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Are Sustainable Coffee Certifications Enough to Secure Farmer Livelihoods? The Millenium Development Goals and Nicaragua's Fair Trade Cooperatives

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ABSTRACT *In December 2001, green coffee commodity prices hit a 30-year low. This deepened the livelihood crisis for millions of coffee farmers and rural communities. The specialty coffee industry responded by scaling up several sustainable coffee certification programs, including Fair Trade. This study uses household- and community-level research conducted in Nicaragua from 2000 to 2006 to assess the response to the post-1999 coffee crisis. A participatory action research team surveyed 177 households selling into conventional and Fair Trade markets in 2006. In an effort to dialogue with specialty coffee industry and mainstream development agencies, results are framed within the context of the United Nations Millennium Development Goals. Findings suggest that households connected to Fair Trade cooperatives experienced several positive impacts in education, infrastructure investment, and monetary savings. However, several important livelihoods insecurities, including low incomes, high emigration, and food insecurity, persisted among all small-scale producers.*

En diciembre de 2001, los precios del bien de consumo de café verde alcanzaron su nivel más bajo en 30 años. Esto ha aumentado la crisis del sustento a millones de cultivadores de café y comunidades rurales. La industria especializada del café respondió perfeccionando varios programas de certificación del café sustentable, que incluye el comercio justo. Este estudio

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utiliza una investigación a nivel doméstico y de comunidad conducido en Nicaragua desde el 2000 al 2006 para evaluar la respuesta a la crisis del café después de 1999. Un equipo de investigación de acción participativa entrevistó a 177 hogares que vendían a los mercados convencionales y de comercio justo en 2006. En un esfuerzo de dialogar con la industria especializada del café y las agencias de desarrollo convencionales, los resultados se formularon dentro del contexto de las Metas de Desarrollo del Milenio de las Naciones Unidas. Las conclusiones sugieren que los hogares vinculados a las cooperativas de comercio justo experimentaron varios impactos positivos en educación, inversión a la infraestructura y ahorros monetarios. Sin embargo, persistieron varias inseguridades domésticas importantes que incluían ingresos bajos, y alto nivel de migración e inseguridad de alimento entre todos los productores de pequeña escala.

Small-scale Coffee Farmers Negotiate Crisis, Continuity, and Change

The world's leading coffee producing countries, including Brazil, Colombia, Mexico, Indonesia, Ethiopia, Guatemala, and Vietnam, also contain most of the global biodiversity, and high levels of cultural diversity (Topik & Clarence-Smith, 2003). The coffee growing regions in many of these same tropical countries have some of the highest levels of economic poverty (UNDP, 2006). Small-scale coffee farm families sustain much of this biological and cultural diversity through the way they live and manage natural resources (Gliessman, 2006; Moguel & Toledo, 1999). Most Mesoamerican smallholder coffee producing households have a strong subsistence logic, producing half or more of the food consumed in the household (Bacon et al., 2008; Jaffee, 2007; Méndez et al., 2006). These households are also active in the monetary economy through commodity production and wage labor (Hernandez-Navarro, 2004). Smallholder livelihoods were damaged when international coffee commodity prices plummeted between 1999 and 2004. In response to the coffee crisis, NGOs, selected coffee companies, and several coffee producer cooperatives spearheaded efforts to expand sustainable coffee certification programs (Bacon et al., 2008; Oxfam, 2003). These markets, including certified Fair Trade, organic, and Rainforest Alliance coffees, have expanded rapidly since the late 1990s (Daviron & Ponte, 2005; Kilian et al., 2006).

This study contributes to a growing body of interdisciplinary research assessing household- and community-level effects of participation in sustainable coffee certification programs. It also uses long-term empirical research to raise critical questions about the ability of voluntary certification programs to deliver on their noble goals, and questions power asymmetries in value chain governance. It contributes to a growing literature that uses coffee as an entry point to study the relationships connecting consumers, industry, and civil society with sustainable development in the tropics (Bacon et al., 2008; Daviron & Ponte, 2005; Goodman, 2008; Goodman, 2004; Jaffee, 2007; Levi & Linton, 2003; Lyon, 2007; Mutersbaugh, 2004; Raynolds et al., 2007; Renard, 1999; Macdonald, 2007). This paper begins with a short discussion of coffee markets, farmer livelihoods, and sustainable community development. The third section describes the participatory action research approach and poses a reflexive approach to the Millennium Development Goals. The next section provides the background for interpreting the case study. The fifth section summarizes research findings. The discussion identifies several reasons why most coffee farmer livelihoods remain precarious, and poses several strategies to improve the more promising sustainable coffee partnerships.

The Coffee Crisis, Specialty Markets, and Sustainable Community Development

Green (unprocessed) coffee commodity prices hit a 30-year low in December 2001; discounted for inflation, the real coffee prices were among the lowest in history. Small-scale farm families initially reacted to their crashing household incomes through a combination of increased migration and declining expenditures in education, health care, and housing (Varangis et al., 2003). In Central America, the World Food Program declared a food security emergency as farmers went hungry in most coffee producing regions (World Food Program et al., 2003). Primary school attendance rates also plummeted. Smallholders' efforts to meet basic human needs halted nearly all on-farm investments, while other coffee farmers sacrificed the biodiversity associated with shade coffee when they switched from coffee production to cattle ranching. The economic impacts rippled through coffee dependent economies as millions of jobs disappeared and thousands lost their farms (CEPAL, 2002; Gresser & Tickell, 2002).

In response to the coffee crisis, many development agencies advocated increasing coffee sales into certified coffee networks and the rapidly expanding specialty coffee market. Companies within the \$11 billion specialty coffee industry invested more resources into efforts to improve coffee quality and sustainability than their counterparts that sell conventional coffees into the \$80 billion global coffee market (Bacon et al., 2008; Liu, 2007). In producing countries, more small-scale farmers united to create stronger producer organizations. International NGOs, such as SETEM, Lutheran World Relief, Oxfam, Coffee Kids, and Twin Trading, have also supported producer-led efforts to build effective cooperatives. Several coffee companies, governments, and foundations invested in building more demand for certified sustainable coffees and undertook social development projects.¹ The long-term effects of these investments and socially conscious coffee markets are unmeasured.

A Reflexive Approach to the Millennium Development Goals

This research combines a contextual analysis with a participatory approach to sustainable livelihoods (Bebbington, 2000, p. 498; Fox, 2006; Scoones, 1998). The team used five of the eight Millennium Development Goals (MDGs) to frame results. The Goals contain a set of common indicators useful for comparing social development conditions among coffee smallholders with national and international averages. The results section uses the Goals associated with poverty reduction, gender equity, environmental sustainability, and partnerships for development (MDGs 1, 2, 3, 7, and 8) (UNDP, 2006). Researchers have critiqued the Millennium Development Goals for their failure to explain the historic, political, and economic roots of poverty (Weber, 2007). Others have noted divergences between the Goals and rights-based approaches to development (Nelson, 2007). Although this study does not address the important consequences behind this second critique, it includes an analysis of the historic context and addresses the political economy of coffee commodity chains.

Research Methods and Population

This section presents a case study based on more than six years of fieldwork and a 177 household survey conducted in northern Nicaragua between June and September of 2006. Nicaraguan small-scale coffee farmers are broadly similar to millions of small-scale farmers throughout Latin America and the Caribbean. Nicaragua has also emerged as a leading producer of specialty and sustainable coffees. The research team, which included researchers from the local university

and youth from the coffee growing communities, also conducted six focus groups with cooperative leaders. Survey data results were reviewed and triangulated within the database and against cooperative records. To assess the effects of sustainable coffee certification programs, the team initially identified a core group of 22 farm households already selling a portion of their coffee to organic Fair Trade markets since 1997. Since the initial study in 2000, subsequent studies have included these households and expanded the population to include comparable farmers within the same district (Bacon, 2005). The 177 households in this study were stratified in the following way: 101 households were members of the CECOCAFEN cooperative union, which has been Fair Trade certified since 1997; 61 farmers sold their coffee via conventional markets; and a third group of 15 growers had sold certified organic coffee for the past three years.

Coffee and Revolution: A Short History of the Golden Bean in Nicaragua

Two centuries after people brought coffee to Nicaragua, the ‘golden bean’ has become an important crop for small-scale farmers. This was not always the story. In the late nineteenth century, the Nicaraguan government offered large land grants, infrastructure, and credit to encourage its political allies, mostly foreigners and elite nationals, to expand coffee production into lands that were then controlled by Chorotegas, Náhuatls, Summo, Matagalpas, and other indigenous peoples. German and Italian immigrants were among the first to settle in these areas. During the last century, indigenous small-scale farmers, many of whom were once workers on large estates, have accessed land and incorporated coffee into their diverse farming systems (Westphal, 2008). In this way, coffee also became an important crop for small-scale farmers.

The combined effects of war, political change, and both economic and natural disasters left most Nicaraguan coffee growers with precarious livelihoods and semi-abandoned farms in the early twenty-first century. Many producers had not applied any type of fertilizer (organic or synthetic) in more than 15 years. Coffee trees were old and damaged and their total production low. Although it is important to note that smallholders measure total yields in terms of the fruits, firewood, and other plants harvested from the shade trees above their coffee plots, overall coffee yields averaged only 406 pounds of exportable coffee per hectare in 2005 (CAFENICA, 2006b; UNICAFE, 2003). Most rural communities were still working to recuperate after more than 10 years of war. Cooperatives often served as a place for reconciliation where ex-combatants from both the Sandinista and Contra groups came together in search of improved livelihoods.

Fair Trade Cooperatives

In the 1990s Nicaragua’s government changed, certified Fair Trade and organic specialty coffee markets expanded rapidly, and a second generation of small-scale cooperatives unions emerged (Bacon, forthcoming). Most of the cooperatives created by the government in the 1980s collapsed, but the cooperatives that combined bottom-up organizing with alternative trade organizations and support from international NGO networks often survived. As the certified Fair Trade markets grew, so did the number of participating cooperatives and their affiliated farmers. In 2005, 20% of Nicaragua’s 31,000 coffee farmers were connected to cooperatives selling into these networks (TransFair USA, 2005; UNICAFE, 2003). However, most of these farmers sold less than 20% of their coffee via these preferred markets and very few households were even aware of their participation in Fair Trade networks (Bacon, 2005).

Nicaraguan Coffee Economy and Crisis

Despite many farmers' continuing struggles, coffee has been an engine of Nicaragua's economic development for more than a century. In the late 1990s, coffee production and processing activities contributed \$140 million per year to the national economy, and provided the equivalent of 280,000 permanent agricultural jobs (Bandana & Allgood, 2001). Coffee is among the nation's primary sources of foreign exchange and provides the economic backbone for thousands of rural communities.

A size-based producer typology helps structure a discussion related to several impacts of the coffee crisis. There are about 31,000 coffee farming operations, of which 94% are small-scale family farms managing less than 10 hectares (25 acres). Land distribution and coffee production remain uneven: 6% of the coffee farmers control 42% of the land in coffee production (UNICAFE, 2003). The impacts to small-scale and micro producers (less than 14 hectares) included rapidly declining incomes resulting in hunger, crop abandonment, and a series of issues that we explore more deeply in the following sections. The owners of medium-scale farms (14–35 hectares) often stopped employing farmworkers and decreased management intensity. The largest plantations (more than 35 hectares) employed most of the farm workers and had higher monetary costs of production (US\$0.74–1.08/lb) due to dense cropping patterns, dependence on paid labor, and intensive chemical inputs. When international coffee prices were high, high yields and low wages contributed to a profitable operation. When the prices fell below the costs of production, banks stopped offering credit and foreclosed on debt-ridden large landholdings.

Case Study Findings: Coffee Farmer Livelihoods and the Millennium Development Goals

This section presents household-level findings within the context of the Millennium Development Goals. The results for all 177 household are presented together, except in cases where the authors identified a significant effect related to participation in different cooperatives and certified coffee networks. The median coffee production area was 2.1 hectares (excluding outliers, the range was from 25.9 to 0.7 hectares). All farmers were located in prime coffee growing territories and more than 80% at altitudes above 900 m.

Millennium Development Goal 1: Eradicate Extreme Poverty and Hunger

Coffee is an important part of the small-scale farm household economy. All the surveyed households used coffee sales to pay for basic needs including food, clothing, education, health care, and housing. Small-scale farmer coffee cooperatives have helped producers receive better prices and provided access to credit and technical assistance. They have also provided emergency food aid during times of crisis and promoted a wide diversity of economic, environmental, and social development projects. All of these programs have helped reduce the effects of extreme poverty and hunger. To supplement coffee income, most households also grow their own food, migrate, and seek off-farm employment. However, job opportunities are limited in a country with an unemployment rate of over 40%. In Nicaragua, extreme poverty rates (the number of people surviving on the equivalent of less than \$1 per day) are estimated at between 42 and 45% (ASDI, 2005; CEPAL, 2006; World Bank, 2007).

The study results offer three insights into the limitations of coffee production in addressing the first Millennium Development Goal. First, small-scale farmer coffee sales contributed less than a dollar per day per person within the surveyed households. The 171 households produced an average of 2,490 lb of green coffee per year.² The average price farmers received for their coffee was US\$ 0.93/lb, thus the estimated annual gross income from coffee sales was \$2,315.70. The minimum estimated monetary production costs, which are not sufficient to cover the costs of sustainable production since they neither compensate farmers for their labor nor include depreciation costs, were about 0.54/lb.³ This results in an average net household income of about \$971.10 per year. There was an average of seven people per household; this leaves \$137.73 per person per year from coffee sales. The final step in this calculation shows that average net coffee sales contributed about \$0.38/day per person. It is important to note that these averages obscure a wide range of results depending on total coffee yields, prices, and the number of individuals per household. Yet, it is clear that the combination of current coffee sales alone is insufficient to eliminate extreme poverty.

A second issue concerns the implied wage that small-scale farmers receive for work in the coffee fields (Calo & Wise, 2005). The wage is implied since small-scale producers do not receive a daily wage for their coffee work, but a combination of credit and payments for the coffee produced and sold. This study did not gather enough data to directly measure the income from days worked in coffee production; however, most households did contract some external labor and were generally paid \$1.50–4.00 per day for this work.

Finally, hunger is a pressing issue in Nicaragua. A recent report estimates that 27% of the nation's population was below minimum nutrition levels in 2005 (World Bank, 2007). Small-scale coffee farm households use harvests from the land they farm, family/community social networks, government support programs, monetary income—including the revenue generated from coffee sales—and credit to help ensure household food security. Coffee farm households are generally better off than other small-scale farmers and rural workers in the lower and drier regions of Nicaragua. Among surveyed households, 123 (69%) stated that at some time they have been unable to meet their basic nutritional needs. Most households surveyed (65%) grow more than half of the food they eat. This strategy is threatened because many farmers fear losing their land. Of the surveyed households, 20% perceived a risk that they could lose their farm. During the worst periods of the 1999–2002 coffee crisis, more than 3,000 farms, close to 10% of Nicaragua's coffee farmers, lost their land to bank foreclosures and debt accumulation (CEPAL, 2002). Meanwhile, 33% of the surveyed households have at least one family member who emigrated during the last two years; 28% stated that the migration was for economic reasons. The most common destinations were other Central American countries (69% of the households with a migrating member) and the USA (10%). These household and individual experiences of limited income, poverty, hunger, and migration among coffee grower provide an important snapshot of conditions related to the first Millennium Development Goal.

Millennium Development Goal 2: Achieve Universal Primary School Education

The average adult surveyed in this study completed five years of public schooling. The results summarized in Table 1 separate households affiliated with Fair Trade cooperatives for more than seven years and those affiliated with cooperatives selling into conventional markets. There are significant differences between the two groups. It should be noted that these strong differences were not detected in comparable international surveys conducted in Peru, El Salvador, Mexico,

Table 1. School attendance toward achieving formal education in Nicaragua

Indicators	Households in cooperative unions selling to Fair Trade markets	Households in co-operative unions not selling to certified markets	National average	Millennium Development target
Primary school attendance (7–12 years), children currently attending class	124 of 128 97%	48 of 65 74%	88%*	100%
Secondary school attendance school (13–17 years)	110 of 131 84%	27 of 51 53%	41%*	No target set
Youth (18–25 years old) who have completed primary education	73 of 270 27%	11 of 100 11%	**	100% by 2015**

Source: Household surveys for this population; *Data from 2005 (PNUD, 2006, p. 325). **86% literacy rates in this age group based on data for 2003 from World Bank, 2007.

and Guatemala (Arnould et al., 2006; Méndez et al., 2006). However, some of these differences are probably due to the strong commitment to education demonstrated in the early 1980s in Nicaragua and the fact that leaders within many Fair Trade cooperatives have sought to expand upon this ethic. The Fair Trade cooperatives invested funds from coffee sales and support from international NGOs in educational scholarships; 49% of the households affiliated with Fair Trade cooperatives said they have received support for their educational efforts, while only 20% of the households affiliated with cooperatives selling into conventional markets provided this assistance. Nicaragua's two largest Fair Trade cooperatives, CECOCAFEN and PRODECOOP, awarded more than 370 scholarships and provided basic literacy training to more than 350 adults by the end of 2006 (Bacon, 2006; PRODECOOP, 2005).

Millennium Development Goal 3: Promote Gender Equality and Women's Empowerment

This survey shows uneven progress toward achieving women's equality in terms of both political participation and productive asset ownership within small-scale farm households and their cooperatives. A recent study estimated that 20–30% of Nicaragua's cooperative members were female (Chamorro, 2005). The three leading Fair Trade cooperatives also have female managers, but within these cooperatives gender relationships remain very uneven (Bacon, forthcoming). Other indicators for assessing gender equality are women's access to financial resources (credit and savings) and their legal ownership of productive assets, such as land titles (CINCO, 2005; CMRDPT, 2007). In this population, 47% of the 37 women who answered questions about credit claimed to have access; the percentages were higher among female members of the cooperatives connected to Fair Trade networks. A national survey in Nicaragua found that only 14% of the women in rural areas had access to credit in 2001 (CENAGRO, 2001).

This research uncovered at least one way that uneven gender relationships contributed to unequal compensation for women's work on coffee farms. Women worked an average of 77 days per year in coffee farms affiliated with Fair Trade networks, but only 33 days per year in cooperatives selling to commercial networks. However, only 45% of the men in both Fair Trade and conventional cooperatives claimed to share coffee sales with their spouses. In most cases, men were the official members of the cooperatives and they received payment for their coffee. The consequences of this inequality are exacerbated by high rates of male alcoholism. Although there is a dearth of support networks in rural areas, many cooperatives in Nicaragua are beginning to address these inequalities by promoting female and youth cooperative membership, community development and education programs, and gender training (Bird et al., 2007). However, direct incentives and more investments are needed to strengthen these incipient programs.

Millennium Development Goal 7: Support Environmental Sustainability

Shade coffee landscapes are important for their ability to conserve biodiversity, mitigate some effects of climate change, produce clean water, and reduce soil erosion (Dietsch & Philpott, 2008 this issue; Méndez & Bacon, 2006; Méndez et al., 2007; Moguel & Toledo, 1999; Perfecto et al., 1996). The largest representative body of smallholder coffee farmers in Nicaragua, CAFENICA, found that the Fair Trade cooperatives manage land containing 156 tree species, 292 orchid species, and 390 bird species many of which are in danger of extinction (CAFENICA, 2006a). Although shade coffee farms help conserve surface water and soil, coffee farms that lack water filtration systems can also contaminate the water they use to depulp and wash the coffee. In the study population, 68% of the Fair Trade farmers, and 40% of those selling to conventional markets, had implemented ecological water purification systems. Finally, 43% of the households selling to Fair Trade certified cooperatives had implemented soil and water conservation practices, compared to only 10% of the non-Fair Trade households. These findings demonstrate the significant—and uncompensated—contributions that many cooperatives and small-scale coffee farmers already make toward achieving the seventh Millennium Development Goal.

Millennium Development Goal 8: Promoting a Global Partnership for Development

The final Millennium Development Goal promotes a combination of activities intended to create a partnership for global development. This study indicates that a strong regional cooperative union, owned by small-scale farmers and their community-level cooperatives, is the primary partner supporting small-scale farmers' integration into global markets. This partnership has often been formed with importers, roasters, retailers, NGOs, and consumers within the specialty coffee industry. Networks of certification agencies, such as the Fair Trade Labeling Organizations International, are examples of institutions making tangible contributions toward a partnership for global development. However, these partnerships do not necessarily work equally for all partners; we argue that the governance, standards and outcomes of these partnerships need to be more thoroughly assessed.

An important strategy related to the eighth goal is to promote partnerships that build business capacity and provide access to markets. In this study, 137 out of 177 farmers stated that the cooperative provided them with better coffee prices; 100% of farmers connected to the FLO-certified cooperatives made this claim, as did 50% of the households connected to the noncertified

cooperatives. Small-scale farmers associated with both types of cooperatives reported that their organizations provided valuable support during the coffee crisis and other emergencies. Examples of this support include food aid, emergency loans, and ad hoc support for medical care. In comparison to the rest of the farmers in the study, the households affiliated with the FLO-certified cooperatives received an average of six more days of technical assistance. Finally, households reported that the cooperatives helped them link to NGO-led and importer/roaster sponsored community development projects, including scholarships for education, coffee quality training, and micro credit programs.

Members of Fair Trade certified cooperatives were also more likely to have access to preharvest credit—77% versus 33%. This credit represents an important partnership for global development that includes participation from international development banks and foundations (such as the Green Development Fund and Rabobank) and mission-driven Fair Trade coffee buyers. Interest rates have declined due to admirable efforts by green development finance agencies. However, many cooperatives outside the Fair Trade system do not have access to credit and the credit to Fair Trade cooperatives remains insufficient. In fact, most Fair Trade cooperatives could only access short-term financing. In 2005, interest rates were generally between 7 and 10% to the cooperatives. This translates to 12–18% at the farm level and millions of dollars spent in interest every year. Members of these cooperatives connected to certified markets paid an average of \$158.56 per year compared to \$55.98 paid by the average household selling to conventional markets. However, these interest payments help to support their cooperatives and these loans are also associated with the higher investment rates found on the farms affiliated with the cooperatives connected certified markets.

Strategies to Confront the Coffee Crisis

The case study findings reveal that small-scale coffee farmer livelihoods are complex, often precarious, and that their conditions still do not meet several important human development standards. These results suggest that fairer trade relationships, increased investment, and creative community development approaches are needed to achieve the targets established by the Millennium Development Goals in coffee growing territories. This analysis is consistent with many global assessments that show the inability of most countries and the international community to work effectively together and deliver on their commitment to meet the Goals by 2015 (PNUD, 2006; World Bank, 2007).

Why are Small-scale Farmers Still in a Difficult Situation?

Declining real coffee prices and increasing costs for sustainable coffee production have caught farmer households in a dangerous price-cost squeeze (see Figure 1) (CLAC, 2006; Gliessman, 2006; Talbot, 2004). Figure 1 shows real coffee prices discounted for inflation, including the international price and the Fair Trade minimum price.

At the same time that the real price of their primary cash crop was falling, small-scale farmers suffered rising costs for sustainable coffee production (CLAC, 2006). A study conducted by the Latin American and Caribbean Network of Fair Trade Small-Farmer Cooperatives demonstrates that the costs of certified organic and Fair Trade production have continued to rise while the sustainable coffee price premiums have remained stagnant. The costs of sustainable production include both monetary costs directly associated with producing, processing, and certifying coffee (such as coffee quality improvement investments, marketing expenditures, and interest

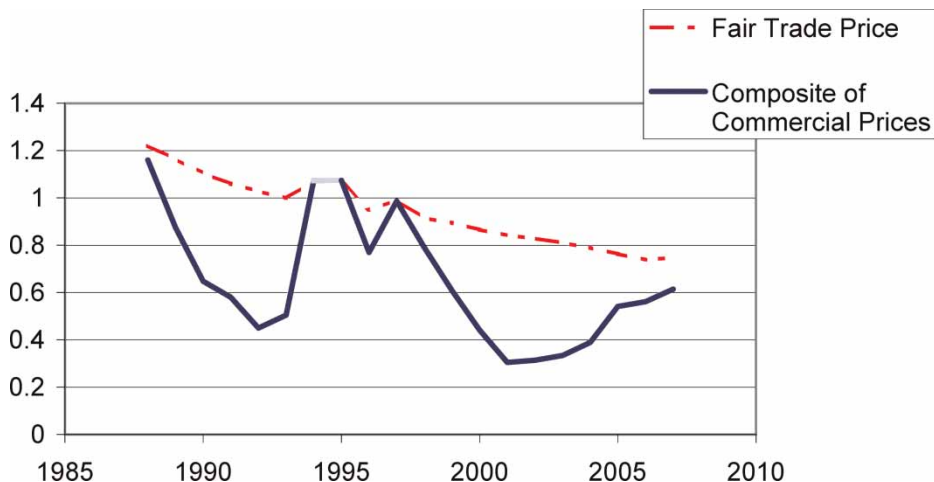


Figure 1. Real Commercial vs. Real Fair Trade Coffee Prices 1988–2007 (1988 US\$). *Source:* Updated from CLAC 2006, FLO 2007. Commercial prices are a composite generated from the International Coffee Organization (ICO, 2008). Prices discounted with the US Department of Labor’s Consumer Price Index Inflation Calculator (US Department of Labor, 2008). *Note:* There are several periods when the nominal international coffee prices exceeded Fair Trade minimum prices, such as this period from 1994 to 1995. This happened again in 1997. The 2007 and 2008 increases Fair Trade social premium and organic differential make this situation less likely in the future. This figure does not include data for coffee that is certified both organic and Fair Trade. The source data for Fair Trade price includes nominal price increases including in 1995 and 2007, although it does not consider planned increase for June 2008.

payments) and the revenues necessary to help sustain farmer livelihoods, democratic organizing practices, and the environment. In response to the CLAC’s proposal, advocacy from several movement organizations, and this research, the FLO board of directors recently increased Fair Trade coffee prices by 7–11% (CLAC, 2006; FLO, 2008). This positive move has not been matched by competing sustainability coffee certification programs, which do not guarantee minimum prices or established premiums. However, these changes were below those recommended in the study and fail to keep up with inflation.

How can Capable and Accountable Small-scale Farmer Cooperatives be Built?

This question is best asked and answered *with* the producer groups and their representative associations. A core strategy to improve small-scale farmer livelihoods and promote collective empowerment is to develop and maintain representative, efficient, accountable, and productive producer cooperatives. These cooperatives, many of which are unions of smaller community-level cooperatives, have provided valuable economic, political, and legal support to small-scale farmers seeking to defend their land against speculators, large landholders, and high debts. The cooperative unions also support their members with technical assistance, scholarships to send their children to school, and even limited support for housing and healthcare expenses. Finally, these cooperatives serve as bridging partners, connecting small-scale farmers to buyers in the specialty and certified coffee markets.

Strategies for effective small-scale farmer organizational development combine local/indigenous knowledge, political legitimacy, and endogenous leadership with effective business

capacity. It is difficult to find and cultivate this combination of leadership values, skills, and knowledge. Long-term partnerships with 'socially responsible' businesses and international NGOs networks often play an important supporting role. In Nicaragua, many cooperatives were formed in the 1980s, but only a few have survived neoliberal politics since 1990. Most of those continuing today have combined a collective struggle for land and political voice with strong internal business and local development strategies. Since the 1990s, Fair Trade certifications and 'socially responsible' coffee companies have supported these processes. However, many dynamic tensions accompany this dual accountability to international markets and small-scale farmer members (Bacon et al., 2008; Mutersbaugh, 2004). Development projects and governments could provide more support to small-scale farmers in their efforts to hold their organizations accountable.

There are several important benefits from membership in cooperative unions linked to Fair Trade markets and international development networks: 61% of all surveyed households increased investments on their farms, and 31% improved their houses. In the case of house improvements, 46% of the households connected to a strong Fair Trade cooperative improved their houses, while only 10% of the households that lacked these connections made similar improvements. Furthermore, 23% of the Fair Trade households purchased land during the last three years, while less than 10% of the households connected only to conventional markets purchased land during the same period. These results suggest that certified coffee markets and committed coffee buyers have played an important role in small-scale farmer local development processes.

Sustainable Coffee Certification, Coffee Buyers, and Small-scale Farmers

Our findings suggest that current conditions are difficult for most small-scale farmers in Nicaragua. However, those linked to Fair Trade cooperatives are more educated, and have more investment, and better access to credit. Fair Trade certification and the international development networks that have supported many of the producer associations and cooperatives that receive this certification have created an enabling environment supporting the growth and strengthening of small-scale farmer cooperative unions. They have also connected many specialty coffee businesses directly to small-scale farmer cooperatives instead of private or multinational export companies. This has resulted in several important benefits that have improved small-scale farmers' livelihoods and in many cases decreased their vulnerability (Arnould et al., 2006; Bacon, 2005; Jaffee, 2007; Reynolds, 2002).

The proliferation of sustainable certification programs, including Utz Kapeh, Rainforest Alliance, Fair Trade, organic, and Starbuck's CAFE Practices, has resulted in new opportunities, benefits, costs, and complications for smallholders and their organizations (Giovannucci & Ponte, 2005; Mutersbaugh, 2004). Organic and Fair Trade certification systems have more small-scale farmer involvement than the Utz Certified and Rainforest Alliance systems, which initially focused their efforts on larger landholdings (Kilian et al., 2004; Reynolds et al., 2007), whereas many small-scale farmers and their organizations have been connected to Fair Trade and organic systems since the mid-1990s. After 2004, some small-scale farmer cooperatives have connected to Rainforest Alliance, Utz Certified, and Starbuck's CAFE Practices certification programs. This sequence of events makes it difficult to assess the effects of participation in these newer certification systems on small-scale farmer livelihoods. Small-scale farmer organizations have a more active role in the governance of the Fair Trade system (including seats on the FLO board of directors) and many organizations have

maintained a critical and constructive position within the Fair Trade movement, demonstrating their preference for this system over others (CLAC, 2006).

Conclusions: Next steps in the Partnerships for Sustainable Coffee

Small-scale farmer families have provided coffee to global markets for centuries. Their continued survival also gives life to many endangered indigenous cultures and sustains delicate mountain environments (Prechtel, 2003). The coffee beans and marketing stories they export, the jobs they generate, and the taxes they pay are their contributions to a partnership with their governments and the global coffee industry. While this partnership has sustained the industry (Talbot, 2004), and provided some benefits to the export elites (Paige, 1999), most small-scale farmers annually generate less than a dollar per day per person from their coffee sales. Many individuals in these regions do not enjoy even the basic human needs codified in the Millennium Development Goals. This partnership has not worked well for most small-scale farmers.

This study's findings call for a renewed commitment to existing relationships with small-scale producer cooperatives and their communities. This renewed partnership will link governments, small-scale farmer organizations, civil society organizations, certification agencies, and the specialty coffee industry together in an effort to achieve the Millennium Development Goals in Nicaragua and all coffee growing territories. The specialty coffee industry has been a leader among industry associations in commitments to both quality and sustainability—this is a chance to take this commitment to the next level with one group of important suppliers. This commitment must offer the terms of trade (prices), access to credit, training, social and productive development investments necessary to overcome decades of exclusion. Above all this will be a space to encourage creative and collaborative ideas for change. The fact that most small-scale farmers work diligently to provide this coffee, yet continue to struggle to stay on their land, educate their children beyond sixth grade, and feed their families should no longer be acceptable within this partnership.

If governments provide basic social services and the coffee industry increases prices and investments, producer organizations should be expected to increase transparency, accountability, and efficiency. These co-investments improve basic living conditions as well as increase coffee yields and coffee quality. Innovative diversification projects and mutually beneficial partnerships will grow as trust is reconvened and the industry establishes a fairer distribution of costs and benefits. These changing attitudes and actions will move all partners forward in the process of moving beyond specific goals and towards achieving basic human rights and creating more secure and sustainable livelihoods with small-scale coffee farm families.

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Notes

- 1 See the work of Crosby et al. (2002), Katzeff et al. (2002), and PEARL (2007) for examples of innovative strategies and projects to create sustainable chains within the specialty coffee industry.
- 2 The average production increases to 4,000 lb when we include the six largest farms in the study.
- 3 This cost estimate does not include farmers' labor time, training time, costs for farm-based quality improvement investments, and the organizational costs associated with creating a participatory and democratic cooperative organization. A study of these 'additional' costs for sustainable production estimated total real costs were from 1.25 to 1.51 US\$/lb for conventional Fair Trade coffee and 1.72 to 2.19 US\$/lb for certified organic Fair Trade coffee (CLAC, 2006).

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