

## "CERTIFICATIONS"

**Michael Sheridan:** For clarity, can you define what you mean by “certifications” in the context of this study? Does this category include only voluntary sustainability standards like Fair Trade and Rainforest Alliance Certifications? Or does it also include corporate sourcing standards like Starbucks’ C.A.F.E. Practices and Nespresso AAA Sustainable Quality?

**Wytse Vellema:** For this study, the term certifications refers to both of the categories you mention.

Most of the farming households which held a certification in this study were certified through either C.A.F.E. Practices (Starbucks), Nespresso AAA, or both. Organic, Fair Trade, and Rainforest Alliance certifications were also present in the region, but none of the interviewed farmers with one of these three certifications did not also have either C.A.F.E. Practices or Nespresso AAA. In 2012, when the data was collected, around 52 percent of the interviewed households held at least one farm certification. Of the certified farmers, 65 percent held only a single certification, 29 percent held two, and 6 percent three.

It is important to note that we looked at the effect of farm certification, not at the effect of certified sales. Having a certified farm does not automatically imply receiving a price premium. Farmers only receive a premium on the coffee which they manage to sell to certified channels. Of the farmers we interviewed, 37 percent managed to sell all their coffee to such channels, and another 20 percent managed to sell part of their coffee there. The remaining 43 percent of farming households with farm certification received a higher price for their coffee than farmers without certification.

## CAUSALITY OR CORRELATION?

**MS:** You write that “certification encourages specialization.” But do the data really show causality or “mere” correlation? Could the causal relationship run in the other direction, with farmers committed to specialization in coffee the ones most likely to pursue certification? This seems like it may be equally plausible, especially given that you suggest certifications are becoming *sine qua non* for participation in high-value specialty coffee markets.

**WV:** Causality is impossible to prove with data or statistics alone. However, we have some reason to believe that the effect we are observing runs from certification to specialization, which is due to the pattern of certification and its relationship with violence – the men with guns you referred to in [your presentation at SCAA Symposium](#) earlier this year. When you look at the share of certified farmers per region, you see a clear pattern: in the north, almost every farmer is certified, in the center about half the farmers is certified, and in the south most farmers are not certified. This appears to reflect the history of violence in the region. Since certifications first appeared in the north of Nariño in 2004, the influence of armed extra-legal groups has been steadily pushed south by the Colombian army. At the time of data collection, 2012, the only part of the region which was still considered ‘zona roja’ – unsafe to travel – was the south.

Having said that, it is true that farmers with more land are more likely to receive (not pursue, more on this below) certification. However, this effect disappears as more farmers in each zone get certified. It appears larger farms are the first to receive certification, and over time smaller farms follow suit until (almost) all farms are certified. In the north, almost 99% of farmers held at least one certification.

As a final point, your question appears to suggest that farmers ‘pursue’ certification. This is not the impression that we had. In most cases, farmers get selected by exporters, not the other way around. It is also not technically the farmers who are certified but the exporter. It is the responsibility of the exporter to make sure farmers adhere to certification requirements, and ensure traceability.

## CERTIFICATIONS AND COFFEE PROFITABILITY

**MS:** You found that certified farms generated more income from coffee as a result of three effects, in descending order of importance: higher prices (which explained 52 percent of the income effect of specialization), higher yields (33 percent) and more area devoted to coffee (15 percent). But I was unclear as to whether it also found that certified growers earn higher returns on their investment in coffee specialization. Are specialized coffee farmers more profitable in their coffee farming than their comparatively less-specialized peers? If so, is there an implication there for smallholder farmers growing coffee who aren't specialized/certified? Should they read this as "certify or die" as far as the viability of their coffee crop is concerned?

**WV:** That is absolutely not the message that we would like growers to take home. In our paper we were not able to say anything about profitability. Rather, we speak of gross returns, which exclude labor costs. Since labor costs are estimated to make up a very large share of total costs - perhaps as much as 80% - this distinction between profit and gross returns is important.

Applying the agricultural practices required to receive certification is known to be tremendously labor-intensive. Although the input of labor could not be measured directly, and hence could not be compared between certified and non-certified farmers, the observation that certified farmers earn more coffee income but less other income - leaving total income the same between certified and non-certified farmers - appears to suggest that the additional time and effort required to apply these 'certified' practices does not pay off. In other words, the negative effect of these extra costs cancels out the positive effect of a higher price.

However, it could also be that certified farmers obtain a higher return to their labor and decide to *consume more leisure*, which is economics jargon for 'decide to work less hours in total'. In that case, certification would make them better off, since it allows certified farmers to enjoy more leisure time while having the same total income. Although we cannot test which of these two explanations is true, we believe the first - that the return to certified coffee is comparable to the return to non-certified coffee - to be more likely, since the farmers we interviewed have incomes hovering around the poverty line. When your income is that low, it seems unlikely that you would consciously choose to sacrifice some of it for more leisure time.

If it is indeed the case that the return to certified coffee is comparable to the return to non-certified coffee, this creates another conundrum: if profits are not higher, then why do farmers choose to certify? I think there are at least two explanations: they make the wrong choice or they have no choice. Farmers could make the wrong choice if the additional coffee income is somehow more salient than the additional effort required to obtain it and the consequent loss in other income that results from it. In that case farmers would attribute the additional income from coffee to the certification, but not the loss of other income from other activities unrelated to coffee. Farmers might have no choice when all buyers require certification. This appears to have become a trend. Companies like Starbucks, Sara Lee, and Tchibo have already stated their intention to source 100 percent of their coffee from certified sources and other companies appear to be following suit. (See Kolk (2013) "[Mainstreaming sustainable coffee](#)" for more details).

The choice might not be "certify or die," but certify or switch out of coffee production.

#### CERTIFICATION AS A TOOL FOR MANAGING SUPPLY-CHAIN RISK?

**MS:** You introduce the very helpful distinction between differentiation on the basis of “symbolic” characteristics (practices for farm management, labor relations, social organization, etc.) that consumers can’t taste in the cup and “intrinsic” ones they can. You further suggest that certifications focusing on symbolic sources of value are losing their purchase in the marketplace and that certifications are the new tool companies use to manage intrinsic quality standards in their supply chains. But what about the idea of certifications as instruments for managing sourcing risk—for creating incentives for growers to adopt the environmental practices that will be essential in an era of accelerated climate change to ensure continued production? Is it possible to see in certifications a third category of value that is neither “merely” symbolic (failure to adopt the standards will make production untenable) nor intrinsic (you can’t taste it!) but perhaps related to risk mitigation and continuity of supply?

**WV:** It is a tantalizing idea to think of certification as a tool to reduce production risk for farmers and sourcing risk for coffee buyers. This is not something we have looked at in this particular research. To my knowledge, very little is known about the relationship between climate-change-resistant agricultural practices and production risk. Given how sensitive coffee production is to climate change, more research on on-farm adaptation options is warranted, although I think we should be careful not to shift the burden of climate change to already vulnerable farming households.

To the question whether certifications might be an effective tool to incentivize farmers to adopt such climate-smart practices – suppose these could be identified – my answer would probably be yes, although not based on the results of our study. There are two reasons for me to be hesitantly positive. First, because certifications appear to be good at channeling farmer effort. Other data we have collected and analyzed together in Nariño showed that reinvestment in coffee production was far higher for certified farmers than for any other category of coffee farmers. Second, if certification is required to sell your coffee (the *sine qua non* you refer to above) and climate smart practices are a requirement for certification, farmers have little choice.

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## **COFFEE-LED APPROACHES TO RURAL DEVELOPMENT**

**MS:** You conclude that “a narrow focus on coffee-related activities alone is unlikely to realize sustainable growth.” What are the implications of this conclusion for policy? What does a viable strategy for sustainable rural economic development in the coffeelands look like? Or perhaps more concretely, what other kinds of activities should be promoted to achieve broader economic impact?

**WV:** The last decade has seen increasing attention being paid to the opportunities for poor small-scale coffee farmers in producing high quality coffee. Certifications and labels are part of this story. Although our results only cover a small area in the south of Colombia and should therefore not be interpreted as the final conclusive impact of coffee certification anywhere in the world, they do show that household incomes do not necessarily increase because of certification.

Why? These farmers have little land. With an average farm size of less than 2 hectares, how much should policy increase their incomes before they can feed their family and their plants and at least send their children to school, maybe even university? Given that most will remain dependent on world coffee prices, which are unlikely to increase sufficiently to make a 2-hectare farmer a middle-income wage, it seems obvious that over time, farm sizes have to increase.

For this to happen, farmers need to be willing and able to sell their land. In the study region, as in other parts of Colombia and the rest of the developing world, most farmers do not hold property deeds to their land, making it hard for them to sell or buy land, and hard for good farmers to grow. On the other hand, households with jobs in the city are often unwilling to sell their land since the social safety net is inadequate to sustain them in case of unexpected unemployment. Thus, they hold on to their land as a back-up option.

In other words, even to enable rural economic development based on coffee, a broader set of activities is required than only those directly related to coffee production; it requires creating an enabling environment, removing obstacles which are currently preventing rural households from reaching their full potential.

## COFFEE AS AN ECONOMIC ENVIRONMENTAL "HERO CROP"

**MS:** Your conclusion may undermine the case for coffee as an economic “hero crop,” but it doesn’t address the important ecosystem services that coffee delivers. Indeed, you suggest that the most common alternatives to coffee are basic grains and livestock, two economic activities that are notoriously bad for soil and water resource conservation. Is it possible that the reallocation of labor and other resources away from these activities toward coffee may generate net positives even if they don’t deliver net financial positives to specialized coffee growers?

**WV:** Whether the re-allocation from other crops to coffee generates net positives for the well-being of the world I really would not know. All we show is that certified farmers do not have higher incomes, but do obtain a larger share of this income from coffee. Whether this switch to more specialized coffee farming is positive from the point of view of the well-being of the world – so-called positive externalities – would probably depends on the specific crops that are replaced, and the way in which they are replaced. And then there might be another crop than coffee which is even better for the environment.

Regarding animals, there is very little intensive animal husbandry in the study region. Most animals are fed to a large extent by those parts of plants which are not fit for human consumption and left-overs from the kitchen. In addition, their dung can be used for fertilization, reducing dependence on expensive and often oil-derived chemical fertilizers.

To answer your question a bit more directly: it might very well be that the switch to more intensive coffee production has positive effects. However, the extent to which such a switch would be positive will depend very much from farmer to farmer. Certainly there is a point (think about the large-scale coffee farms in Brazil) at which less specialization might be better than more specialization, whether there also exists a minimum level is hard to say.

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## RISK MITIGATION

**MS:** You raise the issue of the risks associated with specialization in coffee. There are, of course, risks inherent with any kind of specialization that increase dependency on a single source of income. But you identify fearsome sources of production risk on the farm (coffee leaf rust) and price risk in the marketplace, which you characterize as “nefariously volatile.” Do you see the risks smallholders run in coffee as commensurate with the risks they would run in markets for other agricultural goods or greater? What are the best instruments you have seen in your review of the literature and your time in the field for managing these sources of risk?

WV: Risk is a big issue in the life of any farmer, but especially so for poor small-scale farmers in developing countries. Their income—and with that the food security situation of their family, their ability to keep the farm, and the future of their children—all are directly dependent on a set of risk factors which they can influence only to a limited extent. For small farmers, poverty-related, production, and market risks are probably the most relevant. Of these risk factors, most poverty-related risks are comparable between crops. If a bad harvest leaves you with an income shortfall such that the next production cycle you need to choose between feeding your children or your crops, you are caught in a downward spiral regardless of which crop it is you cannot feed.

Whether production risks are comparable between crops we should ask an agronomist. I guess it would depend not only on the crop, but also on the variety, as evidenced by the development of drought-resistant and disease-resistant varieties for different crops. Of course, in the case of coffee, there are some diseases like coffee rust which have captured headlines because of their ability to take epidemic proportions in a relatively short amount of time. The likelihood of such epidemics occurring is likely to increase with the share of land dedicated to coffee in a region, but again, it is hard to say whether this is specific to coffee.

However, the real difference in risk between cash crops like coffee and products which can be consumed by the household or have a higher share in domestic consumption is market risk, especially price risk. Coffee prices are among the most volatile of all agricultural commodities, hence the remark regarding their “nefarious volatility.” This is the main reason we believe coffee might be more risky than other crops.

There are some instruments to reduce market risk for coffee farmers specifically. One is the strategy currently pursued by Colombian Coffee Growers Federation to encourage domestic coffee consumption. This reduces the influence of the exchange rate on domestic coffee prices. The country-wide guaranteed minimum price for coffee is another. An instrument which farmers have in their own hands is to attempt to link with buyers of relationship coffees, who not only pay higher prices but also set their prices independently of the international price set on the New York stock exchange. However, this option is only available to a limited number of farmers: those who produce coffee with an exceptional flavour profile. For most other poor small-scale farmers, until a hedging or insurance instrument becomes available at a small enough scale to be accessible, price risk is something they will have to live with.

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**RISK MITIGATION (CONTINUED)**

**MS:** It is something of an article of faith in specialty coffee that good relationships are a natural hedge. But you point out in the closing sentence of your article, “the question to what extent the more relational nature of specialty coffee value chains protects producers against [production and price] risks remains open.” Is that something that can be measured? If so, how? What would that research look like?

**WV:** Measuring risk directly is hard. However, given that risk = probability x impact, a good starting point would be to try to first get an idea of the probability of a certain change in production or price, and consequently check the impact of such changes on income, food security, etc. To get an idea of the probability of a certain change, production and price should be measured over time, in different countries, to get an idea of their variability. This is far more straightforward for prices than for production since variation in the latter may also be due to differences in effort. Therefore, for production risk, some additional information would be required on risk sources, most importantly the weather at as local a scale as possible.

Because we would primarily be interested in the difference in production and price risk between types of buyers, we would need to compare these risks between different channels. Ideally we would make such a comparison for identical farmers at the same point in time. Given that this is not possible, we should control as much as possible for observable farmer characteristics which might influence differences such that we measure the effect of the type of buyer as cleanly as possible. Not an easy task perhaps, but not impossible either.