits to be transferred.

Such structures would be less informationally efficient and likely impose search and contracting costs far in excess of the current market-based FT system, but consumers could take upon themselves assuming the transactions costs. Limited certification and direct contracting should permit altruistic buyers to transfer real benefits to poor producers without having them competed away by market forces through entry and lack of quality recognition.

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