IOWA STATE UNIVERSITY
Digital Repository

Graduate Theses and Dissertations | Graduate College

2015

Production and marketing innovations in Fair Trade and organic coffee cooperatives in the Córdoba-Huatusco corridor in Veracruz, Mexico

Saul Julian Abarca-Orozco
Iowa State University

Follow this and additional works at: http://lib.dr.iastate.edu/etd

 Part of the Agriculture Commons, Quantitative, Qualitative, Comparative, and Historical Methodologies Commons, and the Sustainability Commons

Recommended Citation
Abarca-Orozco, Saul Julian, "Production and marketing innovations in Fair Trade and organic coffee cooperatives in the Córdoba-Huatusco corridor in Veracruz, Mexico" (2015). *Graduate Theses and Dissertations*. 14677.
http://lib.dr.iastate.edu/etd/14677

This Dissertation is brought to you for free and open access by the Graduate College at Iowa State University Digital Repository. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.

Production and marketing innovations in Fair Trade and organic coffee cooperatives in the Córdoba-Huatusco corridor in Veracruz, Mexico

by

Saul J. Abarca Orozco

A dissertation submitted to the graduate faculty

in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Major: Sustainable Agriculture

Program of Study Committee:
Jan L. Flora, Co-Major Professor
Robert. E. Mazur, Co-Major Professor
Cornelia B. Flora
Robert A. Martin
David J. Peters
Cynthia L. Haynes

Iowa State University

Ames, Iowa

2015

Copyright © Saul J. Abarca Orozco, 2015. All rights reserved.

DEDICATION

To my beloved parents, Maria Teresa Orozco and Saul Abarca Gomez, my siblings, Daimon and Anaid, my uncle, Jose Antonio (RIP), and my fiancée Shuyang Qu. Many thanks for your patience, care and love during my Ph.D. program.

TABLE OF CONTENTS

LIST OF TABLES

Page

LIST OF FIGURES

Page

ACRONYMS

AMECAFE	Asociación Mexicana de la Cadena Productiva del Café (Mexican Coffee Production Chain Association)
ASERCA	Agencia de Servicios a la Comercialización y Desarrollo de Mercados Agropecuarios (Agricultural Market Development and Marketing Services Agency)
CNOC	Coordinadora Nacional de Organizaciones Cafetaleras (National Federation of Coffee Organizations)
FIRA	Fideicomisos Instituidos en Relación con la Agricultura (Trust Funds for Agriculture)
FONAES	Fondo Nacional de Apoyo para las Empresas en Solidaridad *(*National Fund for Support of Social Responsibility Firms)
ICA	International Coffee Agreement
ICO	International Coffee Organization
IFPRI	The International Food Policy Research Institute
IMF	International Monetary Fund
INMECAFE	Instituto Mexicano del Café (Mexican Coffee Institute).
INVEDER	Instituto Veracruzano para el Desarrollo Rural (Veracruz Institute for Rural Development)
ISMAM	Indígenas de la Sierra Madre de Motozintla (Indigenous Peoples of the Sierra Madre of Motozintla)
MNC	Multinational Corporations

NCA	National Coffee Association (US)
REDCAFES	Red Nacional de Organizaciones Cafetaleras Sustentables, AC. (National Network of Sustainable Coffee Organizations)
SAGARPA	Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación (Agriculture, Livestock, Rural Development, Fisheries and Food Secretariat)
SCAA	Specialty Coffee Association of America.
SCC	Smallholder Coffee Cooperative
SCF	Small Coffee Farmer
SCHP	Secretaría de Hacienda y Crédito Público
SEDESOL	Secretaría de Desarollo Social
SIAP	Sistema de Información Agroalimentaria y Pesquera (National Service for Agrifood and Fisheries Information)
UCIRI	Unión de Comunidades Indígenas de la Región del Istmo (Union of Indigenous Peasants of the Isthmus Region)
USAID	United States Agency for International Development
WFTO	World Fair Trade Organization
WTO	World Trade Organization

ACKNOWLEDGEMENTS

The writing of my dissertation has been one of the most challenging endeavors of my academic life. First, I would like to thank my committee chairs, Jan L. Flora and Robert E. Mazur, without their remarkable support, patience, and guidance I would never have been able to finish my dissertation. My deepest gratitude to my committee members, Robert A. Martin, Cornelia B. Flora, David J. Peters, and Cynthia L. Haynes, for their guidance and support throughout the course of this research. I would also like to thank professors Marta Maldonado and David Schweingruber for their valuable contributions to my understanding of qualitative research and methodologies.

During the dissertation writing process I also had the support from many friends and colleagues. I would like to thank my officemates Diego Thompson, Claudia M. Prado Meza, Caroline Oliveira and Hector Bombiella Medina for their friendship, advice, and for making the hours spent at East Hall more pleasant. My friends Angie Carter, Maria Van Der Maaten, Jean McGuire, Adam Wilke, Ben and Amy Shin, Silvina Lopez, Andres Sepulveda, Angelica Reina, Ka lai Ng Puga, Vilma Mateos, Luis Gabriel Gimenez, Melissa Milla, and all my friends that I've not mentioned, I appreciate your love and care. The department staff, particularly Rachel Burlingame, Deb McKay, Renea Miller, Nick Van Berkum, Dwight Dake and Charles Sauer (former Sustainable Agriculture Program Coordinator), for making my time at Iowa State University a great experience.

My deepest appreciation to my research participants who were willing to partake in my focus groups, individual interviews and observations, without whom, this dissertation would not have been possible. I would also like to thank Roberto Martinez Herrera, Marco Antonio Cordoba Arroyo and their families for all the support provided while I was in Mexico conducting

this research. My family for their encouragement and to my fiancée for her hours of patience, respect, and love.

Finally, this research would not have been possible without the financial support of the College of Agriculture and Life Sciences (CALS). Thanks to Dr. Lorna M. Butler and Dr. Robert O. Butler for the Butler International Travel grant, which I was awarded to travel to Mexico to conduct my research. Also, thanks to the Organization of American States for providing me with the initial funding to begin my PhD program and the National Council of Science and Technology (CONACyT) for its financial support during my studies, especially the monthly stipend provided during the period I was writing my findings.

ABSTRACT

The conditions brought about by neoliberal policies represented challenges, but also opportunities, for smallholder coffee cooperatives (SCCs) and their farmers to change practices. This study focuses on the production, processing, marketing, and organizational innovations that result from coffee farmers taking the decision to form cooperatives for the purpose of marketing their coffee as a specialty crop (Fair Trade/organic) rather than simply as a commodity. These innovations are examined at both the level of the cooperative and the individual farm. Field research was conducted in the Córdoba-Huatusco corridor from July to October 2013, where six coffee cooperatives and an independent group of seven conventional farmers agreed to participate in this study. For SCCs, challenges, such as increasing production costs, stagnant coffee prices, and lack of low-or moderate-interest credit options, have reduced their opportunities to make a living through their participation in the coffee value chain. Chapter 2 examines how changes in agricultural policies, particularly government financial support programs for the coffee sector, have influenced the responses of SCCs to changes in the market.

Since market liberalization occurred in Mexico, the Mexican government implemented several economic policies to comply with the rules and regulations imposed by international organizations. Multinational corporations vertically integrated in the value chain have become principal actors in international coffee markets. Within markets, cooperatives that received Fair Trade payment for their coffee production attributed their increasing incomes to the following factors. 1) Farmers received more training to improve record keeping; 2) Cooperative leaders are more familiar with procedures and paperwork to obtain certification and re-certification annually on time; and 3) Investments in infrastructure, training, and professionals hired have led to an

increase in the quality of their production. Chapter 3 examined how access to training programs, governance and infrastructure investments contribute to marketing and production/processing innovations in SCCs. Main contributions included improving organizational skills, involving youth and professionals, improving decision-making processes (participation of all members in the SCC), promoting diversification (production and marketing strategies), and investing scarce resources in infrastructure (primarily processing equipment). By providing training to leaders and members of the cooperatives, many of these changes are advanced. Chapter 4, which examines innovations in production members of SCCs have adopted as a result of shifting from conventional to Fair Trade and organic production.

Some innovations were mandated by Fair Trade and organic requirements, and farmers made others on their own as they adjusted to the new regimes. Farmers explained how practices have changed since they have incorporated themselves into the alternative (Fair Trade and organic) markets. SCC farmers implemented the following innovations: composting, especially using organic residues previously considered waste; various techniques to replace old coffee trees that take into account the size of their farms, the quantity of coffee needed annually to obtain a decent income, and the financial resources available; pest management strategies derived from hands-on experiments with natural low-cost remedies; and diversifying the range of crops that could be sold as organic and, subsequently, increase farmers' incomes. Still, there is a lot to learn, but SCC farmers participating in alternative markets have a better chance to succeed and continue working in the coffee sector than most independent conventional farmers.

CHAPTER I.

GENERAL INTRODUCTION

The world coffee production was around 145 million bags from which Mexico produced 4.3 million in the 2012-2013 season (ICO, 2013). Mexico has around 511,000 producers farming over 697,300 hectares (SAGARPA, 2013). World-wide, Fair Trade and organic markets are only about 1-2 % of the total, and the remaining 98% of the market is still in the hands of intermediaries that process conventional coffee (Valkila & Nygren, 2009). The Fair Trade retail sales in 2010 were US$19.4 million for Asia, US$27.8 million for Africa, and US$4.2 million for Latin America (Boonman et al., 2011). In 2008, global sales of Fair Trade certified coffee represented US$30 million for nearly 400 producer organizations (Pay, 2009).

After market liberalization in the Mexican economy in 1994, the coffee sector has been learning to survive a number of difficulties. First, prices have been volatile in the commodity market, partly because of world-wide overproduction. Second, Mexican government policies do not provide any sense of direction or certainty to producers' efforts. Third, vertically integrated multi-national corporations (MNCs) have augmented their financial, political, and economic power at both the international and domestic levels.

Independent small-scale coffee farmers that have not been members of any type of organization often became financially dependent on the market. Before liberalization of markets, many farmers planted subsistence staple crops that helped them alleviate their household food needs. Whenever coffee prices were not enough to satisfy family needs it was easy to go to the backyard garden or to the 'finca' and find some food to eat. After market liberalization, most farmers (distracted by the smoke screen created by a short period of high prices in the international coffee market) began planting more and more coffee trees and fewer staple crops

useful to supplement food for the household. The illusion of high prices was short-lived. When most farmers realized they were entering the coffee market two or three years after the demand was satisfied, prices dropped dramatically and well below the cost of production.

Initially, the Fair Trade movement was conceived as an alternative niche market in which specialized roasting companies sourced coffee directly from smallholder coffee organizations. Over time, the movement evolved into a certification scheme with expanded conventional market bases directed toward mainstream consumers (Murray & Raynolds, 2007 cited in Valkila, 2010).

International mainstream coffee value chain

The supply chain for mainstream coffee is as complex as the number of hands through which coffee beans pass before reaching final consumers; the supply chain can be shortened somewhat if producer groups can process their own beans (Milford, 2004). A simple version involves producers selling their beans to intermediaries who transport the coffee to a processing plant; producers with access to a truck can sell directly to the warehouse of any processing plant. After processing, coffee is sold to an intermediary with connections to an international trader. The local exporter is usually the last link of the chain in the producing country. In the consuming country, roasting companies, usually owned or connected to international traders, either sell to retailers (i.e., supermarkets, restaurants, hotels) or reach final consumers through their own infrastructure such as coffee shops or chain stores. Figure 1 is a visual representation of the mainstream coffee chain (Milford, 2004).

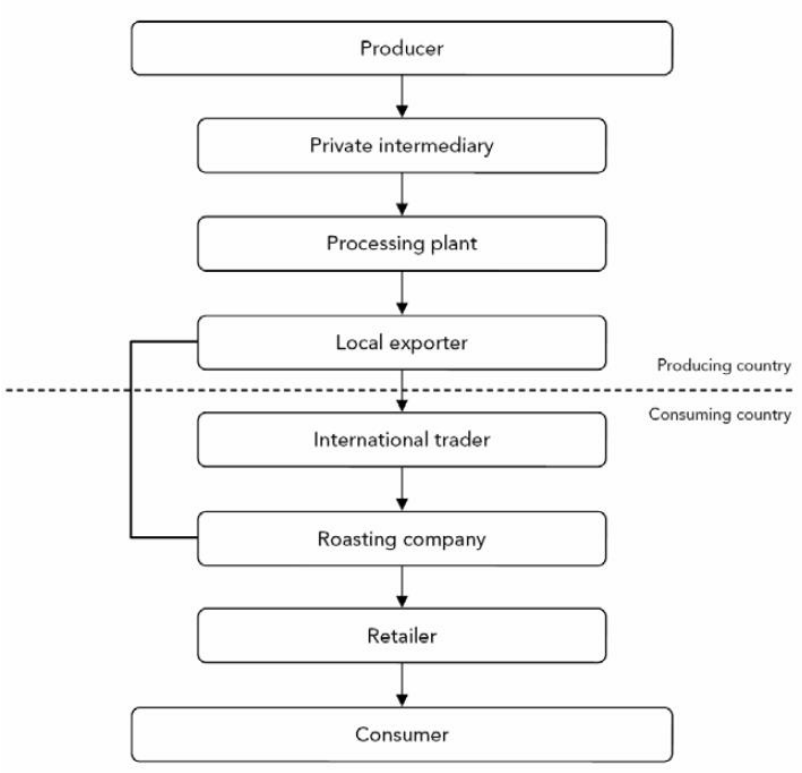

Figure 1-1. The mainstream coffee value chain (Source: Milford, 2004, p. 6)

Consolidation of the coffee industry has brought benefits for a handful of large multinational traders and roasters, but in the global market this concentration has created bottlenecks in a buyer-driven chain. Multinational corporations set the minimum quantities required for declaring a particular origin in their blends; Ponte (2004) notes that previously this was set by governments based on political negotiations under the ICA regime. In other words, Multinational corporations have the ability to affect the buyer-driven chain. Some of the world's largest coffee firms operate in Mexico and purchased coffee in Veracruz; Beneficiadora California is associated with Neumann Kaffee Gruppe AG (NKG; created in 1990 in Germany and currently operating in 28 countries (Neumann Kaffee Gruppe, n.d.). Becafisa is the Mexican

subsidiary of Volcafe Holding Ltd., which was acquired from the ERB group by ED&F Man Holdings Limited founded in England in 2004. There is also Nestlé (Switzerland), which dominates the instant coffee market around the world and has transformed coffee production due to the large amounts of Robusta coffee needed to produce Nescafe (Renard, 2010); Nestlé buys a small percentage of Arabica coffee in Mexico. Most of its business comes from importing large quantities of Robusta coffee from other countries to produce instant coffee (Renard, 2010). Agroindustrias Unidas de Mexico S.A. (Mexican Agroindustries –AMSA) is one of the most important commercial firms in Mexico, and a subsidiary of the ECOM Agroindustrial Corporation group (Renard, 2003; Morales, 2007). ECOM is a global commodity trading and processing company with headquarters in Switzerland, and a strong presence in major producing and consuming countries; their portfolio of business includes coffee, cotton, cocoa, oilseeds and hogs (pigs) (ECOM, n.d.). AMSA buys coffee for both the domestic and export markets. The strategy of this firm has been to provide financial support to 'campesino' groups to grow and process coffee. With their economic power comes the control of the Mexican coffee through the establishment of low prices paid to producers that are not sufficient to cover production costs (Renard, 2010; Morales, 2007).

In the roasting segment of the coffee value chain, there is also a high level of concentration with four companies controlling the coffee market: 1) Nestlé SA (Switzerland) owner of the brands Nescafe, Bonka and Ricore; 2) Kraft Foods Inc. (USA), which owns Maxwell House, Yuba, and Starbucks (in Europe its brands are Maxwell House, Carte Noire, Maxim, Blendy, Gevalia, Jacques Vable, Kenco, Hag and Saimaza); 3) Procter & Gamble (USA) markets the brands Folgers and Millstone (for the ground and instant markets); and 4) Sara Lee Corporation (USA), which owns the brands Hills Bros. and Superior (the latter for the food

service industry); in Europe Sara Lee owns Douwe Egberts, Maison du Café, Marcilla, Merrild, Van Nelle and Senseo, as well as Café do Ponto and Pilao brands in Brazil (Slob, 2006)

Fair Trade coffee value chain

The motive for establishing Fair Trade has been to provide small scale farmer cooperatives the opportunity to sell their coffee through shortened value chains. Fair Trade coffee is typically purchased directly from the producer by the import agents in the North. This involves fewer intermediaries, avoids stock market speculation, and provides a fair price (i.e., a bonus for a cooperative's social projects, and an additional bonus if organic certification is obtained). The Fair Trade system is based on partnerships and long-term commitment ensuring a guaranteed income for growers and stable procurement for buyers (Slob, 2006). Alternative Trade Organizations, such as Equal Exchange and Twin Trading, work with producer organizations registered under the Fair Trade Labeling Organizations International (FLO).

Under the Fair Trade umbrella, producer cooperatives have the opportunity to sell their coffee directly to licensed international traders or Fair-Trade-certified roasting companies (which are small roasters that are not part of the previously mentioned multinational corporations) in consuming countries (Slob, 2006). To guarantee that the benefits of a higher price reach the producer, FLO and national Fair Trade organizations supervise the whole FT value chain. Only trading companies that are willing to respect Fair Trade standards are licensed by FLO. Another key actor in the Fair Trade chain is the *licensee* defined by Slob (2006:26) as: "a company - usually a retailer - that has entered into a License Contract with a FLO National Member for the use of a Fair Trade Label on the product for final sale to consumers." According to the size (number of employees) and nature (plantations or cooperatives) of producer organizations, FLO

charges certification fees to them (USD $2460 – $6396) (World Trade Organization, 2005). The following figure depicts the Fair Trade coffee supply chain (Milford, 2004).

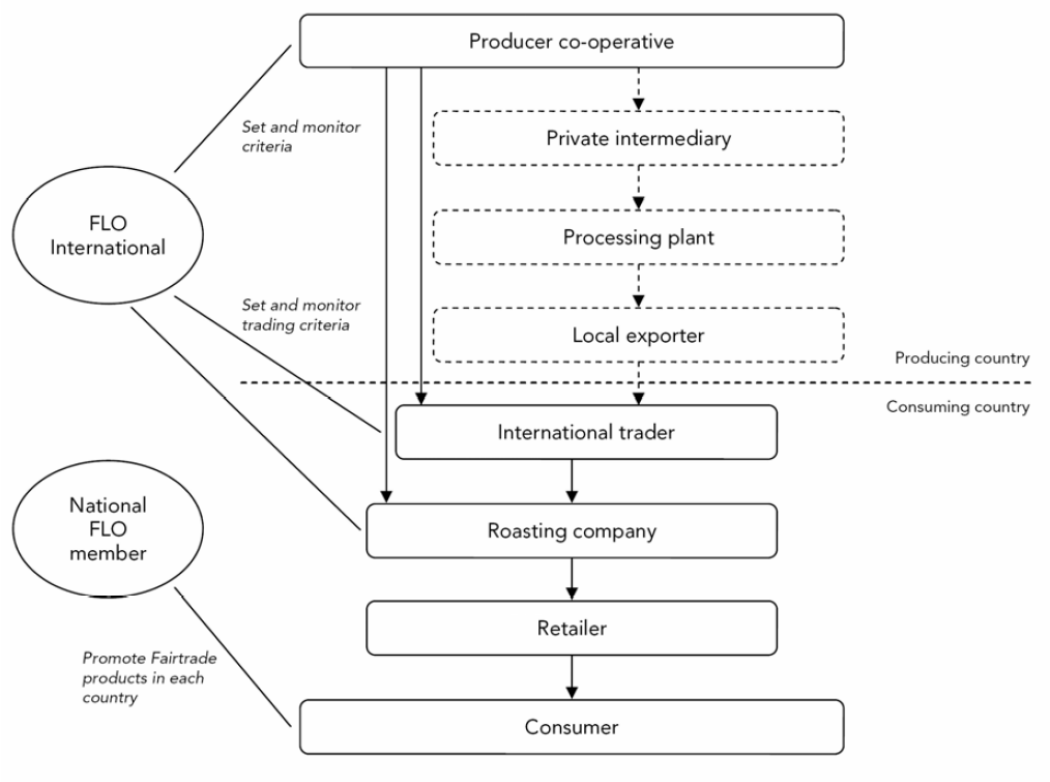

Figure 1-2. The Fair Trade coffee chain (Source: Milford, 2004, p. 9; Slob, 2006).

While the Fair Trade value chain appears to have as many links as does the commercial one, it differs in that the institutions in the producing country (note the dashed, rather than solid, lines around them can be part of the cooperative system. For instance, a producer cooperative can own its own processing plant (called a *beneficio* in Spanish) and the local exporter can be a secondary-level cooperative consisting of a group of producer cooperatives. Thus, ideally the entire producer-country value chain could be owned and controlled (at least indirectly) by the coffee producers themselves.

In addition to following Fair Trade principles, coffee traders/buyers are encouraged to build long-term relationships with coffee producing organizations where rights and interests from both parties are truly respected. In order to sustain a long-term relationship with traders, smallholder coffee cooperatives should be managed in a transparent and democratic manner. Most cooperatives are encouraged to obtain organic certification, though not all of them do. Coffee cooperatives following organic practices contribute even more to the protection of the environment (Slob, 2006). It is worth mentioning that only one firm from France willing to buy Fair Trade/ organic coffee has a strong presence in the area and has been working with some of the Fair Trade/organic SCCs.

In 1992, Jean-Pierre Blanc, Managing Director of Malongo travelled from France to Mexico seeking organic coffees. While in Mexico he was introduced to Father Francisco Van der Hoff and the growers of the Union de Comunidades Indígenas de la Region del Istmo (UCIRI), a Fair Trade cooperative in Oaxaca, Mexico (Fridell, 2006). Malongo's effort resulted in establishment of long term relationships with small scale coffee growers that spread to other states, including Chiapas and Veracruz. This rural family-owned business has positioned itself as a successful French company in Fair Trade coffees following an economic model based on quality ethics (De Ferran & Grunert, 2007). This quality culture is based on traceability standards, preservation of the roasted coffee, respect for the rights of farmers and workers growing the plants, and customer satisfaction (Malongo, n.d.). Malongo's leading role in Fair Trade and bio-coffee sales focuses on the hotel and catering segments, wholesale (selling to large and medium-sized stores), exporting, and online sales (Malongo, n.d.). Only two cooperatives have established a long-term relationship with this French trader. The rest have been trying to sell their coffee on their own and through intermediaries but they have not been successful.

Research questions and organization of the dissertation

Field research was conducted in the Córdoba-Huatusco corridor from July to October 2013, where six coffee cooperatives plus an independent group of seven conventional farmers agreed to participate in this study. For smallholder coffee cooperatives (SCCs), challenges, such as increasing production costs, stagnant coffee prices, and lack of options for credit sources with low interest rates, have reduced their opportunities to make a living from their participation in the coffee value chain. The leading questions are:

Chapter 2: How have changes in agricultural policies, particularly government financial support programs for the coffee sector, influenced the responses of SCCs to changes in the market?

Chapter 3: At the level of the SCCs, how do governance, training programs, and infrastructure investment contribute to marketing innovations?

Chapter 4: What innovations in production have members of SCCs adopted as a result of shifting from conventional production to Fair Trade and organic production? What innovations were mandated by Fair Trade and organic requirements, and which did farmers make on their own as they adjusted to the new regimes?

The global liberalization of markets and the constrained participation of governments in regulating international transactions have allowed multi-national corporations (MNCs) that are vertically integrated in the value chain to be more competitive within markets. Thus, in chapter 2, it is essential to put into context the background information to understand challenges both at the international level and the particular situation of farmers in the Mexican coffee sector. Since market liberalization occurred in Mexico, several economic policies were implemented to comply with the rules and regulations imposed by international organizations such as the World

Trade Organization, the International Monetary Fund and the World Bank. It was an adaptation process that resulted in severe disruptions in various sectors, including the agricultural sector. The following paragraphs explained more in detail the economic policies implemented in Mexico since the early 1980s. The eradication of the import substitution model prevalent in Mexico until the 1980s brought a series of socioeconomic and politically radical transformations affecting all sectors of the Mexican economy, leaving the agricultural sector particularly vulnerable to external factors that before were ameliorated by an activist state. The elimination of tariffs and quotas that before protected local industry and the agricultural sector from fluctuations in the international markets were completely removed in a short period of time. The Mexican political and industrial elites were urged and eager to join other countries in embracing a 'laissez faire' market approach, which very quickly drastically affected the lives of millions of families in urban and rural areas as well. During the first year of his presidency, Carlos Salinas de Gortari removed state control of the coffee market to comply with the structural adjustment policies required by the World Bank and other financial institutions (Renard, 2010). In 1989, the *Instituto Mexicano del Café* (Mexican coffee Institute –INMECAFE) ceased commercial activities; in 1993, the institute was fully dismantled (Renard, 2010). Even during the years that the International Coffee Agreement served as a regulatory framework for international trade (1963-1989), coffee supply exceeded demand and member countries had to either hold on to their coffee or try to sell it in the domestic market. MNCs have used their financial resources, political power, vertically integrated organization, and immediate access to first-hand information to take advantage of market liberalization and the 'structural adjustments' brought by the neoliberal approach to developing countries (Fridell, 2006). It has been difficult for cooperatives to market their products to MNCs, because MNCs pay the lowest price possible to

the farmer so they can get higher margins in international markets. In some coffee production regions, farmers, tired of the difficulties experienced in the conventional market, and the lack of satisfactory options from the government, looked for alternative markets to their products.

Initially new opportunities for farmers came from religious institutions. Faith-based organizations first introduced the concept of Fair Trade markets to producers in Chiapas and Oaxaca. Farmers who lived in rural communities lacked education and experienced limited access to food, income, and basic services. The notion of alternative coffee markets then spread among other producer states, including Veracruz. From a political economy perspective, chapter 2 describes the socio-economic and political situation in Mexico, particularly in Veracruz State, where four key informants and leaders and members of six smallholder coffee cooperatives (SCCs) participated in this study. The SCC leaders and members shared their experiences, challenges, and the strategies they implemented to survive in a highly competitive, unequal, unregulated market; as well as their efforts to participate more fully into what has been called alternative markets.

Chapter 3 analyzes a specific problem for SCCs in the Córdoba-Huatusco region in Veracruz Mexico. Cooperatives have existed in Mexico since the 1950s but the goals of these organizations have changed dramatically in the last 20 years, in part due to long periods of low prices, punctuated by several coffee crises. The abolition of the International Coffee Agreements, the positioning of multinational corporations as new powerful actors in the coffee sector, as well as the entry to the market of countries with high productivity ratios such as Vietnam, have dramatically changed the relationships among actors, markets, governments and farmers. SCCs in Veracruz have experienced changes in the marketing situation that take place faster than a cooperative's organizational structures can adapt. Farmers are looking for alternatives that can

guarantee steady prices and a decent income to sustain their families and farms. SCCs have been introduced to a new set of opportunities developed as an alternative to the commodity market. Their efforts have focused on alternative markets, particularly Fair Trade and organic. However, each organization has experienced a distinct learning process by participating in alternative markets. Varying learning curves have shaped the SCCs' experiences in alternative markets. Some organizations have experienced more challenges than others, and the full benefits of price premiums, innovations and new marketing strategies are not yet completely tangible.

Even though Fair Trade and organic markets offer opportunities for selling coffee at better prices, improving marketing strategies and organizational capacity require a process of adaptation. SCCs need to invest financial, human and political resources to obtain certification as well as access to Fair Trade/organic buyers. Also, large multi-national corporations (MNCs) and their subsidiaries in Mexico have taken control of the mainstream coffee distribution channels, bringing new challenges to cooperatives trying to avoid conventional channels. As discussed further in chapter 3, the market does not provide a level playing field for all participants. In Veracruz, since government agencies and private parties introduced SCCs to the concept of specialty markets, several lessons have been learned by farmers about changes in production, organization and marketing systems over time.

Chapter 4 is focused on the direct experiences of farmers. They explained how practices have changed for them since they entered into the Fair Trade and alternative markets. For farmers in Veracruz, one of their great advantages up to 1989 was that the government agency INMECAFE, which controlled most activities in the coffee sector, had its headquarters in Veracruz. Most of the new technologies, research centers and production practices derived from this organization gave farmers in Veracruz certain advantages over farmers in other states.

However, despite the strong presence of INMECAFE, most farmers did not incorporate the innovation of processing their coffee so it would last longer. Because processing, storage, selling, and most of the logistics for getting the coffee processed was controlled by INMECAFE farmers barely understood how to contact buyers, how to deal with transportation issues, and how to develop marketing strategies. On the one hand, INMECAFE brought certainty and support for farmers over two decades. On the other hand, because INMECAFE's was in charge of most processes after collection of the beans, the structure did not allow farmers the opportunity to learn how to carry out these processes on their own.

Currently, Federal and State financial support are not as strong as even 10 years ago. Farmers face many barriers in accessing financial resources and training and in dealing with government bureaucracy in some agencies distributing financial programs. Chapter 4 will navigate through some of the particular experiences of farmers in the cooperatives participating in this study and the small group of independent farmers. Farmers' insights and perceptions will help to understand the problems they currently face and what are changes and innovations they are implementing to solve recurrent problems. Most farmers agreed that working collectively increases the likelihood of being more competitive in the future. However, it is at the individual level where farmers have the opportunity to improve on-farm practices and to strengthen their organizations.

In general terms, the central thesis of the dissertation relates to the contribution SCCs have made in Veracruz to preserving farmers' livelihoods at the individual level but also in a collective way through cooperatives. To better understand and navigate the conditions brought about by neoliberal policies, SCCs and farmers have focused their efforts on production, marketing and organizational innovations. The impact of these innovations is not completely

visible yet. More research is needed to quantify and observe how much progress will be made in the future by these cooperatives. The SCCs main improvements include refining organizational skills, involving youth and professionals; improving decision-making processes through participation of all SCC members; implementing production and marketing diversification strategies; investing scarce resources in infrastructure, and training for SCC members. Still, there is a lot to learn. Yet SCCs participating in alternative markets have a better chance to succeed and continue working in the coffee sector than most independent conventional farmers and cooperatives.

After the field work for this study was ended, la Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación (SAGARPA; the Secretariat of Agriculture, Livestock, Rural Development, Fisheries and Food), a unit from the Federal Executive Branch of the Government of Mexico organized round tables with different actors in the coffee value chain to develop a new approach for the coffee sector (October 22, 2013). The Secretariat has among its objectives (SAGARPA, 2013):

1) Developing and executing a policy of support, which allows producers to improve their production practices
2) Increasing the efficiency of the competitive advantages inherent in the agricultural, livestock and fisheries sectors
3) Integrating the economic activities from rural areas into larger productive chains
4) Encouraging organizations of producers to initiate economic projects on their own and to propose goals and objectives for the agricultural sector within the National Development Plan.

During the round tables organized by SAGARPA, coffee producers indicated they were in favor of programs promoting coffee production that operates in simple and clear terms with three main goals: Produce quality trees, renovation programs, and support on certification. Coffee producers emphasized the need for policies that support the sustainable development of coffee production and an intensive campaign promoting coffee consumption in the domestic market (SAGARPA, 2013). The efforts of the federal government to provide some resources that help coffee producers to balance their participation in international markets with domestic support is a positive sign in the midst of a scenario of social instability in the country and the abandonment that coffee producers have experienced in the last decade.

In spite of these recent efforts of SAGARPA, SCCs in the Córdoba-Huatusco coffee corridor of Veracruz, Mexico, participating in Fair Trade and organic markets have difficulties in influencing policy decisions at the national level. In alternative markets, the SCCs must identify niche market opportunities suitable for their products and then find strategic and reliable trading partners. The effects of these alternative markets differ from cooperative to cooperative and directly affect farmers' households.

Methods and Data

Field research was conducted in Mexico from July 15 to October 15, 2013. This study began with participant-observation at the Cumbre Latinoamericana del Café (Latin American Coffee Summit) from August 1-3, 2013 in Puebla, Mexico. After making some contacts and engaging in informal conversations at this annual conference, the author gathered data through individual semi-structured interviews with four key informants in Veracruz State—the director of the Fair Trade network organized in the region, a non-government representative, a coffee

researcher, and a representative of an international trading firm (see Table 1-1 for more details). The information provided by key informants helped verify the relevance of the principal research questions, and contributed towards making changes and adjustments in the research design before moving to the field to interview farmers in the cooperatives.

The decision to work in Veracruz State was taken, in part, because of the large number of coffee producers in that state who recently sought to participate in Fair Trade and organic markets. As stated by sociologist David Jaffee (2007), Mexico has a mix of both conventional coffee producers and those accessing alternative markets. Independent small coffee farmers seeking involvement in Fair Trade and organic markets generally engage those markets through their membership in coffee cooperatives. The effects of these alternative markets differ from cooperative to cooperative and directly impact farmers' households. The following municipalities were visited: Chocamán, Chinameca, Huatusco, Tepatlaxco and Ixhuatlán del Café in the so called 'Córdoba-Huatusco coffee corridor' in Veracruz State. Among these communities, six cooperatives plus an independent group of seven conventional farmers agreed to participate in the study. Five cooperatives were part of a previous effort to consolidate a fair trade social network with 18 cooperatives from four different states, including Oaxaca, Chiapas, Puebla, and Guerrero (REDCAFES, 2012). Unfortunately, four cooperatives abandoned the project because the National Network of Sustainable Coffee Organizations began to experience financial difficulties and stopped responding to farmers' demands. The lack of transparency in information provided about contracts with international buyers, unpaid debts, and a tendency to concentrate the decision-making process and power in management positions impacted the work of the Network.

Participant selection

Initial contacts were made through phone calls and emails to cooperative leaders. After the initial contact, the purpose of the study was explained to the leaders and they were asked for assistance in recruiting members to participate in this study. An open invitation was extended to the Fair Trade and organic cooperatives' membership by word of mouth. For example some cooperatives have weekly meetings scheduled through the year and leaders used this venue to inform farmers about the study. A day, time and location (either at the cooperative facilities or in locations designated by farmers) were determined for each cooperative. Farmers interested in the project attended these meetings. In addition, one local leader very well known in the community helped to recruit conventional farmers. Once the first group of seven unorganized conventional farmers was recruited, they were asked to invite their neighbors to participate. However, this strategy did not reach any more conventional farmers. The group of conventional farmers was small, but it was useful to compare their opinions about the coffee situation with those of Fair Trade and organic coffee cooperatives members.

Interviews with key informants and cooperatives

Four semi-structured interviews with key informants were conducted. As described in Table 1-1, they included a director from one of the cooperatives, a non-government representative, a researcher, and a representative of an international trading firm. The information provided by key informants helped verify the relevance of the principal research questions and contributed to make changes and adjustments in the questions to be asked before moving to the field to interview farmers within the cooperatives.

Table 1-1. Description of key informants interviewed

City	Position	Organization	Description
Xalapa	Director	REDCAFES (National Network of Sustainable Coffee Organizations)	Organization attempted to group small producers in the region to address more adequately the international coffee market (conventional and specialty).
Xalapa	Non-government representative	Sistema Producto Café. (Integrated Coffee Production System)	Federal Program developed by the Secretariat of Agriculture, Livestock, Rural Development, Fisheries and Food (SAGARPA, 2013) to overcome the barriers and problems in the coffee sector.
Huatusco	Full time professor/ researcher*	Universidad Autónoma Chapingo. (Chapingo University)	One of the leading agricultural institutions in Mexico.
Coscoma-tepec	Agronomist/ Director	International trading firm	Has worked more than 10 years in the region, buying conventional and Fair Trade coffee for the international market.

*This informant has an extensive background in coffee production; his family has been in the coffee business for more than 50 years. He has written extensively about the agro-ecology of coffee.

Following the interviews with key informants, in-depth interviews were conducted with farmers individually and in focus groups at each of the six cooperatives. In addition, the independent group of seven conventional farmers was interviewed in a focus group. In-depth interviews were chosen as the approach, because it was the most appropriate method to conduct research and also to gain in-depth knowledge of the Fair Trade and organic context and processes.

In three cooperatives, focus groups were split in two sessions either because not all members were available on the same date or the number of farmers was large enough to have

more than one focus group. Ten individual interviews were conducted with farmers (all males) in Huatusco and Chocamán. In total, there were nine focus groups held in Chocamán, Huatusco, Tepatlaxco and Ixhuatlán del Café. Seventy-four focus group participants (63 males and 11 females) belong to the cooperatives. Seven unorganized conventional producers (4 males and 3 females) participated in focus groups. On average, eight producers participated in each focus group. However, not all participants contributed their ideas equally through the focus group (see table 1-2). Frequently, four farmers led the conversations, and the remaining farmers only reiterated previous comments or expanded ideas mentioned by their peers. The researcher used some techniques to persuade quiet farmers to speak, such as asking questions directly to them, going around the table to get everyone's comments on particular questions. Almost 50% of the time the technique worked and farmers elaborated a little longer on their arguments. With the permission from all participants, interviews were recorded using two smart phones; there was only one researcher during all focus groups and individual interviews. In five of the nine focus groups, cooperative leaders were interviewed at the same time as the members. All participants identified themselves as coffee farmers.

Table 1-2. Focus groups and individual participants in coffee cooperatives

ID	**Focus**				**Individual**			
	Group	*Participants*	*Active*	***Q****		*#Farmers*	*#Leaders*	*Q**
SCC1	2	15	7	15				
SCC2	2	19	8	19				
SCC3	1	8	6	0	4	2	2	2
SCC4	1	8	5	8				
SCC5	0	0	0	0	6	6		6
SCC6	2[(a)]	17	10	17				
Convent	1	7	5	7				
TOTAL	**9**	**74**	**41**	**66**	**10**	**8**	**2**	**8**

*Number of questionnaires filled by participants. (a) One focus group's tape recording from this cooperative was damaged so it was not possible to transcribe this interview.

Informal conversations with participants

Informal conversations occurred during walks with two farmers belonging to two different SCCs. These farmers invited the researcher to have a walk around their plots to observe firsthand the agricultural practices implemented in their fields. During these walks, there were opportunities to discuss practices in their production system, state financial support, and Fair Trade /organic markets. Field notes were collected in a notebook and later transcribed. Learning experiences and observations were compared with information provided through formal interviews; then analytic memos were created based on field notes. Information collected was useful to better understand different aspects of farmers' daily lives and their interactions with other coffee cooperatives and markets. These observations/notes were useful because farmers were not under pressure of other peers or cooperative leaders. It was helpful to see their gestures and tone of voice when talking about certain issues. Sometimes farmers showed anger, very few times happiness, but most frequently dissatisfaction because their hard work was not paying off with a better livelihood.

In addition, during one focus group discussion, a cooperative leader extended the researcher an invitation to participate in one workshop held by an international trader in the Chocamán region. The purpose of the workshop was to explain a new initiative to create a cooperative-own trading company and invite everyone in the SCC to participate. SCC leaders and members attended the workshop. After the workshop, informal conversations with farmers and attendees occurred. These conversations were not recorded because farmers did not grant permission to do so. However, field notes from this workshop were transcribed and useful to compare with data from secondary sources like, reports from international organizations, studies from research centers in the area and the literature review.

Data analysis

All semi-structured interviews with key informants, eight[1] focus groups, and 10 individual interviews with farmers were transcribed verbatim in Spanish. Only key remarks were then translated into English. Findings relied on quotes captured from leaders and farmers' experiences and insights, as well as detailed information provided by key informants that complemented or contradicted data collected by international organizations and the literature. Key informants suggested several articles related to previous coffee crises, reports on certifying entities, Fair Trade and organic markets (e.g., international and national levels), and electronic books on coffee production in Veracruz. Transcriptions were an invaluable component of the data collected, because they allowed a better understanding of the overall status of coffee cooperatives and the socioeconomic and environmental context of small coffee farmers in Mexico. Moreover, reports and documents from the International Coffee Organization (ICO), international non-governmental organizations (NGOs), such as Oxfam Mexico, and organizations, such as *Asociación Mexicana de la Cadena Productiva del Café (AMECAFE;* Mexican Coffee Production Chain Association) helped to expand the information from cooperatives in the Córdoba-Huatusco region of Veracruz State. These documents were used to address the national and local context for SCCs.

Contextualization of changes brought by international economic reforms helped in understanding market patterns and structures in which state, private companies and cooperatives interact. Through comparative analysis of focus groups, individual interviews, and field notes, specific categories were developed about strategies implemented by cooperatives and policies implemented by the state in an effort to stabilize market conditions. Comparisons among data

[1] One focus group tape recording was damaged, so it was not possible to transcribe this interview.

from the literature, responses from farmers, key informants, and field notes allowed the triangulation of information and assessment of the trustworthiness of findings.

List of Definitions

Capacity: the ability or power of an organization to apply its skills, assets and resources to achieve its goals (USAID & Aidstar Two, 2011**)**

Capacity building or development is the process by which individuals, groups, organizations, institutions and societies increase their abilities to: perform core functions, solve problems, define and achieve objectives; and understand and deal with their development needs in a broad context and in a sustainable manner (USAID & Aidstar Two, 2011).

Organizational Capacity Building: the strengthening of internal organizational structures, systems and processes, management, leadership, governance and overall staff capacity to enhance organization, team and individual performance (USAID & Aidstar Two, 2011; Matachi, 2006).

Innovation is defined at three different levels; first, as a change in the way cooperatives use, relate and assist their farmers to implement agricultural practices in the field (production); second, as changes in the way they relate to each other inside the cooperative and connect with other players outside the cooperative (organizational); third, as an adaptation process to the requirements of the market so they can be closer to consumers and get better prices for their FT/organic coffee (marketing). (Key informants & cooperative leaders' interviews, 2013)

Corridor: a belt of land linking two areas or following a road or river (Oxford dictionaries, 2015) e.g., the Córdoba-Huatusco region is the principal coffee corridor between the uplands and the central area in Veracruz.

REFERENCES

Boonman, M, Huisman, W, Sarrucco-Fedorovtsjev, E, & Sarrucco, T. (2011, June 28). Fair Trade Facts and Figures 2010: A Success Story for Producers and Consumers. *The Partnerships Resource Centre (PrC).* Retrieved from http://hdl.handle.net/1765/77652

De Ferran, F., & Grunert, K. G. (2007). French fair trade coffee buyers' purchasing motives: An exploratory study using means-end chains analysis. *Food Quality and Preference,* 18(2), 218-229. Retrieved from http://www.sciencedirect.com/science/article/pii/S0950329305001692

ECOM (n.d). Homepage. Retrieved from http://www.ecomtrading.com.

Fridell, G. (2006). Fair Trade and neoliberalism: Assessing emerging perspectives. *Latin American Perspectives,* 151(33), 8-28. doi: 10.1177/0094582X06294109

International Coffee Organization, ICO. (2013). *The International Coffee Organization 1963-2013: 50 Years Serving the World Coffee Community.* Retrieved from http://dev.ico.org/documents/cy2012-13/history-ico-50-years-e.pdf

Jaffee, D. (2007). *Brewing Justice: Fair Trade Coffee, Sustainability, and Survival.* Berkeley: University of California Press.

Malongo (n.d.). History. Retrieved from http://www.malongo.com.

Matachi, A. (2006). Capacity Building Framework. *United Nations Economic Commission for Africa.* UNESCO-IICBA. Retrieved from http://www.eng.unesco-iicba.org/.

Milford, A. (2004). Coffee, co-operatives and competition: The impact of fair trade. Norway: Chr. Michelsen Institute (CMI). *Development Studies and Human Rights*. Report 2004(6). Retrieved from http://www.cmi.no/publications/file/1802-coffee-co-operatives-and-competition.pdf

Morales A, T. (2007). Trato leonino de cinco empresas a productores veracruzanos de café. *La Jornada*, January 15. Retrieved from http://www.jornada.unam.mx/2007/01/15/index.php?section=estados&article=038n1est

Murray, D. L., & Raynolds, L. T. (2007). *Globalization and its antinomies: negotiating a Fair Trade movement*. In Fair Trade: The challenges of transforming globalization, ed. L.T. Raynolds et al., 3-14. London: Routledge.

Neumann Kaffee Gruppe AG. NKG. (n.d). History. Retrieved from http://www.nkg.net/aboutus/history

Oxford Dictionaries, Language Matters (2015). Definition [Website]. Retrieved from http://www.oxforddictionaries.com/us/definition/american_english/corridor

Pay, E. (2009). The market for organic and fair-trade coffee. Study prepared in the framework of FAO project GCP/RAF/404/GER "Increasing incomes and food security of small farmers in West and Central Africa through exports of organic and fair-trade tropical products" By Trade and Markets Division. Food and Agriculture Organization, UN. Retrieved from http://www.fao.org/fileadmin/templates/organicexports/docs/Market_Organic_FT_Coffee.pdf

Ponte, S. (2003). Standards and sustainability in the coffee sector: a global value chain approach. Winnipeg, Canada: International Institute for Sustainable Development.

REDCAFES. Red Nacional de Organizaciones Cafetaleras Sustentables. (2012). La cadena café en la REDCAFES. A.C. Reporte. Hard copy.

Renard, M. C. (2010). The Mexican coffee crisis. *Latin American Perspectives*, 37(2), 21-33. Retrieved from http://www.jstor.org/stable/20684713

Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación. SAGARPA. (2013). Inician SAGARPA y productores de café mesas de trabajo para conformar Reglas de Operación y modernizar la política nacional cafetalera. Boletines de Prensa. México, D.F., 26 de octubre de 2013. http://www.sagarpa.gob.mx/saladeprensa/2012/Paginas/2013B659.aspx

Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación. SAGARPA. (2013). Introducción: Misión y visión de la SAGARPA. [Website]. Retrieved from http://www.sagarpa.gob.mx/quienesomos/introduccion/Paginas/default.aspx

Slob, B. (2006). A fair share for smallholders: A value chain analysis of the coffee sector. *Centre for Research on Multinational Corporations (SOMO).* Retrieved from http://www.eldis.org/go/home&id=40742&type=Document#.VPq38rPF_ys

United States Agency for International Development (USAID) & Aidstar Two. (2011). Organizational Capacity Building Framework. Technical Brief No.2, January. Retrieved from http://www.aidstar-two.org/upload/AS2_TechnicalBrief-2_4-Jan-2011.pdf

Valkila, J. (2009). Fair Trade organic coffee production in Nicaragua: Sustainable development or a poverty trap? *Ecological Economics* 68, 3018–3025. doi: 10.1016/j.ecolecon.2009.07.002

Valkila, J., & Nygren, A. (2009). Impacts of Fair Trade certification on coffee farmers, cooperatives, and laborers in Nicaragua. *Agriculture and Human Values 27*, 321–333. doi: 10.1007/s10460-009-9208-7

CHAPTER 2. NEOLIBERALISM IN THE COFFEE SECTOR: CHANGING ROLES OF THE STATE, MULTINATIONAL CORPORATIONS, AND COFFEE COOPERATIVES IN VERACRUZ, MEXICO

Manuscript prepared for submission to *World Development*

Abstract

The agri-food sector in developing countries, particularly coffee, has witnessed dramatic socio-technical changes in the last half century. Liberalization of markets has affected rural producers in radical ways. This chapter examines a coffee region in Mexico within a framework of international political economy and describes the central dynamic components of the neoliberal model: the State, which provides the political, and administrative regulatory framework; multinational corporations (MNCs), which are economic agents of global capitalism using the technological paradigm for agricultural specialization; and smallholder coffee cooperatives (SCCs) pursuing alternative options in the global coffee market. Based on in-depth interviews with cooperative leaders and members, key informants, focus group discussions, and analysis of secondary data, this study examines perspectives of coffee cooperative leaders and members and external key informants regarding how changes in agricultural policies have influenced the responses of SCCs to changes in the market and how and why smallholder coffee cooperatives responded by participating in Fair Trade and organic markets. Research findings indicate the state has adopted key policy elements to support and induce exports, thereby generating greater profits for powerful actors in the global marketplace. In response, marketing strategies adopted by SCCs rely on establishing long-term relationships with Fair Trade buyers/traders, and mobilizing financial resources through credit unions, private banks, and a limited amount of government grants.

Introduction

The world recession of the early 1980s and the debt crisis experienced by many non-oil-producing (heavily indebted) developing countries, led the International Monetary Fund and the World Bank at the behest of creditor nations and banks, to institute debt-restructuring plans known as ‘structural adjustment’, an integral part of the neoliberal approach. This was a strategy for encouraging debtor nations to shift from import-substitution to export-oriented development to generate foreign currency to repay international debts, thereby generating greater profits for multinational corporations and financial institutions in the global marketplace. The World Trade Organization (WTO) and World Intellectual Property Organization (WIPO) helped give shape to the neoliberal project. The structural adjustment included privatization of certain government functions, particularly selling government enterprises; reducing or shifting government regulations; and shrinking the participation of the State (Fridell, 2006). Furthermore, elimination of trade barriers, including tariffs, non-tariff restrictions, and quotas were promoted as part of a neoliberal wave with the argument that it would eliminate inefficiencies and provide countries access to more goods and services (Johannessen & Wilhite, 2010). Such an expanded market, it was argued, would give individual consumers more choices (Busch, 2010).

Political economy focuses on understanding the interplay among political, economic, and social phenomena involving the State, markets, social class, culture, and civil society (Hooks & Crookston, 2013). A political economy framework is useful here for analyzing the effects of structural adjustment as an integral part of the neoliberal approach to the coffee sector. International restructuring of the market economy and policies subsequently adapted by nation-states have transformed the role of government in capital accumulation and the development

process in the international system and, in turn, have promoted the roles of new actors (multinational corporations) in the coffee value chain (Bacon, 2010; McMichael, 2009).

Structural adjustment, designed to reduce governments' fiscal deficits, included reduction or privatization of major public services: health care, education and transport infrastructure (Harper, 2000), while increasing foreign exchange earnings through a shift to export-oriented production. During the presidencies of Jose Lopez Portillo (1976-1982) and Miguel De la Madrid Hurtado (1982-1988), Mexico was near the top of an extensive list of countries with a large and growing public debt and increasing inflation. The local currency rapidly lost value and, in 1982, the peso collapsed (Cypher & Delgado Wise, 2010). In this situation, the Mexican Federal government was obligated to follow the plans of the World Bank and the IMF and to apply resources for debt restructuring plans, ceding much control of the Mexican economy. Through the restructuring process, Mexico experienced budget constraints in its main economic activities, including those supporting the agriculture sector. Increased export earnings were expected to overcome the effects of these budget cuts. For example, Mexico's Federal budget for agriculture was reoriented to favor regions where production conditions were optimal—to mid- to large-sized mechanized farms with access to irrigation systems and oriented to the export market (Robles Berlanga, 2013). This reorientation left other regions undercapitalized, with fewer funds to continue investing in agricultural technology development, and with a serious knowledge gap about international markets, particularly for smallholder organizations (Escamilla, 2007).

Another important shift in international trade dynamics of agricultural commodities, such as coffee—one of the oldest and most traded goods around the world, was the breakdown of the International Coffee Agreement (ICA) in 1989 with the subsequent relaxation of supply controls

that included producer export quotas (Goodman, 2008). This system was designed to stabilize coffee prices within an agreed range by enforcing stocking requirements among coffee producing nations (ICO, 2013). For advocates of market liberalization, the International Coffee Agreement (ICA) until 1989 represented a regulatory barrier to improving the conditions of producers and consumers worldwide. However, producers in the ICA era enjoyed the benefit of price stability. The ICA-led institutional framework allowed producers to capture more of the price paid than they obtained after termination of the quota system (Pérez -Akaki & Huacuja, 2006).

Fridell (2007) explained that four main limitations prevented continuation of such benefits from the ICA quota system after 1989. (1) The coffee agreement had had a minimal impact on how wealth was distributed within producing countries in the South, which was determined by internal class relations and inequalities in political power and resources. (2) ICA's ability to deal with structural causes of global oversupply was diminishing. In this regard, Talbot (2004:75) states: "the regulatory regime attempted to limit total coffee exports while simultaneously creating conditions under which producers would tend to produce coffee in excess of the amount needed to fill the global quota." (3) The inability to overcome political difficulties preventing the full implementation of the agreements in a competitive global economy. The constant coffee oversupply dissipated Northern roasters' fears of potential high prices. In 1988, the U.S. National Coffee Association (NCA) abandoned the ICA and, in 1989, the United States refused to come to an agreement with Brazil and Colombia on new quarterly quotas, and the ICA was suspended. The Reagan administration decided that it was no longer convenient to support the ICA because the USSR was nearing disintegration, and old fears that Latin America would 'go communist' vanished. In addition, there was increasing support for fewer market regulations and particularly for free and unrestricted trade in coffee (Talbot

2004:80-97). The U.S formally withdrew from ICA in 1993 (Talbot, 2004 cited in Fridell, 2007). (4) Certain larger political and economic conditions contributed to the eventual collapse of the ICA. Consumer pressure for cheaper coffee, the end of the Cold War, and the advantages of global over-production accruing to roasters in the North are some of the burdens that international commodity agreements faced under global capitalism (Fridell, 2007).

The liberalization of markets, based on *laissez faire* principles of supply and demand (abstention by governments from interfering in the workings of the market), contributed to severe international coffee price collapse in the 1990s and later during the 2000s. The limited financial support of governments in developing countries left smallholder coffee farmers and their organizations without a safety net to cushion the transition from protectionist policies to free trade (Otero, 2013). In the international market, depressed coffee prices were caused by the persistence of production that consistently exceeded demand in the period 1998-2003. May, Mascarenhas & Potts (2004) describe some of the principal causes:

1. Technological innovation permitting increased production on existing coffee farms and plantations
2. Increased plantings, particularly in Brazil and Vietnam
3. Low rates of global growth in coffee consumption (May et al., 2004, p. 4).

Long-term solutions to the coffee crisis may include national government policies that contribute to a more equitable distribution of wealth and resources to rural participants, particularly credit programs, technical and marketing assistance, land redistribution, and support for building social infrastructure (Robles-Berlanga & Ruiz-Guerra, 2012).

In 2001, the 77 members of the International Coffee Organization (ICO) negotiated a new agreement. This agreement highlighted the need for a ‘sustainable coffee economy’ and the

promotion of technology transfer among members. In the latter part of 2003, the international coffee market experienced some recovery, which continued until 2005. The challenge remained of how to sustain coffee market conditions that avoid boom and bust cycles. Since 2005, several changes have occurred as a result of the instability in coffee prices (Slob, 2006). The International Coffee Agreement (ICA) of 2007 substituted for the agreement signed in 2001. In London in September 2007, 77 members of the ICO agreed on new international cooperation rules. The 2007 agreement was the 7th agreement since 1962. The agreement made it clear that ICO was first and foremost a forum for intergovernmental consultation. The agreement in 2007 does not have the same regulatory power that it had before 1989. It did not contain market-regulatory clauses, as in the 1994 and 2001 agreements. The focus of the 2007 agreement was on facilitating international trade through increasing transparency and promoting a sustainable coffee economy (International Coffee Organization, n.d). It was created for the benefit of stakeholders in participant countries, ostensibly with particular concern for small-scale farmers. Some innovations in this agreement include:

> The development and funding of coffee development projects, and the establishment of a Consultative Forum on Coffee Sector Finance, responding to the need for increased access to information on topics related to finance and risk management in the coffee sector, with particular emphasis on the needs of small and medium-scale producers (International Coffee Organization, n.d.).

Coffee development projects are initiatives funded in part by the Common Fund by Commodities (CFC). The four main areas of development are: 1) reducing production constraints, 2) quality improvement, 3) diversification, and 4) market improvements. ICO members from developing countries can apply for funds. Projects should involve government

participation, organizations such as universities, research centers or not-for profits. Veracruz State applied for funds for a sustainable and diversification project in 2006 and was awarded a 5-year grant. Funds are administered by institutions with solid financial infrastructure capable of offering a counterpart contribution to the project (often in-kind). Thus, it is possible that a group of cooperatives can access this program, but it must have a transparent and solid financial system in place to manage the funds (International Coffee Organization, 2013).

The 2007 agreement also seeks to enhance market transparency and expand the range of statistical data. A Promotion and Market Development Committee was created for information campaigns, capacity building and research projects related to coffee production and consumption (International Coffee Organization, n.d.). A major challenge for the ICA 2007 is to level the playing field for all stakeholders in the coffee sector, particularly when multinational corporations exercise the greatest amount of control of the supply chain and governments around the world are less active in promoting international policies that could regulate the market. Liberalization of international coffee markets produced two parallel segments of the coffee commodity chain (Talbot, 2004). The first was the large-scale processing of low-quality, low-cost coffee blended, roasted, and processed by MNCs and sold on the mass market through supermarkets. The second was an alternative marketing channel called the specialty coffee market, where small traders and roasters could participate and hopefully prosper. After liberalization of markets, and the subsequent instability in coffee prices, farmers around the world looked for alternative markets for their coffee. Peru, Colombia, and Mexico were introduced to the concept of 'specialty coffees' and several SCCs were formed looking for options to commodity markets and severely depressed international prices (Escamilla, 2007). "Specialty coffees are carefully tended, produced in smaller quantities at higher cost, and with

more direct involvement of the specialty roasters in quality control within the producer countries" (Talbot, 2004, p. 202). Small roasters and traders import coffee from SCCs around the world, usually in small batches. The final processed coffee is sold in specialized grocery stores or small specialty coffee shops.

Alternative market represented a viable strategy to improve the marginal price paid by the commodity market to farmers and their cooperatives. Basic requirements for cooperatives to participate in alternative markets include gaining legal status, building organizational capacity, and adding value to coffee. Reaching out to specialized international markets thus became an option. The specialty coffee market niches include organic, Fair Trade, shaded and bird friendly, denomination of origin (e.g., Chiapas or Veracruz), gourmet, and branding as "local coffee" (Escamilla, 2007). In Mexico, smallholder coffee farmers in Chiapas and Oaxaca were pioneers in opening organic and Fair Trade markets. Other states, such as Veracruz and Puebla, have developed relationships with national and international Fair Trade and organic traders in the last decade. Step-by-step, SCCs in Veracruz and Puebla are reaching out and participating in alternative markets (Escamilla, 2007; Hernandez-Rodriguez, 2014).

The Fair Trade coffee market has expanded rapidly. However, increased quantities do not mean that the market for specialty coffees has grown to a point where all production can be absorbed by demand. Small cooperatives are only able to sell around 25 percent of the Fair Trade certified coffee that they harvest. International markets such as the US and the EU are still inaccessible to some cooperatives (Renard, 2010).

Smallholder coffee cooperatives selected for this research are located in southeast Mexico, more precisely in Veracruz State. The decision to conduct research in the central region of Veracruz, Mexico was influenced by the increasing number of coffee cooperatives in the state

that recently have attempted to participate in Fair Trade and organic markets. As stated by sociologist David Jaffee (2007), Mexico has a mix of coffee producers accessing both conventional and alternative markets. Independent, small coffee farmers seeking involvement in Fair Trade and organic markets generally engage such markets through membership in coffee cooperatives. The effects of these alternative markets differ from cooperative to cooperative and directly affect farm households. Field research was conducted in the Córdoba-Huatusco corridor from July to October 2013. Data collection was based on in-depth interviews with cooperative leaders and members, key informants, focus group discussions, an independent group of seven conventional farmers and analysis of secondary data. The objective of this paper is to understand coffee cooperative members' and key informants' perspectives regarding how changes in agricultural policies, particularly government financial support programs for the coffee sector, have influenced the responses of SCCs to changes in the market. Vertically integrated MNCs are more competitive in the global coffee value chain than under the ICA regime. For SCCs, challenges, such as increasing production costs, stagnant coffee prices, and a shortage of credit sources with low interest rates, have reduced their opportunities to make a living from their participation in the coffee commodity value chain.

Fair Trade/organic SCCs in the Córdoba-Huatusco coffee corridor in Veracruz, Mexico have difficulties in influencing policy decisions at the national level. In alternative markets, the SCCs must identify niche market opportunities suitable for their products and then find strategic and reliable partners to share a social vision for trading, based on the principles of democracy, cooperation, public participation, human rights, and sustainability (Fridell, 2009; FairTrade International, 2013).

The remainder of the paper is organized as follows. Section 2 includes a description of the dynamic components of the neoliberal model. Section 3 is a detailed description of the methods and data utilized. Section 4 describes the perceptions of SCC participants regarding changes in the market, and Section 5 provides conclusions and limitations for the study.

Dynamic components of the neoliberal model

In modern societies, political economists recognize that markets and governments are intertwined. Two tendencies prevail, one claims minimal government involvement, while the other favors tightly regulated markets. Among the two there is a continuum of ideas and policy proposals that link market and government in ways that benefits from each institution are captured, while negative effects are minimized. During the last century, growth, distribution, and stability were recognized as having important political as well as economic dimensions (Hooks & Crookston, 2013). Deterioration of the environment and disparities in wealth growth among nations, private companies, and individuals has brought conflicts. Political economy helps to understand process and effects of neoliberal policies as well as the repercussions in the economic and political realms.

The objectives in this section are to describe the principal changes in the agricultural sector after market liberalization and identify the role for each major actor, with particular emphasis on the role of the Mexican State. Neoliberals promoted market liberalization policies as the best way to secure optimal resource allocation for commodities (Busch, 2010; Talbot, 2004). Market liberalization policies accentuate the commodity dependence of many developing countries, mainly because there are few diversification options, and access to markets for other agricultural and industrial products is limited. In many coffee-producing countries, the constant struggle to access markets and the limitations to find viable alternatives to shortening the value

chain between producer and consumer derived in part from market liberalization policies (Osorio 2005; Otero 2013). As the Executive Director of the International Coffee Organization (ICO), Nestor Osorio, pointed out in a letter addressed to the G8-Summit in 2005: "The challenge continues to be the development of policies and actions to avoid a recurrence of the type of imbalance between supply and demand that gave rise to the crisis. In view of the continuing economic importance of coffee… I believe that this is a crucial element for sustainable development" (Osorio, 2005:2). Currently, limited policies regarding financial support for the coffee sector and economic disadvantages of SCCs in the market have not led to governmental economic measures that maintain prices at levels to help producers bear production costs. Many agricultural projects and initiatives can only be successful if the participation of the actors in the coffee sector is balanced in terms of their relative financial power in the market. Due to limited financial support from the government and limited alternative activities in many coffee areas, it is very difficult for coffee farmers to achieve economic sustainability. The social costs associated with the stagnation or disappearance of SCCs from the coffee sector could bring about more problems for local communities (Osorio as cited in ICO, 2005).

Mexican government involvement

During the presidency of Carlos Salinas de Gortari[2] (1988-1994), an advocate of the neoliberal project, aggressive market liberalization policies were implemented, which transformed agricultural policies. These had negative consequences for small-scale and peasant farmers, including those in the coffee sector. The most important consequences among these were in the financial, processing, and marketing aspects of coffee, especially when larger

[2] A politician affiliated with the *Partido Revolucionario Institucional* (PRI; Institutional Revolutionary Party).

producers began competing and gaining control over resources (Bray et al., 2007, as cited in Bacon 2008).

In 1989, the Mexican government dismantled its state-run coffee agency, *Instituto Mexicano del Café* (INMECAFE; Mexican Coffee Institute). This agency played a vital role in supply control and production subsidies in relation to quotas the International Coffee Agreement had assigned to Mexico for the coffee sector for almost two decades (Bray et al., 2002). With the demise of INMECAFE, coffee cooperatives and other producer associations emerged. Among the latter were the *Coordinadora Nacional de Organizaciones Cafetaleras* (CNOC; National Federation of Coffee Organizations), established in the late 1980s; Union de Comunidades Indígenas de la Region del Istmo (UCIRI; the Union of Indigenous Peasants of the Isthmus Region) in Oaxaca State, the first organization of organic small farmers in Mexico; and *Indígenas de la Sierra Madre de Motozintla* (ISMAM; the Indigenous Peoples of the Sierra Madre of Motozintla) in Chiapas State, who experimented with growing and exporting organic coffee (Bray et al., 2002). Small farmer organizations promoted training and technical support for quality conversion. "Although training was carried out using inexpensive farmer-to-farmer methodologies, it still required trained professional staff and substantial overhead expenses, subsidies largely met by the church, international organizations, and the Mexican government" (Bray et al., 2002, p. 434).

After the fall of INMECAFE, a new institution named *Consejo Mexicano del Café* (Mexican Coffee Council) was created in 1993 and was integrated by several ministries, producing states and the coffee market sector (Renard, 2010; Giovanucci & Juarez Cruz, 2006; Enciso, 2005). This institution partially replaced previous INMECAFE functions and according to Renard (2010, p. 25) "it retained some of the advisory functions but not its regulatory

powers.” Thus, the conflicts between the Mexican State, coffee organizations and their members were not fully ameliorated by this institution (Cafes de México, 2013; Renard, 2010).

The dismantling of government agencies that support the coffee sector to comply with the removal of protectionist economic policies implemented through the North American Free Trade Agreement (NAFTA), implemented in 1994, opened up the domestic market to cheap crops imported from the United States by reconfiguring the State’s approach to peasant and indigenous communities. Small-scale coffee farmers that also raised corn were negatively affected. Many programs that helped farmers in the past to obtain low-interest loans for pre-harvesting costs and technical support to solve farming problems were reduced or eliminated as a result of the changes in economic policies (Jaffee, 2007; Otero, 2013). In Mexico, the Agriculture, Livestock, Rural Development, Fisheries and Food Secretariat (*Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación,* also known as SAGARPA) is the federal branch in charge of implementing agricultural policies and administering federal funds for agriculturally-related activities. The main goals reflected in SAGARPA’s annual budget are to solve problems related to the lack of infrastructure, acquisition of new machinery, improve efficiency of market channels to sell agricultural products, protect producers from climate disasters, and help farmers to improve their organizational structures (SAGARPA, 2013).

The arrival of a ‘new vision for change’ with *Partido Acción Nacional* (PAN, National Action Party), which won the presidency in 2000 and left office in 2012 after two six-year terms, increased expectations that policy changes could return some equity to the programs ostensibly designed to alleviate poverty and improve the livelihoods of farmers in rural areas. However, these changes in the upper echelons of political power had little impact on policies for improving farmers’ incomes and livelihoods in the coffee sector. SAGARPA channeled most financial

resources to large farmers, mainly in the northern irrigated areas; thus, the equitable distribution of financial resources continues to be unrealized. In his analysis of the Mexican annual budget, Robles Berlanga (2013) explains SAGARPA's policies favor regions where production conditions are optimal (mid- to large-sized farms with access to irrigation systems and mechanization). By supporting large industrialized farms, SAGARPA fails to address equity considerations.

In southern and central Mexico where most small-scale agricultural farmers are located, the financial support needed to increase competitiveness is limited; resources provided are insufficient for most smallholder production units. From 2007 to 2010, five of the 32 states located in northern Mexico appropriated almost 40% of SAGARPA's annual budget: Sonora, Sinaloa, Tamaulipas, Jalisco, and Chihuahua. In contrast, states, such as Veracruz, Oaxaca, Guerrero, Hidalgo, and Puebla, with increasing rates of poverty and a large number of small-scale peasant and indigenous producers (predominantly less than five hectares) received less than 20% of the federal agricultural budget (Robles Berlanga, 2013).

The end of the international coffee agreement and the elimination of INMECAFE coincided with wild swings in coffee prices, bringing long periods of low prices and short periods of peak prices to the coffee sector. In Mexico, price crises affected the vast majority of coffee producers, even to the point where prices dropped below production cost and farmers were unable to provide their families with a decent livelihood (Agroentorno, 2011; Lyon, 2010). The Mexican government implemented two programs in response to the crises. First, *OPORTUNIDADES*[3] (Opportunities), which changed to PROSPERA in 2012, "focuses on

[3]This is the principal anti-poverty program of the Mexican government. The original name of the program was PROGRESA; the name was changed in 2002 to OPORTUNIDADES; in 2012, the name was changed to PROSPERA.

helping poor families in rural and urban communities invest in human capital—improving education, health, and nutrition of their children—leading to long-term improvement of their economic future and a consequent reduction of poverty in Mexico. By providing cash transfers to households (linked to regular school attendance and health clinic visits), the program also fulfills the aim of alleviating current poverty" (SEDESOL, 2012). Second, the federal government established the *Programa de Apoyos Directos al Campo* "PROCAMPO" (the Agricultural Direct Support Program) with the direct goal to improve the rural livelihoods of impoverished small farmers. PROCAMPO provides direct financial transfers to producers, based on the number of hectares under production of any legal agricultural product (not only coffee) to directly support families in the countryside in each of the 32 states (Giovanucci & Juarez Cruz, 2006; Woodrow Wilson International Center for Scholars, 2011; SAGARPA, 2014).

Starting in 2002, SAGARPA launched sub-programs focusing on specific needs of the coffee sector, such as *Fomento Productivo Café* (*PROCAFE*; Coffee Production Promotion Program) and *Impulso Productivo al Café* (Jumpstarting Coffee Yields), in twelve states where farmers cultivate coffee (Chiapas, Colima, Guerrero, Hidalgo, Jalisco, Nayarit, Oaxaca, Puebla, Querétaro, San Luis Potosí, Tabasco, and Veracruz). For example, these programs support renovation of coffee trees (Puebla and Chiapas), denominations of origin or *appellations* (Chiapas, Oaxaca, and Veracruz), Integrated Pest Management practices, distribution of chemical and organic fertilizers (Veracruz), and a promotion program to increase domestic consumption of coffee from Veracruz (Giovanucci & Juarez Cruz, 2006).

In 2004, after the demise of the Consejo Mexicano del Café consisting of representatives from several ministries, producing states and the coffee market sector (Renard, 2010), only two main coffee initiatives remained: (1) the *Sistema Producto Café* established in 2005 (Integrated

Coffee Production System) and (2) the *Asociación Mexicana de la Cadena Productiva del Café* created in 2006 (AMECAFE; Mexican Coffee Production Chain Association). Both entities are mixed public-private initiatives, partially funded by the State; in the case of AMECAFE, service fees also contribute to its budget. Recently both institutions have struggled to operate and cover the needs of coffee producers. Without the political or financial clout the coffee sector had in previous years, AMECAFE and Sistema Producto Café need to implement several public strategies to address organizational, funding, and policy development issues to convince farmers they can handle new challenges from this sector. Both organizations must look for alternatives in the midst of a financial crisis, distrust, environmental concerns, and social mobilization (Cafes de Mexico, 2013; Enciso, 2005).

The neoliberal economic policies implemented by the Mexican State which resulted in the demise of government institutions working in the coffee sector led to small-scale farmers' mass exodus to the North. On one side, the poorest peasant farmers from the States of Oaxaca, Veracruz, Chiapas, Puebla, and Guerrero located in southern Mexico, were forced to become hired laborers in the northern, well-developed agricultural regions in Mexico (Jaffee, 2007). On the other side, farmers with few resources were pushed to, paraphrasing the words of Earl Butz, U.S. Secretary of Agriculture during the Nixon administration, "Get big or get out" (Carlson, 2008).

Multinational corporations (MNCs) and their roles

The expansion of unregulated trade, the agricultural subsidies maintained by developed countries, and the depressed prices of primary products in the rest of the world allowed MNCs to expand the scopes of both their purchasing and sales powers. Particularly in the coffee sector, the development of technological innovations provided major roasting companies with greater

flexibility in using coffees of different quality grades (Talbot, 2004). The bean roaster and retailer end of the coffee value chain are where most of the profits from the business are now concentrated, giving more benefits to actors in developed countries than to SCCs or other entities in the developing-country part of the value chain (Bacon et al., 2008; Hernandez-Rodriguez, 2014;).

Multinational corporations (MNCs) vie with one another in an unregulated market where the main goal is to maximize profits for shareholders, with little to no attention to environmental or social aspects of coffee production (Lyon, 2010; Jaffee, 2007; Mariscal, 2004). Around the world, MNCs (e.g., Starbucks, Sara Lee, and Philip Morris) have been participating in alternative markets, such as Organic, Bird Friendly, Fair Trade, Rainforest Alliance, Utz Kapeh (later Utz Certified), etc. MNCs argue their intentions are to help small producers by purchasing their coffee at better prices, promoting a healthy environment, and improving the livelihoods of rural communities in developing countries. However, MNCs operate in a market where keeping costs down by purchasing large quantities regardless of quality is the norm. Therefore MNC's intentions are conditioned to the rules of the market, not social or environmental norms (Lyon, 2010; Jaffee, 2007; Mariscal, 2004). On this issue, Jaffee commented, "…the Fair Trade movement remains vulnerable to co-optation by large corporations and other forces who have an interest in diluting the movement's key messages about how, and why, mainstream trade is unfair" (Jaffee, 2007, p. 228). Other corporations, like Nestlé, have created their own labels to focus on a different set of variables, mainly environmental issues, but lacking strong social and economic components for improving rural livelihoods.

Civil society and roles of coffee cooperatives

The concept of *civil society* includes a wide range of organizations related to the global agri-food markets. Globally, as well as locally, civil society includes non-profits, not-solely-for profits, consumers groups, cooperatives, farmers' organizations, social enterprises, local community groups, and advocacy and cultural groups, etc. Some well-organized coffee cooperatives in developing countries assume the functions of civil society organizations, but, for the most part, it is difficult to separate their market roles from their civil-society roles (Giagnocavo, 2012). Civil society organizations could have a more prominent role in setting agri-food policies in favor of small-scale producers if they understand context in a broader perspective. In light of this, Giagnocavo argues:

> …special focus should be put on cooperative structures (and innovations/adaptations based thereon), due to the fact that they blend effective economic activity (business and job creation and efficient provision of services) with social goals and contribute to social cohesion and inclusion (2012. p. 4).

The economic model for cooperatives is based on investments in people, the environment, and the economy of participants (completely opposite to the speculation and maximization of shareholder value in corporations). Cooperatives look for adopting medium, long-term strategies, and short-term results do not dictate business decision-making (Giagnocavo, 2012). Major contributions from cooperatives consist of providing a variety of services for small-scale producers (e.g., serving as a liaison between farmers and potential Fair Trade buyers) or developing networks with research centers and universities. Whenever possible, cooperatives seek strategic alliances and collaboration with public and private sectors.

Methods and Data

Field research was conducted in Mexico from July 15 to October 15, 2013. Field work began with participant observation at the "Cumbre Latinoamericana del Café" (Latin American Coffee Summit) from August 1-3, 2013 in Puebla, Mexico. After making some contacts and engaging in informal conversations at this annual conference, the author gathered data through individual semi-structured interviews with four key informants in Veracruz State—the director of the Fair Trade network organized in the region, a non-government representative, a researcher, and a representative of an international trading firm (see Table 2-1 for details). The information provided by key informants helped verify the relevance of the principal research questions, and contributed towards making changes and adjustments in the research design before moving to the field to interview farmers in the cooperatives. The decision to work in Veracruz State was taken, in part, because of the large number of coffee producers in that State who recently sought to participate in Fair Trade and organic markets.

The following municipalities were visited in the central region of Veracruz State: Chocamán, Huatusco, Tepatlaxco, and Ixhuatlán del Café. Within these communities, six cooperatives (leaders and members) plus an independent group of seven conventional farmers agreed to participate in the study. Five of the cooperatives were part of a previous effort to consolidate a Fair Trade social network with 18 cooperatives from four different states, including Oaxaca, Chiapas, Puebla, and Guerrero (REDCAFES, 2012). Unfortunately, four cooperatives abandoned the project because the National Network of Sustainable Coffee Organizations (which in future sections will be referred to as REDCAFES) was unresponsive to the cooperatives' requests due to unclear financial aspects.

Table 2-1. Description of key informants interviewed

City	Position	Organization	Description
Xalapa	Director	REDCAFES (National Network of Sustainable Coffee Organizations)	Organization attempted to group small producers in the region to address more adequately the international coffee market (conventional and specialty).
Xalapa	Non-government representative	Sistema Producto Café. (Integrated Coffee Production System)	Federal Program developed by the Secretariat of Agriculture, Livestock, Rural Development, Fisheries and Food (SAGARPA 2013) to overcome the barriers and problems in the coffee sector.
Huatusco	Professor and researcher*	Universidad Autónoma Chapingo. (Chapingo University)	One of the leading agricultural institutions in Mexico.
Coscoma-tepec	Agronomist/ Director	International trading firm	Has worked more than 10 years in the region, buying conventional and Fair Trade coffee for the international market.

*This informant has an extensive background in coffee production and has written several reports related to coffee agroecology.

With permission from all participants, interviews were recorded using two smart phones; only one researcher was present during all focus groups and individual interviews. In five of the nine focus groups, cooperative leaders were interviewed at the same time as the members. All participants identified themselves as coffee farmers.

Informal conversations with participants

Informal conversations occurred during walks with two farmers belonging to two different SCCs. These farmers invited the researcher to have a walk around their plots to observe firsthand the agricultural practices implemented in their fields. During these walks, there were

opportunities to discuss practices in their production system, state financial support, and Fair Trade/organic markets. Field notes were collected in a notebook and later transcribed. Learning experiences and observations were compared with information provided through formal interviews then analytic memos were created. Information collected was useful to better understand different aspects of farmers' daily lives, and their interactions with other coffee cooperatives and markets. These observations/notes were useful because farmers were not under pressure of other peers or cooperative leaders; it was interesting to see their gestures and tone of voice when talking about certain issues. Sometimes they showed anger or frustration and very few times happiness. Most frequently, the farmers displayed dissatisfaction because their hard work was not paying off with a better livelihood. In addition, during one focus group discussion, a cooperative leader extended the researcher an invitation to participate in one workshop held by an international trader in the Chocamán region. The purpose of the workshop was to explain a new initiative to create a cooperative-own trader company and invite everyone in the SCC to participate. SCC's leaders and members attended the workshop. These conversations were not recorded because farmers did not grant permission to do so. However, field notes from this workshop were transcribed and useful to compare with data from secondary sources like, reports from international organizations, studies from research centers in the area and the literature review.

Data analysis and literature cross-check

All semi-structured interviews with key informants, eight[4] focus groups, and 10 individual interviews with farmers were transcribed verbatim in Spanish. Only key remarks were then translated into English. Findings relied on quotes captured from leaders and farmers'

[4] One focus group tape recording with COOP 4 was damaged, so it was not possible to transcribe this interview.

experiences and insights, as well as detailed information provided by key informants, that complemented or contradicted data collected by international organizations and the literature. Key informants suggested several articles related to previous coffee crises, reports on certifying entities, Fair Trade and organic markets (e.g., international and national levels), and electronic books on coffee production in Veracruz. Also, reports and documents from the International Coffee Organization (ICO), international non-governmental organizations (NGOs), such as Oxfam Mexico, and government agencies, such as Asociación Mexicana de la Cadena Productiva del Café (AMECAFE, 2011) helped to expand the data from cooperatives in the Córdoba-Huatusco region of Veracruz State. These documents were used to address the national and local context for SCCs. Contextualization of changes brought by international economic reforms helped to understand market patterns and structures in which the State, private companies, and cooperatives interact. Through comparative analysis of focus groups, individual interviews, and field notes, specific categories were developed about cooperatives' strategies and policies implemented by the State. Comparisons among data from the literature, responses from farmers, key informants, and field notes allowed the triangulation of information and assessment of reliability of findings.

Findings and Discussion

SCCs' responses to market changes: the end of INMECAFE and its impacts on SCC's producers in Córdoba-Huatusco corridor

Key informants and leaders from the SCCs believe it is important to implement agricultural policies that regulate the participation and influence of corporations in local communities by making them more inclusive. The perception of most leaders and farmers in the

cooperatives is that corporations, through local subsidiaries, are gaining market share and control over local resources. The following quote illustrates their concerns:

> There are many policy decisions that have affected the coffee sector. One of them was to eliminate INMECAFE and the infrastructure built around that government agency… Right after INMECAFE was closed, many private businesses started to flourish, but among these, only one gained supremacy and control over the market—Agroindustrias Unidas de Mexico S.A. de C.V. (AMSA). This company began to eliminate most of the competition in the region. Buyers in the Huatusco area later on moved to another area. In the past, there were many buyers who promoted competition for farmers' coffee, but once the small buyers were eliminated by AMSA, things changed radically (Focus Group 8, Leader, Veracruz, Mexico, 2013).

Growth of AMSA and Nestlé in the region

As key informants, cooperative leaders, and farmers see it, small-scale production is slowly being strangled and running out of options. Smallholder farmers are seen just as price-takers without any opportunity to affect international policies that could allow them more participation in markets, while improving rural livelihoods (Key informant interviews & Field notes, Veracruz, Mexico, 2013). Moreover, the increase in competitiveness at the international level does not guarantee competitiveness at the local level. In other words, a large share of the price that MNCs are able to receive in international markets is not due to their advantages in the market in competing with other firms. MNCs obtain a large profit margin from the prices paid to suppliers of raw materials—in this case, coffee farmers. They obtain profits from both the local level, and from the international price market (Individual interview, Key informant 3, Veracruz, Mexico, 2013). A farmer explained:

> Nestlé and AMSA—two firms in the region—are planning to reduce as much as possible the [number of] local buyers and traders. It is not in their best interests to have small producers like us, who are organized and ready to fight for our rights. They don't like the idea that we don't have to rely on them to sell our coffee. This is why they are trying to eliminate competition so they can control everybody again (Focus Group 3, Leader, Veracruz, Mexico, 2013).

On the one hand, there are still three to four medium-size buyers in the region who participate in the value chain in competition with AMSA, but, according to producers, is only a matter of time before AMSA either buys the medium size-businesses or eliminates competitors.

> Since then, AMSA has maintained its policy of eradicating any competition in the nearby towns. They want to be the only one in the market, so they can control prices, production, etc. In Ixhuatlán county, AMSA eliminated all the local buyers and now they are the lone buyer of coffee. So, whenever they want they buy and when they don't feel like it they don't buy from anyone. Therefore, all the power is concentrated in this firm and that's how things are now. The government keeps giving away money to corporations (Focus group 8, Leader, Veracruz, Mexico, 2013).

On the other hand, small local buyers are collaborating on strategies to survive the oligopsony (soon to be a monopsony if practices persist) present in the region. During focus group discussion 8, one SCC member—who happens to also be a local buyer—explained that for small buyers the only way to survive these days is to buy and sell both types of coffee -- conventional and Fair Trade /organic. As a matter of fact, it is imperative for them to have a relationship either with medium sized buyers or with the Fair Trade /organic SCCs that own a

'beneficio' (wet or dry coffee mill) because by doing this, they avoid the mainstream channel controlled by large subsidiaries of MNCs.

SCCs and their members do not have a positive perception of policies implemented in the agricultural sector. They believe the government should develop policies that promote the efficient distribution of crops among regions and help cooperatives to obtain passage of a sustainable national coffee law that emphasizes environmental measures for conventional producers and systematically promotes alternative coffee production in the region. In Veracruz, a state congressman presented a proposal for this initiative called *Ley de Desarrollo Sustentable del Café (*Sustainable Development Coffee Act) to the House of Representatives (Salas Hernandez, 2014). The state congress approved the initiative, but the State's Governor vetoed the proposal in 2011 and it did not become law. However, in May 2013 the proposal with modifications was sent again to the House of Representatives and it was analyzed and debated for a second time (Salas Hernandez, 2014). A cooperative leader provides insights on this issue:

> I think we need a better Secretary of Agriculture, because government has always appointed people who are not even related to agriculture. I believe each region should have a specialty crop, and the government should control what to produce and where. This year, for example, farmers went crazy and planted sugar cane in places not suitable for the crop, without any control or restrictions, Therefore, all sugar cane producers are dealing with extremely low prices and an oversupply of sugar. (Focus Group 1, Leader, Veracruz, Mexico, 2013)

In this study, financial support programs, such as PROCAMPO, were mentioned by at least two farmers in each of the six cooperatives interviewed and by six independent conventional farmers. Each group spent the money provided by this program differently. For

example, farmers participating in Fair Trade marketing assert this money was usually spent to improve their small plots; on the other hand, independent farmers used the money to pay loans acquired previously or to cover any expenses they had at the time the money was given (Field notes, 2013). The administration and promotion of sub-programs, such as *Fomento Productivo Café* (Coffee Production Promotion Program; *PROCAFE)* and *Impulso Productivo al Café* (Jumpstarting Coffee Yields*),* are in the hands of State offices. Thus, the appropriate application of resources depends on the efforts in each state. Only key informants were aware of the details about how these sub-programs work. In general, SCCs and the group of independent farmers knew about the generic PROCAMPO and a few subprograms advertised occasionally by local government or institutional agencies, such as AMECAFE (Field notes, unrecorded conversation with farmers, 2013).

Interviews with farmers organized in Fair Trade /organic SCCs suggested they were better able to allocate financial resources compared to the conventional group interviewed. For example, when government loans are available, SCCs allocate the resources in the areas that will give them more benefits in the short term and will allow them to pay back the money if necessary. While conventional farmers, in part because of their smaller holdings, use the money to pay personal immediate debts, later on they must seek resources to pay back the loan, getting into a vicious loan trap.

One of the goals of Fair Trade is to provide SCCs with the financial resources that allow them to offer low-interest loans to their members. According to the cooperative's leaders, a defined percentage of the Fair Trade price received must go directly to funds[5] that SCCs should administer transparently and efficiently. These funds should provide SCC members access to

[5] Farmers participating in focus group discussions or individual interviews did not mention any access to funds or any similar program in their coops.

small loans at a lower interest rate than a private bank and contribute in that way to the financial sustainability of the organization. However, three cooperatives experienced constraints during the payment process in the 2012-2013 agricultural season. One SCC explained the buyer (it was not indicated whether the buyer was operating under Fair Trade principles) did not purchase the promised amount of coffee. The second SCC mentioned the buyer did not set any guarantee that the price offered at the beginning of the season would actually be given to farmers, so they decided to sell their coffee on their own. The experience of the third SCC involved a buyer who paid for half of the coffee at Fair Trade prices, and the other half was sold as conventionally grown coffee.

The situation and constraints experienced by the three SCCs described above were not shared by the remaining three cooperatives. For them, the international Fair Trade buyer paid the price established in the contract and has been supportive of the development of a long-term relationship. Cooperatives that received Fair Trade payment for their coffee attributed this achievement to the following factors: first, farmers received more training to improve record keeping on their farms; second, cooperative leaders are more familiar with procedures and paperwork to obtain certification and re-certification annually on time, thus, passing all inspections; third, investments in infrastructure, training, and hired professionals have led to an increase in the quality of their production. In addition, leaders' knowledge about international prices and customization of coffee to buyers' requirements gave extra credit to cooperatives.

SCC farmers respond

During the last 25 years, and particularly in the last decade, producers in developing countries learned more about markets and gained more control over the quality of their production and products. SCCs approached organizations selling Fair Trade products in the North

in an effort to better coordinate resources and marketing strategies, that is, to create an alternative marketing system throughout the value chain. A farmer mentioned a good example of what is currently happening in the region:

> With other groups in the region, we are trying to put together a trading company, so we will have more control over our sales. Our cooperative is going to be leading this effort [the office will be here]. We are confident about doing things better than previous efforts in the region. We are going to be careful in order to have good results (Focus Group 3, Farmer, Veracruz, Mexico, 2013).

While the marketing efforts of all six cooperatives are diverse, the two SCCs that had a more stable relationship with a buyer are based upon institutional access to financial and human capital (i.e., infrastructure investments, access to credit, and farmers' higher level of education) that have sped up the process of coffee certification. Proactive leadership is another factor contributing to the development of marketing innovations. The most commented marketing struggle remains the lack of experience in building strong networks by securing Fair Trade/organic buyers/traders. However, cooperatives that have not secured a buyer are learning about developing better marketing strategies, hoping to establish long-term relationships with Fair Trade/organic buyers. Empirically, SCCs recognize regional geographic characteristics provide particular attributes to their coffee beans, which, in turn, can be used to attract national and international buyers. Lately, two cooperatives have been attempting to take advantages of characteristics using evaluation scales from international organizations, such as that of the Specialty Coffee Association of America (SCAA). This strategy could lead SCCs to guarantee more stable prices in the contracts they set up with buyers, as the following quote suggests:

> We are neither effectively promoting our coffee, nor marketing our products correctly. The right promotion strategies should help us reach specialty markets and be more competitive. According to several tasting trials [one of these trials was done by a professional taster, who is also the treasurer's daughter] our coffee has an excellent quality (more than 80 points on the SCAA scale). We wonder if Nestlé with NESCAFE is even close to that but probably they won't score more than 40. When we went to a competition in México City, we won third or second place, I don't remember exactly, but this recognition says something about our coffee. Thus, we need to invest more in marketing strategies, perhaps TV or some other media outlets. We are not doing enough (Focus Group 3, Leader, Veracruz, Mexico, 2013).

SCCs have transitioned successfully into Fair Trade and organic markets when professionals, such as technicians, accountants, young members with college degrees, or consultants, work with them in quality production and marketing aspects of their products. The SCCs that have approached Fair Trade/organic markets with successful marketing strategies rely on three factors: (1) various networks to which they belong, (2) leadership outreach and establishment of long-term relationships with buyers/traders, and (3) financial resources obtained either from inside the cooperative or through funding from external sources, such as credit unions, private banks, non-profits, and small grants from the local government. Leaders in SCCs agreed it is difficult to develop marketing strategies to help them shorten the intermediary chain (even for the most developed SCCs, it is still a dream to sell directly to final consumers in the international market). However, infrastructure investments, diversification of products and participation of young people with expertise in new technologies and media, has opening the door for securing a larger share of the price paid in alternative markets. Nonetheless,

corporations will continue to exercise financial power to retain their present share of conventional markets. Thus, it is very important that SCCs participating in alternative markets embrace strategies that provide them with better results from coffee production and marketing in national and international markets.

Relationships with Fair Trade buyers: Success vs. no success and solutions

Extremely low prices in the conventional coffee market made SCCs look for other options to avoid bankruptcy and the disintegration of their organizations. Fair Trade and organic SCCs interviewed adapted management practices and marketing strategies that today allow them to update their processing equipment, add more value to red cherries, and sell roasted coffee. Aspects of adding value to coffee at the cooperative level are longer storage in the warehouse compared to red cherries; reducing risk of coffee becoming moldy, contaminated, or rotten; and in general more control over quality standards and processing. Before, when farmers participated in the conventional market, their responsibility ended when the 'coyotes' or middlemen collected the cherries from the farm or the farmer delivered the bags into the middlemen's warehouse. Now, farmers know more about coffee attributes, and why those attributes are important for obtaining higher prices in international markets. Coffee farmers are engaging in record keeping and they are thinking carefully about how to build long-term relationships over time at the national and international levels. In a nutshell, SCCs have made several changes from production to marketing, as one farmer affirmed, "Our practices have changed a lot. We have changed a lot" (Focus Group 3, Leader, Veracruz, Mexico, 2013).

SCCs are employing various collective actions to find some alternatives to mainstream channels and corporations. Some of these actions have challenged policies enforced by the State

by creating their own marketing and trading firms. Ironically, the financial support to start these firms is coming from the State. Key informants better explain these efforts:

> Farmers are doing their part changing the dynamics in their organizations. They are moving forward by developing pilot projects and in-situ innovations. However, it is important to talk with SAGARPA [federal government] about more serious investments in agriculture. It is imperative to renew physical infrastructure and there is an even greater need to renew coffee trees. Finally, [we must] succeed in specialty and alternative markets (Individual Interview, Key informant 4, Veracruz, Mexico, 2013).

The Mexican Federal government is a key player in the development of new policies to set up and control the coffee sector. However, as key informants perceived, "Lately, the federal government has been like on the bench just watching the game. Once in a while it tries to fix problems but most of the time is just watching and reacting instead of preventing." There have been some attempts by the institutions that replaced INMECAFE to create new policies to revitalize the sector once again. However, as explained in section 2, the political power, trust, and authority emanating from these institutions in the coffee sector are insufficient to change or recover balance for the SCCs in the long term. In this regard a leader explained:

> Without help from a government agency setting the rules of the game (like INMECAFE did in the past), it will be very hard to reduce the power intermediaries have at the national, state, and local levels. The main point here is to control prices and provide farmers with more dollars out of the price paid by consumers. But again, without intervention from the government, competition is not fair and the field is not going to be level for all participants. (Focus Group 3, Leader, Veracruz, Mexico 2013)

Agricultural policies in Mexico have limited impacts on the recurring price fluctuations, and have not contributed sufficiently to the SCCs' acquisition of skills and tools needed to compete in a liberalized market. In the words of key informant 2, "There is no public policy protecting, promoting, or incentivizing the development of coffee production in Mexico. It all goes back to supply and demand…importers know this and take advantage of it" (Individual Interview, Key informant 2, Veracruz, Mexico, 2013). Certainly, there is a need for an integrated national policy, which would include the voices of SCCs, providing them with 'decision-making' power, and thereby promoting more equal distribution of resources.

Conclusions and Limitations

The growth of MNCs in the region is tied to the political consequences of structural adjustments since the 1990s. First, the increased fluctuation in producer prices is the most apparent outcome in the literature, followed by the imbalance in financial power between small coffee growers and MNCs. As Talbot (2004) pointed out, MNC coffee processors and distributors are oligopolistic suppliers of coffee to consumer markets and at the same time oligopsonistic buyers of coffee produced by small farmers in developing countries. The protection MNCs can obtain from price fluctuations through their access to futures markets, as well as using price volatility to their advantage in making strategic purchases from farmers and cooperatives, are two of the main strategies that explain why international coffee crises have not negatively affected large MNCs. Besides, the MNCs' strategic position in the coffee chain allows them to obtain higher profit margins by increasing the price of coffee in consumer countries, while driving down the price for green coffee in the world market (Talbot, 2004). The small coffee producers cannot compete against the financial power of MNCs without the support of national policies and their governments.

Nevertheless, SCCs are attempting to bypass MNCs' oligopolistic/monopsonistic power over locally produced conventional coffee by pursuing Fair Trade and organic markets. However, the entry of MNCs into alternative markets is distorting the guaranteed prices that Fair Trade buyers can offer coffee producers. The most common strategies mentioned during discussions with coffee farmers and SCC leaders were, first, the need to enter specialized markets, not only Fair Trade and organic, but also bird friendly; and secondly, the expansion of the domestic market represents an opportunity for specialty coffees to avoid dependence solely on exports. Furthermore, farmers in four cooperatives commented that to have some liquid assets during the season, they frequently sell one part of their coffee as conventional and the other part as Fair Trade/organic.

In the current situation, SCCs are not able to compete directly with MNCs in international markets. The bleakness of both options (conventional and Fair Trade) may help explain why two cooperatives owning a *beneficio* 'hedge their bets' by selling coffee in both the conventional and the Fair Trade markets, diversifying their market participation in temporal and economic terms. Table 2-2 describes the participation of cooperatives and the groups of unorganized farmers in three different markets (conventional, Fair Trade and organic) for the 2012-2013 season.

Table 2-2. Coffee cooperatives' market participation for season 2012-2013

	SCC1	SCC2	SCC3	SCC4	SCC5	SCC6	Unorganized farmers
Conventional	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fair Trade	No	No	Yes	Yes	Yes	Yes	No
Organic	No	No	Yes	Yes	No	No	No

Source: Own data

Stronger and more favorable agricultural policies from the federal government and State programs are necessary conditions for strengthening SCCs and backing coffee producers so they

can enter alternative markets efficiently and competitively. If the SCCs want to remain competitive in the coffee market and particularly in alternative markets, they need to focus their efforts on strengthening participation in policy-making, using similar lobbying strategies to those used by the MNCs. They can also improve their participation in national policy making by gaining access to first-hand information about how government rules are applied in pursuit of neoliberal policies (Vorley et al., 2012). Without knowledge of the inner workings of the system, there is little hope of reforming it. Cooperatives have made and are making progress in identifying niche-market opportunities based on quality characteristics of their products, but national policies should include a long-term social vision for coffee trading. Once policies are in place it may take several years until reliable strategic business partners sharing this vision learn to work together. The following quote expresses the SCCs' social vision for trading:

> Currently, we are dealing with a French [Fair Trade] trader, our hope with this company is to end the shortage of funds and shorten the payment process. Also, we expect to build a long-term relationship where all the coffee shipments signed by contract are valid. We are thinking they will honor their word and establish a good relationship with us. (Focus Group 3, Farmer, Veracruz, Mexico, 2013.)

MNCs control the conventional distribution structures, and, therefore, exert significant influence and power over intermediaries in the coffee chain—and are seeking to do so in relation to the Fair Trade and organic markets. MNCs operate in a market in which keeping costs down by purchasing large quantities regardless of quality is the norm. Therefore, MNCs are conditioned to the rules of the market, not social or environmental norms (Lyon, 2010; Jaffee, 2007; Mariscal, 2004). The main conventional buyers in Veracruz (working for MNCs) do not want Fair Trade cooperatives to be independent and promoting knowledge about quality and

higher prices that farmers can obtain by participating in alternative markets. Nowadays, there is a lively debate about MNCs' participation in Fair Trade systems, because they already dominate the mainstream distribution and marketing channels in conventional coffee markets. Their privileged position in a globalized market allowed them to obtain better deals from their contracts with suppliers. As pointed out by Jaffee (2007), corporations, such as Starbucks, obtained the Fair Trade label thanks to contracts set up by TransFair USA; which changed its name to Fair Trade USA and renounced participation in the FairTrade International Organization (Naylor, 2013). This and other forays by MNCs into quality coffees using Fair Trade or labels of their own design must be watched closely to assess the strategies they may be using to also gain control of alternative markets.

Neoliberal policies privilege quantity over quality and cheap over fair prices changing international trade dynamics and altering the role of the State, MNCs, and SCCs. Interviewees believe a more balanced participation of all actors in the coffee value chain will improve the quality of the product, also it will lead to beneficial impacts for the environment and the quality of life that coffee farmers and their families deserve. A reconfiguration of international policies could also help assure that certification standards and practices are appropriate to the size and context of producers. Evaluating the participation effects of MNCs in the marketing of quality coffee should lead to positive changes for SCCs in the market place. The Mexican government could lobby with international organizations -- including the WTO -- for policies to prevent conventional importers from taking advantage of cooperatives in developing countries. Supporters of social, environmental, and market-access policies believe without an alternative or quality marketing channel apart from the conventional channels, there is a risk that Fair Trade

prices paid by consumers will not reach cooperatives and their members (Instituto Interamericano de Cooperación para la Agricultura, 2007).

Results from this study suggest neoliberal reforms revised the relative influence of the State, MNCs and cooperatives in the coffee sector. World-wide coffee overproduction, the lack of Mexican government financial support for coffee farmers, and the increasing influence of MNCs in national agricultural policies contribute greatly to shifting the relationships among cooperatives and businesses in the coffee value chain. In this regard, SCCs interviewed agreed the shift in market power to the bean roaster and retailer end of the coffee value chain is imposing new economic conditions on both conventional and Fair Trade farmers in Veracruz, Mexico. A leader expressed what this means for cooperatives in the region:

> Providing financial support to improve crop production and marketing practices are just two improvements that government could make in agricultural policy. The Mexican Federal government should use taxes to create more jobs instead of letting MNCs come to Mexico to use qualified professionals as low skilled workers, paying them a low salary [minimum wage] without chances to obtain managerial positions. Managerial positions are usually in the hands of people from other regions or from outside the country (Individual interview, Leader, Veracruz, México, 2013).

The geographical scope of this study was limited in size, and it was not possible to compare the perspectives of coffee cooperatives in other regions within Veracruz or among states in Mexico. This is worthy of further investigation, especially for cooperatives located in the neighboring states of Chiapas or Oaxaca, where a large number of small coffee cooperatives are also working on strategies to improve their livelihoods. Perhaps a comparative analysis will raise the voices of small coffee producers and empower other cooperatives outside of Veracruz

State. Other areas of inquiry could encompass examination of the perspectives of female members in each cooperative. However, the predominant culture favors the presence of males in public and private meetings; therefore, female farmers are difficult to reach even through cooperatives.

REFERENCES

Agroentorno. (2011). Calidad del café orgánico. *Agroentorno, 136* (14), 32-33. Retrieved from http://www.funprover.org/agroentorno/noviembre011pdf/caliddecafeorg.pdf

Asociación Mexicana de la Cadena Productiva del Café (AMECAFE). (2011). Plan de innovación de la cafeticultura en el estado de Veracruz. In collaboration with SAGARPA, COFUPRO, Universidad Autónoma Chapingo, SISTEMA PRODUCTO CAFÉ and INCA RURAL. Huatusco, Veracruz. Retrieved from http://amecafe.org.mx/downloads/PLAN%20DE%20INNOVACION%20VERACRUZ.pdf

Bacon, C. M. (2010). Who decides what is fair in Fair Trade? The agro-environmental governance of standards, access, and price. *The Journal of Peasant Studies*, 37(1), 111-147, doi:10.1080/03066150903498796

Bacon, C. M., Méndez, V. E., Gliessman, S. R., Goodman, D., & Fox, J. A. (2008). *Confronting the Coffee Crisis: Fair Trade, Sustainable Livelihoods and Ecosystems in Mexico and Central America.* London, England: The MIT Press.

Bray, D. B., Sánchez, J. L. P., & Murphy, E. C. (2002). Social dimensions of organic coffee production in Mexico: Lessons for eco-labeling initiatives. *Society and Natural Resources, 15*(5), 429-446. doi:10.1080/08941920252866783

Busch, L. (2010). Can fairy tales come true? The surprising story of neoliberalism and world agriculture. *Sociologia Ruralis, 50,* 331–351. doi: 10.1111/j.1467-9523.2010.00511.x

Cafés de México. (2013). January-February. ¿Qué le pasó al rumbo del café de México? Revista digital especializada. *Cafés De México. 248*. Sección: *Le Coloniale.* Retrieved from http://www.cafesdemexico.com/images/stories/revistas/cdm_ene-feb_2013-2.pdf.

Carlson, M. (2008). Earl Butz: US politician brought down by racist remark. *The Guardian Newspaper*, February 4. Retrieved from http://www.theguardian.com/world/2008/feb/04/usa.obituaries

Cypher, J. M., & Delgado-Wise, R. (2010). *Mexico's Economic Dilemma: The Developmental Failure of Neoliberalism: A Contemporary Case Study of the Globalization Process.* Lanham, Maryland: Rowman & Littlefield Publishers.

Enciso, A. (2005). Confirma SAGARPA: La desaparición del Consejo Mexicano del Café. *Diario La Jornada*, February 2. Retrieved from http://www.jornada.unam.mx/2005/02/02/index.php?section=politica&article=013n1pol

Escamilla-Prado, E. (2007). Influencia de los factores ambientales, genéticos, agronómicos y sociales en la calidad del café orgánico en México. *(Doctoral dissertation).* Retrieved from http://hdl.handle.net/10521/1625

Fairtrade International. (2013). [Website], Retrieved from: http://www.fairtrade.net/our-vision.html

Fridell, G. (2009). The co-operative and the corporation: competing visions of the future of Fair Trade. *Journal of Business Ethics* 86:81–95. Springer 2008: DOI 10.1007/s10551-008-9759-3

Fridell, M., Hudson, I., & Hudson, M. (2008). With friends like these: The corporate response to fair trade coffee. *Review of Radical Political Economics,* 40(1), 8-34. Retrieved from http://rrp.sagepub.com/content/40/1/8.short

Fridell, G. (2007). *Fair trade coffee: The prospects and pitfalls of market-driven social justice.* University of Toronto Press.

Fridell, G. (2006). Fair Trade and neoliberalism: Assessing emerging perspectives. *Latin American Perspectives,* 151(33), 8-28. doi:10.1177/0094582X06294109

Giagnocavo, C. (2012). Civil society, cooperative capacity building and eradicating poverty. *Civil Society Forum.* Commission for Social Development. United Nations, Division for Social Policy and Development. Retrieved from http://social.un.org/coopsyear/documents/NGOPaperGiagnocavo.pdf

Giovannucci, D. & Juarez-Cruz, R. (2006). *Proyecto Evaluación Alianza para el Campo 2005: Análisis Prospectivo de Política Cafetalera.* Retrieved from http://www.sagarpa.gob.mx/programas2/evaluacionesExternas/Lists/Otros%20Estudios/Attachments/9/Prospectivo%20Cafetalera.pdf

Goodman, D. (2008). The international coffee crisis: A review of the issues. In Bacon C.M., Méndez V.E., Gliessman S.R., Goodman D., and J. Fox (eds.) *Confronting the Coffee Crisis: Fair Trade, Sustainable Livelihoods and Ecosystems in Mexico and Central America. MIT Press, Cambridge,* MA, 3-26.

Harper, R. (2000). The social organization of the IMF's mission work. Pp. 21–53 in M. Strathern ed., *Audit Cultures: Anthropological Studies in Accountability, Ethics, and the Academy* New York: Routledge.

Hernández-Rodríguez, E. (2014). *Mercados alternativos en Café: Estudio de caso en la región cafetalera de Huatusco, Veracruz.* (Master's thesis). Archived by Centro Regional Universitario de Oriente. Universidad Autónoma Chapingo. Huatusco. Veracruz.

Hooks, G., & Crookston, A. (2013). Political Economy. *Oxford Bibliographies Online: Sociology*. doi: 10.1093/obo/9780199756384-0103

Instituto Interamericano de Cooperación para la Agricultura. IICA. (2007*).* El comercio justo como alternativa para el desarrollo equitativo: Propuesta para una estrategia de fortalecimiento y consolidación del comercio justo en Colombia. *Cuaderno Técnico Nº 38*. Retrieved from http://repiica.iica.int/DOCS/B0694E/B0694E.PDF

International Coffee Organization. ICO. (2013). *The International Coffee Organization 1963-2013: 50 Years Serving the World Coffee Community.* Retrieved from http://dev.ico.org/documents/cy2012-13/history-ico-50-years-e.pdf

International Coffee Organization. (n.d.). *International Coffee Agreement 2007 - Benefits of membership.* Retrieved from http://www.ico.org/Benefits_ICA2007.asp

Jaffee, D. (2007). *Brewing Justice: Fair Trade Coffee, Sustainability, and Survival*. Berkeley: University of California Press.

Johannessen, S., & Wilhite, H. (2010). Who really benefits from fair trade? An analysis of value distribution in Fairtrade coffee. *Globalizations, 7*(4), 525-544. doi:10.1080/14747731.2010.505018

Lyon, S. (2010). *Coffee and community: Maya farmers and fair-trade markets.* Boulder Colorado: University Press of Colorado.

Mariscal, A (2004). Starbucks: Transnacional busca controlar el café orgánico. *Café RebelDia*, April 26. [Web log post]. Retrieved from http://www.chiapas.ch/cafe2.php?artikel_ID=343&start=5&j=5

May, P., Mascarenhas, G., & Potts, J. (2004). Sustainable coffee trade: the role of coffee contracts. Winnipeg, Canada: International Institute for Sustainable Development. Retrieved from http://agris.fao.org/agris-search/search.do?recordID=GB2013201242

McMichael, P. (2009). A food regime analysis of the 'world food crisis'. *Agriculture and Human Values, 26*(4), 281-295. doi: 10.1007/s10460-009-9218-5

Naylor, L. (2013). "Some are more fair than others'': fair trade certification, development, and North–South subjects. *Agricultural and Human Values*, 31(2), 273-284. doi:10.1007/s10460-013-9476-0

Osorio, N. (2005). Los efectos de la crisis causada por los bajos precios del café. [International Coffee Organization Website]. Retrieved from http://www.ico.org/documents/ed-1966-c.pdf

Otero, G. (2013). El régimen alimentario neoliberal y su crisis: Estado, agro empresas multinacionales y biotecnología. *Revista Antípoda, 17*(49). Retrieved from http://go.galegroup.com/ps/i.do?id=GALE%7CA354088585&v=2.1&u=iastu_main&it=r&p=IFME&sw=w&asid=40337df1cd7c1ab606b84f03edfab203

Pérez-Alemán, P. (2012). Global standards and local knowledge building: Upgrading small producers in developing countries. *Proceedings of the National Academy of Sciences* (PNAS), 109(31), 12344-12349. Retrieved from http://www.pnas.org/content/109/31/12344.full.pdf

Pérez-Akaki, P., & Huacuja, F. E. (2006). Cadenas globales y café en México. *Cuadernos geográficos* de la Universidad de Granada, (38), 69-86. Retrieved from http://revistaseug.ugr.es/index.php/cuadgeo/article/view/1582

Red Nacional de Organizaciones Cafetaleras Sustentables (REDCAFES). (2012). La cadena café en la REDCAFES. A.C. Reporte. Hard copy.

Renard, M. C. (2010). The Mexican coffee crisis. *Latin American Perspectives*, 37(2), 21-33. Retrieved from http://www.jstor.org/stable/20684713

Robles-Berlanga, H. **(**2013). Ejercicio del presupuesto de SAGARPA por programa y entidad federativa. México, primera edición. [Subsidios al Campo en México website]. Retrieved from http://subsidiosalcampo.org.mx/wp-includes/textos_pdf/subsidios-pdf/5.EJERCICIO.pdf/

Robles-Berlanga, H. & Ruiz-Guerra, A.J. **(**2012). Presupuestos para la agricultura familiar y campesina en México. *Oxfam México*. Primera edición. Diciembre 2012. Retrieved from http://www.oxfammexico.org

SAGARPA (2014) Descripción: PROAGRO productivo SAGARPA. [website] Retrieved from: http://www.sagarpa.gob.mx/ProgramasSAGARPA/Paginas/default_anterior.aspx#

Salas Hernández, J. (2013, May 22). Presentó Gustavo Moreno, por segunda vez, iniciativa de Ley Desarrollo Sustentable del Café. *Al calor político.* Digital Newspaper. Sección: Estado de Veracruz. Xalapa, Veracruz, México. [Website] Retrieved from http://www.alcalorpolitico.com/informacion/presento-gustavo-moreno-por-segunda-vez-iniciativa-de-ley-desarrollo-sustentable-del-cafe-116581.html#.

Secretaria de Desarrollo Social. SEDESOL. (2012). Conoce prospera: Objetivo, misión y visión. [Website] Retrieved from https://www.prospera.gob.mx/Portal/

Slob, B. (2006). A fair share for smallholders: A value chain analysis of the coffee sector. *Centre for Research on Multinational Corporations (SOMO).* Retrieved from http://www.eldis.org/go/home&id=40742&type=Document#.VPq38rPF_ys

Specialty Coffee Association of America (SCAA). (2014). Green coffee and cupping standards. Retrieved from http://www.scaa.org/

Talbot, J. M. (2004). *Grounds for Agreement: The Political Economy of the Coffee Commodity Chain.* Lanham, MD: Rowman & Littlefield Publishers.

Vorley, B., Pozo-Vergnes, E. D., & Barnett. A. (2012). Small producer agency in the globalised market: Making choices in a changing world. [International Institute for Environment and Development website]. Retrieved from: http://pubs.iied.org/pdfs/16521IIED.pdf

Woodrow Wilson International Center for Scholars. (2011). *Los productores de café en México: problemática y ejercicio del presupuesto*. Mexican Rural Development Reports. No.14. Retrieved from http://www.wilsoncenter.org/sites/default/files/Hector_Robles_Cafe_Monografia_14.pdf

World Trade Organisation, (2005). World trade report 2005: exploring the links between trade, standards and the WTO, p. 122. Retrieved from https://www.wto.org/english//res_e/booksp_e/anrep_e/world_trade_report05_e.pdf

CHAPTER 3. CONTRIBUTIONS OF GOVERNANCE, TRAINING, AND INFRASTRUCTURE INVESTMENT TO MARKETING AND PRODUCTION INNOVATIONS IN FOUR FAIR TRADE COFFEE COOPERATIVES IN VERACRUZ, MEXICO.

Manuscript prepared for submission to the *Journal of Agriculture and Human Values*

Abstract

This study of four smallholder coffee cooperatives (SCCs) in the Córdoba-Huatusco corridor in Veracruz, Mexico examined how governance, training and infrastructure investment contribute to marketing and production innovations. Leaders and farmers were interviewed using a semi-structured questionnaire. Using NVIVO, data were analyzed from interviews with leaders (16), farmers (16), and key informants (4). The author also recorded field notes, which were consulted. The SCCs participate in Fair Trade/organic markets without adequate organizational structures, solid support networks, and knowledge of marketing strategies needed to succeed in alternative markets. SCCs experienced difficulties in shortening the value chain with FT/organic buyers and consumers. Moreover, obtaining Fair Trade certification and following organic practices is insufficient for gaining market access. Production and marketing innovations by cooperatives are outcomes of effective investments in infrastructure plus the ability of leaders to provide access to training for all cooperative members and effective and well-implemented decision making processes. Two SCCs have agreements directly with an international buyer, which provides them with financial support to implement organizational and marketing strategies. The other two SCCs depend on marketing chains arranged by third parties and their financial support is limited.

Keywords: capacity building, Fair Trade, innovation, organic, organizational capacity, smallholder coffee cooperatives.

Introduction

This study of four smallholder coffee cooperatives (SCCs) in the Córdoba-Huatusco corridor in Veracruz, Mexico examined how governance, training and infrastructure investment contribute to marketing and production innovations. In the context of neoliberalism and globalization, the severe coffee price crises of recent years have resulted in social, environmental, and economic inequalities for coffee producing countries. A major impact was drastic income reduction for coffee farmers (Osorio, 2005). The International Coffee Organization[6] (ICO) summarized the consequences of the world coffee crisis as: growing rural unemployment, abandonment of coffee plots, drastic income reduction, and farmers' migration to major cities and to other countries (Escamilla, 2007). Osorio (2005) adds the following impacts: lack of financial resources to cover primary needs such as food, health or education; increasing number of households living under the poverty line; higher rates of malnutrition; indebtedness; a decline in the share of shade coffee grown; and substitution of coffee plantations with other cultivars that are less environmentally friendly or are illicit (Osorio, 2005 cited in Escamilla, 2007).

Mexico produces coffee in mountainous regions with steep slopes, undeveloped infrastructure and many technological barriers and disadvantages (Pohlan, 2006). Consequently, yields are as low as 500 kilograms per hectare (Pohlan, 2006). Some farmers have family members collect coffee cherries in order to reduce their labor costs. However, when family is not available wage workers must be hired (Barham, 2011). With the support of government institutions such as the Agriculture, Livestock, Rural Development, Fisheries and Food

[6] Of ICO's 74 member countries, 30 are importing members including Japan, Norway, Switzerland, the USA and all members of the European Union. The 44 exporting members are from Africa, Asia, and Latin America. (Osorio, 2005)

Secretariat (*Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación*, commonly known as SAGARPA); the Agricultural Market Development and Marketing Services Agency (*Agencia de Servicios a la Comercialización y Desarrollo de Mercados Agropecuarios*, ASERCA); and the National Fund for Support of Social Responsibility Firms (*Fondo Nacional de Apoyo para las Empresas en Solidaridad*[7], FONAES), cooperatives became aware of the possibilities of the Fair Trade and organic markets in the early 2000s.

Fair Trade is defined as "a voluntary program utilized by coffee importers and food companies to create an alternative market for traditionally disadvantaged small-scale producers in developing countries" (EqualExchange, 2014). Components of Fair Trade coffee include:

- Targeted purchasing of coffee through democratically organized farmer co-operatives.
- Floor prices for coffee that provide for a dignified livelihood.
- Direct exports by producers (i.e., no intermediaries between Equal Exchange and coffee producers). Cooperatives thus learn about export process.
- A promise by importers to make affordable credit available to the farmer cooperatives.
- A worldwide network of non-profit certifying organizations.
- A fee paid by importers and wholesalers to cover the cost of certification.
- A seal that assures consumers that the product is fairly traded.
- Fairly traded coffee helps build pride, independence and community empowerment for small farmers and their families (http://Equalexchange.com 2014).

The purpose of the study is to analyze perceptions of farmers regarding determinants of agricultural innovations for SCCs in Veracruz, Mexico. Innovations examined include two components: first, a change in the way SCCs encourage and farmers implement agricultural practices in the field (production innovations); and secondly, adaptation to requirements of the

[7] *Empresas en Solidaridad* is a term to identify social responsibility organizations, including small businesses, cooperatives which are market-oriented, etc., but at the same time the overall goal is to benefit underserved and marginalized populations. (http://www.fonaes.gob.mx/)

market so that they can shorten the value chain and earn higher prices for FT/organic coffee (marketing innovations). Other innovations are viewed as occurring prior to marketing and production innovations such as certain organizational changes that improve governance (including changes in the way cooperative leaders and members relate to each other, both inside and outside the cooperative), investments in infrastructure that, it is argued, open up marketing options and secure Fair Trade/organic buyers. Finally, the conduct or arrangement of workshops for cooperative members about new marketing and production options, and how to carry them out.

Development of Cooperatives and Fair Trade Principles

Cooperative development involves "a group of people forming a member-controlled organization to provide themselves with specific economic or social benefits" (Nadeau & Thompson, 1996, p.7). Cooperative development is not a recent phenomenon: in developed countries such as the U.S. there is a cooperative tradition spanning more than one hundred years (Nadeau & Thompson, 1996). "Cooperative organizations should be evaluated in terms of the positive sustainable impact on the environment, the economic and social well-being of those directly involved in the organization or project" (Nadeau & Wilson, 2001, p. 65). In developed countries, cooperatives were formed to add value to raw materials produced on the farm, to gain negotiating power and support from peers through collective marketing, and to reduce the power and proliferation of "middlemen" (e.g., brokers, buyers, processors, etc.) in value chains (Nadeau and Wilson, 2001). In Mexico, farmers organized coffee cooperatives to survive coffee crises and to avoid high cost of inputs and low market prices (Hernandez-Rodriguez, 2014). For the vast number of small coffee farmers, the conventional coffee market did not provide the minimum price necessary to sustain crop production; income earned was not sufficient to sustain

their families. For these reasons, farmers looked for alternatives to sustain both their farms and families (Raynolds et al., 2007). Fair Trade and organic practices were two of the new alternatives that coffee farmers implemented, hoping to increase their income, along with increasing post-production opportunities and improving marketing strategies (Hernandez-Rodriguez, 2014).

Nelson and Pound (2009) found that 29 of 33 authors agreed that certified Fair Trade production provides a favorable economic opportunity for smallholders to form producer organizations and abide by the production specifications of particular markets. Higher returns and stable incomes are two clear benefits for Fair Trade farmers compared to those still producing for the conventional market (Murray, et al., 2003; Milford, 2004; Imhoff & Lee, 2007). Another advantage is that producers are no longer forced to deal with unscrupulous intermediaries or middlemen ('coyotes'). Farmers can sell their coffee to cooperatives and trust that they will obtain a fair price. Arnould et al. (2006) conclude that "participation in Fair Trade is like a life jacket, a shock absorber, or a buffer against the effects of volatility of global market capitalism… It is a safety net, but given current pricing levels, production regimes, and farm sizes, Fair Trade coffee alone is not THE solution to the problems of the rural poor" (Arnould et al., 2006:20). All market risks for small producers are not going to be removed by Fair Trade alone. Small-scale Fair Trade farmers are not immune to the whims of the international market (Moberg, 2005; Berndt, 2007). Even though Fair Trade farmers are still affected by market fluctuations, they also receive positive economic benefits because the guarantee of a fair price enables them to make longer-term investment decisions (Jaffee, 2007).

Fair Trade returns are used to improve production and processing capacity and infrastructure, in addition to disbursement to cooperative members. Thus, only a portion of the

guaranteed Fair Trade price paid to cooperatives goes directly to individual farmers. There are deductions along the way for organizational, production, processing, social, financial (servicing debt payments) and environmental costs or improvements, (Murray et al., 2003; Milford 2004; Utting-Chamorro, 2005). Despite the fact that farmers do not directly receive all the benefits of a higher price, in the long run these deductions benefit producers. For example, an upgrading of the organization's infrastructure not only improves quality and value of coffee, but also enhances its competitiveness and price (e.g., cooperatives investing in industrial toasters are able to create coffee mixes that expand the portfolio of products they can offer to clients). When cooperatives have capitalization funds to manage, indirect benefits result such as improving organic production facilities and diversifying income through expansion of shaded trees or other crops. (Ronchi, 2002). For some cooperatives, crop diversification is becoming a strategy to reduce dependency on coffee.

When the market is oversupplied and farmers can only sell a proportion of their coffee as Fair Trade, coffee quality improvements are particularly necessary. However, Northern retailers have strict requirements for quality and environmental standards, and local farmers' conditions are not always taken into consideration when establishing the rules (Moberg, 2005). Murray *et al.,* (2003) pointed out that in Mexico and Central America, increases in incomes of Fair Trade cooperative members has enabled crop diversification, raised income and spread risks. Two cooperatives in Chiapas were included in their study. On one side, Fair Trade returns in the Majomut cooperative improved member families' access to food through participation in organic gardening and other projects. On the other side immediate family expenses for medicines and ceremonies are now covered by La Selva cooperative.

Families in Fair Trade cooperatives in Mexico and El Salvador had access to training and marketing assistance to develop community stores, small businesses, and improved production of basic grains.

According to the World Fair Trade Organization (WFTO, 2013), there are 10 principles that Fair Trade organizations (SCCs and trading organizations) must follow in their day-to-day work. These principles are described on their website (http://www.wfto.com; verified 29 November, 2014):

1. Creating opportunities for economically disadvantaged producers
2. Transparency and accountability
3. Implementing Fair trading practices and promoting Fair Trade
4. Payment of a fair price
5. Eliminating child labor or forced labor
6. Commitment to non-discrimination, gender equity and women's economic empowerment and freedom of association
7. Ensuring good working conditions
8. Providing capacity building: The organization seeks to increase positive developmental impacts for small, marginalized producers through Fair Trade
9. Promoting respect for the environment

Organizations involved with Fair Trade are concerned with social, economic, and environmental well-being of marginalized small-scale producers. On the one hand, cooperatives should be transparent in their management and commercial relations and should not maximize profit at the expense of farmers; SCCs must respect contracts and deliver products on time following specifications and maintaining quality (WFTO, 2013). On the other hand, Fair Trade buyers should pay the mutually agreed fair price on receipt of documents so financial disadvantages are reduced to a minimum and prices can be sustained by the market (WTFO,

2013). The aim of all participants is to raise awareness of the need for greater justice in world trade through Fair Trade. Honest advertising and marketing techniques are always used to develop poverty reduction strategies (WTFO, 2013).

While all principles are equally important for Fair Trade participants, one important aspect highlighted in this paper is capacity building. WFTO principle 8 states:

> The organization develops the skills and capabilities of its own employees or members. Organizations working directly with small producers develop specific activities to help these producers improve their management skills, production capabilities and access to markets -- local/regional/international/ Fair Trade and mainstream -- as appropriate (WFTO, 2013. pp. 1-4)**.**

> Principle 10 "The respect for the environment" overlaps with some practices in organic farming. It encourages Fair Trade organizations to maximize the use of raw materials from sustainably managed sources and to buy most inputs from local sources when possible. It also promotes production technologies that seek to reduce energy consumption, minimize the impact of the waste stream on the environment, and reduce greenhouse gas emissions (WFTO, 2013)**.** SCCs take great responsibility in managing their environmental impacts by using organic or low pesticide production methods. The following paragraph describes these practices in more detail.

Organic farming means "production of crops and livestock without synthetic chemical fertilizer and pesticides, no use of GMOs, and humane treatment of animals" (Francis, 2009, p. 288). Some of the techniques used in organic farming include increased use of plant and animal manures, reduced tillage, and rotational grazing of livestock. All these techniques emphasize a reduction in purchased inputs such as petroleum products, other chemicals and machinery. As

summarized by Francis, ‘organic farming is a specific set of certified practices, and sustainable agriculture is a long-term goal’ (2009, p. 288). The ‘cost-price squeeze’ generated by inputs at one end and by middlemen at the other can be circumvented by adopting sustainable agriculture in general and organic farming in particular. Organic farming helps producers beat the cost-price squeeze in two ways: 1) it helps farmers to spend less on costly manufactured products; 2) it fetches a premium price that consumers are willing to pay for reasons of health, nutrition and the environment. On top of these economic incentives to producers, the added benefit is an environmental one because organic farmers should be stewards of sustainable farms (Francis, 2009). For Fair Trade certification at the production level, the most important requirement is to be organized in small cooperatives or groups of farmers. However, it is not mandatory that all members follow strictly organic practices. At the marketing level in order to sell a product as Fair Trade the buyer or importer also needs to be certified and comply with the rules for buyers established in Fair Trade principles. In the case of organic certification, farmers have to follow a three-year transition period during which fields must be clean of any chemicals applied in the past (Rodale Institute, 2014).

Farmers must follow all production practices mandated by the certification entities; a third-party agent conducts a farm-level inspection for certification every year. Buyers and importers must be certified to market organic products, because they have to follow special regulations in their warehouses, transportation and marketing strategies to guarantee organic standards. International buyers in the region purchase coffee from cooperatives in three main categories: 1) Organic certified, 2) Fair Trade certified 3) both, Fair Trade and Organic certified. Cooperatives have farmers who only follow Fair Trade practices, and those farmers can only access the Fair Trade guaranteed prices not the organic premium. Farmers transitioning from

conventional to organic cannot sell as organic through the SCC, only as Fair Trade (Escamilla, 2007). Once they comply with the agro-ecological production practices, the organic certification is issued and they can sell the coffee as organically certified. Non-organic coffee producers can access Fair Trade prices if they follow principles and cooperative rules. When SCCs have both certifications they can receive price premiums of up to 40 dollars more per bag (Hernandez-Rodriguez, 2014). Due to cost of certification and unwillingness to make changes in production practices, independent conventional coffee farmers are not able to utilize any of the certifications.

Smallholder coffee cooperatives in Veracruz, Mexico participate in the Fair Trade/organic markets without adequate organizational structures and support networks (International Coffee Organization, 2013). Based on that analysis, there are several questions that, when answered, could lead to improving SCCs' organizational capacity: How do governance, training and infrastructure investment contribute to production innovations? How do governance, training and infrastructure investment contribute to marketing innovations? The study is focused on how access to training, governance, and infrastructure relate to marketing strategies and production innovations. The paper is organized as follows: 'Introduction' with subsection 'The development of cooperatives and Fair Trade principles; Conceptual framework: Organizational capacity building/development.' The next section is a detailed description of the 'Methods and data' utilized. This is followed by 'Findings' and 'Conclusions and limitations'.

Conceptual Framework: Organizational capacity building/development

Organizational capacity building/development refers to the strengthening of internal organizational structures (management), systems and processes, leadership, governance and, in this case, farmer capacity to enhance organization, team and individual performance (Matachi,

2006; Walters, 2007; Organization for Economic Cooperation and Development, 2006). A simplified and adapted version of the *capacity framework* (Venture Philanthropy Partners, 2001) by McKinsey & Company was utilized to analyze the transcriptions of interviews with leaders, farmers and key informants, and to develop the categories for the analysis. The original framework is comprised of seven essential elements:

- Three higher elements: aspirations, strategy and organizational skills;
- Three foundational elements: systems and infrastructure, human resources, and organizational structure; and
- A cultural element connecting all other elements (McKinsey & Company, 2001)

The guiding framework is designed to evaluate non-profit organizations, help them to understand the strengths and weaknesses in their decision making process and how they present results to their donors. For the purpose of this paper, we adapted some of the categories to reflect how access to training, decision making processes -- as an aspect of governance -- and infrastructure acquired by the SCC play a role in the way they innovate and adapt marketing strategies and production practices. The framework for this study is organized with the following components:

1) Access to training: in production practices, organizational skills or marketing strategies
2) Governance: internal norms for decision making process and organizational structure used to identify capacity building needs (collective capabilities, leadership experiences, professionalization)
3) Infrastructure: physical and technological assets supporting the organization

These components are designed to bolster the functionality of organizations.

Methods and Data

Previous research focused on the advantages and disadvantages of Fair Trade and organic agriculture and identified some of the common topics that cooperatives fail to address. Particularly for Mexico, Escamilla (2007) and Hernandez-Rodriguez (2014) contributed to the socioeconomic and environmental research focused on cooperatives and small farmers in the region. They evaluated changes in production practices, organizational capacity and geographic characteristics needed to obtain designation of origin (e.g., Café Veracruz). Internal challenges include achieving at a minimum the organizational capacity required for effective decision making, which prevents SCCs from fully participating in alternative markets (Prakash, 2000; Escamilla, 2007; Hernandez-Rodriguez, 2014).

Interviews with leaders and farmers in four different cooperatives along the Córdoba-Huatusco corridor were conducted in Veracruz, Mexico from July to October in 2013. The corridor is well known for its production of coffee and for the recent establishment of FT/organic cooperatives. Leaders and members of four cooperatives were interviewed using a semi-structured questionnaire. In total six focus group discussions and four individual interviews were conducted (see Table 3-1).

The first step was listening to the interviews to become fully acquainted with the data. Transcription of the audio-recordings in Spanish was completed using SCRIBE© software. Two of the four stages of the constant comparative method were utilized for coding and analyzing the data. Only two stages were used because the diversity and scope of data were not large enough to apply the whole method. The first stage in the inspection of the data was to compare what Glaser and Strauss (1967) called ‘incidents’ applicable to each category. The coding system “kept track of the comparison group in which the incident occurs” (Glaser and Strauss 1967, p.106). Glaser

and Strauss add a defining rule to the method: “while coding an incident for a category, compare it with the previous incidents in the same and different groups coded in the same category” (Glaser and Strauss 1967, p. 106); by doing this, the incidents help to generate theoretical properties of the categories. For this study, each incident from the data was coded in categories of analysis, incidents either fit an existing category or created new ones. The use of cards to write down categories and a brief description of the data was helpful to complete the second rule of the constant comparative method: “stop coding and record a memo on your ideas” (Glaser and Strauss 1967; p. 107). The researcher incorporated the information collected from cards into short memos. These memos were useful to identify theoretical notions and conflicting opinions among participants as well as the researcher’s thoughts. The main point here was to reflect the ideas from participants, thoughts grounded in the data, not speculative conclusions.

The second stage of the method involves integrating categories and their properties. After writing short memos, the coding continues and as pointed out by Glaser and Strauss (1967) “the constant comparative units change from comparison of incident with incident to comparison of incident with properties of the category that resulted from initial comparisons of incidents.” What this means for the study is that across several sources of information, comparisons started accumulating important characteristics on the property of a category pertaining to the research question including innovations in production, organization and marketing which become integrated, resulting in a unified whole.

The most relevant quotes from key informants, leaders and farmers in the four cooperatives were translated into English. To ensure trustworthiness of findings, participant’s quotes, were compared against field notes and secondary sources including articles from academic institutions and national research centers that have been working in the region.

Table 3-1. Focus groups and individual participants in coffee cooperatives

ID	**Focus Group**	*ID Focus Groups*	*Partici-pants*	*Active Partic.*	***Q****	**Indivi dual**	*Farmers*	*Leaders*	*Q**
SCC1	2	FG6 & FG7	15	7	15				
SCC2	2	FG1 & FG2	19	8	19				
SCC3	1	FG3	8	6	0	4	2	2	2
SCC4	1	FG9	8	5	8				
Total	**6**		**50**	**26**	**42**	**4**	**2**	**2**	**2**

*Number of questionnaires filled by participants.

To ensure confidentiality, personal information was not transcribed. Each focus group was assigned to the cooperative to which participants belonged to and received a consecutive number from 1 to 9; due to a large number of participants in three cooperatives, those participants were divided into two focus groups. For a complete description on the four cooperatives please refer to Table 3-1 above. Within focus groups, each participant was identified with an alphanumerical ID (e.g., F1 to F10), when farmers were also leaders in the cooperative the letter "L" was added to the ID of the person being quoted (e.g., FL1). Alphanumeric IDs were also assigned for farmers in each of the four individual interviews. Female farmers or representatives attending the meeting were identified with an alphanumerical ID adding the letter 'W' (e.g., FW1). This classification later on facilitated comparing points of view among participants.

The analysis focused on identifying the main topic of each paragraph and assigning a temporary theme (open coding by paragraph). Later, the themes were compared to devise the term that best represented farmers and leaders' arguments. Before final themes were developed, all transcriptions were read again and the temporary assignment of themes was either left as it was or modified if the central argument was not described adequately. Main themes refined from the data are: access to training (around production and organizational practices), governance and

leadership, acquisition of infrastructure, marketing strategies, and production practices. Then, quotations from the transcriptions were categorized under these five themes using Nvivo software.

Findings

There are several interesting differences in how each of the four coffee cooperatives in the study used their resources to improve innovation strategies, particularly their organizational capacity and marketing strategies. Findings are organized in four major areas; first, a brief description on the origins of four cooperatives in the Huatusco corridor in Veracruz, Mexico; second, comparisons among the four cooperatives regarding organizational innovation, access to training, acquisition of infrastructure and governance; third comparison of the four cooperatives on marketing innovations and production; and fourth, the relation of, access to training, acquisition of infrastructure and governance to marketing innovations (examination of research-question results).

Description of origins for four cooperatives' in the Huatusco corridor in Veracruz, Mexico

<u>Cooperative 1: SCC1</u>

In 2008, a group of peasant farmers involved with conventional coffee production formed this cooperative in order to participate in Fair Trade markets. Many small-farmer cooperatives have been established in the region, in part encouraged by the creation of the National Network of Sustainable Coffee Organizations (REDCAFES) which has been working in the region since 2000 to market coffee from SCCs in specialty markets, particularly Fair Trade and organic. Most farmers in this cooperative were producing conventional coffee when they joined the cooperative.

This cooperative transitioned from conventional to organic production over a three-year period. The members sought to contribute to a healthy environment and to escape low prices paid by intermediaries (*coyotes*[8]). Beginning in 2009, their Fair Trade coffee was sold to REDCAFES, which was in charge of looking for buyers, making contracts, transporting the coffee and paying farmers. In 2011, SCC1 obtained organic certification and for the season 2011-2012 they sold their production to REDCAFES. However, due to financial problems (which cooperative members did not describe in detail), lack of transparency in the use of resources and the fact that REDCAFES stopped being responsive to cooperative requests, SCC1 left the organization. The first harvest season where SCC1 tried to sell FT/organic coffee themselves was 2012-2013. Unfortunately, SCC1 sold their coffee through local intermediaries, at conventional prices because the buyer who was supposed to purchase their Fair Trade coffee production did not honor the agreement. Even worse, when this happened to SCC1 it was late in the season, so most intermediaries in the region have already purchased all the coffee they needed. Fifteen participants attended the focus group discussions; the SSC had 24 members in total.

Cooperative 2: SCC2

This organization emerged after a workshop offered in 2000 by the municipality in which the SCC is located. The workshop catalyzed farmers to organize and develop new initiatives. Their first contact with alternative markets was directly related to organic practices. Leaders looked for financial resources, particularly seed-money to defray the costs (lost income) of following the rules for transitioning from conventional to organic. With initial financial support from the Trust Funds for Agriculture (*Fideicomisos Instituidos en Relación con la Agricultura*,

[8] The name coyote is shared among all SCCs in the region to refer to local buyers who were always scanning the area for coffee, lowering the prices to farmers once they stepped in their offices or ‘compras’ (small warehouses).

FIRA[9]) and resources to fund training, members started producing organic coffee in 2003 (Focus Group 6, various participants, Veracruz Mexico). Other workshops and trainings on Fair Trade and organic practices were offered through REDCAFES[10], which linked SCCs together in order to consolidate practices, production, quality assurance, and financial resources. SCC2 obtained most of its financial, infrastructure, and training resources thanks to REDCAFES' guidance. In 2005 REDCAFES helped cooperative members to obtain Fair Trade Certification. Currently, SCC2 has 36 producers and approximately 180 hectares of coffee. Only 150 hectares are certified organic, with 100 hectares planted with arábica and 50 hectares planted with Robusta varieties (REDCAFES, 2012). The cooperative has adopted regulations that members must strictly follow.

Cooperative 3: SCC3

This cooperative was founded in May of 1990. Farmers in the organization were looking for a place where they could start building their organization and infrastructure. In 1991, in the midst of a social crisis in Mexico, they moved to an old wet mill (*beneficio húmedo)* abandoned by the federal government. Farmers had legal ownership of neither the land nor the mill. They decided to form a cooperative because collectively they had more chances to obtain legal ownership on the land and the mill. They did not want other people from outside the community taking the land and mill for a different purpose. Due to fear that the federal government would reclaim the property, farmers did not invest money in the mill, in new equipment, or the property itself. The SCC's leaders met with the federal Secretariat of Finance and Public Credit

[9] Established in 1954 by Mexico's federal government, Trust Funds for Rural Development (FIRA) is a second-tier development bank that offers credit and guarantees, training, technical assistance and technology-transfer support to the agriculture, livestock, fishing, forestry and agribusiness sectors in Mexico. Definition retrieved from http://www.fira.gob.mx/Nd/IndiceEn.jsp

[10] In 2004-2005, REDCAFES indirectly exported coffee from Veracruz through traders from Oaxaca. A year later, in the 2006-2007 season they begin exporting directly without help from other organizations.

(*Secretaría de Hacienda y Crédito Público,* SHCP*)* in Mexico City, the equivalent of the Treasury Department in the US. Leaders were told by federal officers that the coffee wet mill was part of an extensive list of facilities to be sold. The Secretariat asked SCC3 to make an offer, but the amount of money required was not immediately available to them. They sought and received the assistance of a local legislator to secure funding from the government so they could buy the mill and dryers. It was not until 2006 that farmers were able to purchase the mill. After they became owners of the land, they started renovating the mill and building additional infrastructure. At the beginning, the wet mill only processed conventional coffee, which was sold to local buyers in nearby Córdoba.

From 1994 to 2004, the SCC had a series of ups and downs but its objective was clear – to create a strong and consolidated group of coffee farmers who were willing to work and invest their own financial resources in infrastructure. In 2002, SCC3 obtained organic certification status and in 2005, Fair Trade certification. It was in this same year that SCC3 first exported organic and Fair Trade certified coffee to Europe and the US. During the process, many farmers quit because they were not willing to invest in the organization and, in their views, the risks of being involved were higher than the benefits; of 55 original participants, only 16 committed farmers remain today in the cooperative.

Cooperative 4: SCC4

In 2000, when prices for conventional coffee hit the floor, farmers decided to work collectively to obtain better prices. A public sector technician from *Instituto Veracruzano para el Desarrollo Rural (*INVEDER; The Veracruz Institute for Rural Development) proposed alternatives that could improve coffee production and access to better prices. He organized talks and workshops about how to do things differently and implement new practices to participate in

the organic market. In order to participate in alternative markets they had to become legally organized – which they did. Most members in the cooperative were farming conventionally, and they knew that conventional coffee did not have a promising future. The technician from INVEDER taught them about the transition from conventional to organic practices.

The technician also supported SCC members in writing a proposal to purchase the old abandoned coffee mill because it was very likely they could take ownership. The main challenge was finding financial support. Thus, the farmers developed some proposals and knocked on the door of several federal and state institutions. When they contacted the *Fondo Nacional de Apoyo para las Empresas en Solidaridad* (FONAES; National Fund to Support Social Responsibility Firms) financial support was granted. Currently, SCC4 has a business relationship with an international Fair Trade buyer (a French roaster), which has provided financial stability and more income each season. More conventional farmers in the region are wondering if they can join the SCC.

Comparisons among access to training, acquisition of infrastructure and governance

For all SCCs the ideal situation would be to become traders of their own products, so they could market independently in national and international markets; however, in order to do that, it would be necessary to improve management and leadership practices, add and improve infrastructure, and increase market knowledge. Hiring professionals already involved in the Fair Trade /organic markets or training experienced SCC members are two of the main options that SCCs are following to achieve that goal. Moreover, to be more competitive, the SCCs must have leaders who actively encourage members to participate in the decision-making process (governance), and implement training so everyone can understand guidelines and rules.

Governance refers to “all processes of governing, whether undertaken by a government, market or network, whether over a family, tribe, formal or informal organization or territory and whether through laws, norms, power or language” (Bevir, 2013). It relates to "the processes of interaction and decision-making among the actors involved in a collective problem that lead to the creation, reinforcement, or reproduction of social norms and institutions” (Hufty, 2011). To understand which cooperatives are getting closer to the goal, it is useful to compare the different types of training received, the acquisition of infrastructure, and the decision-making processes. Table 3-2 describes aspects related with access to training, acquisition of infrastructure and governance, for each of the four cooperatives.

Access to training

SCC1 and SCC2 relied on REDCAFES for accessing training. When SCC1 started, only the municipality offered workshops and government agencies offered talks for farmers. After that, it was with support of REDCAFES that more coaching was providing on Fair Trade and organic practices. However, SCC1 abandoned REDCAFES in 2012, and since then they have been on their own trying to obtain training and financial resources to keep the organization afloat. Most of the training occurred around the time the organization was created.

Recently SCC2 had an opportunity to participate in a workshop to improve record keeping and to receive new information about pest control. Most of the workshops have been organized by other cooperatives, and SCC2 has been invited to participate. Due to SCC2’s previous dependence on REDCAFES for training and marketing, the organization lacks initiative and funding to provide workshops for members.

Table 3-2. Acquisition of infrastructure[11], access to training, and governance by four Smallholder Coffee Cooperatives

	SCC1	SCC2	SCC3	SCC4
Acquisition of Infrastructure	• SCC has a hoop house to grow coffee trees.	• Bought land for warehouse & admin. offices. • Warehouse used for storage, classifying coffee, meetings, & celebrations. Also, used as collateral for loans. • Have truck for transporting coffee transportation or for emergency. • 4 communities in SCC have ecological driers. • Members use infrastructure & transport for free.	• Owns land where *beneficio* and offices are located. • Facilities include: hoop house, vermicomposting facility (some compost sold to other customers), a small sugar cane mill, & radio antenna rented to local radio station. • Financial support from SEDESOL helped buy machinery and upgrade facilities, warehouse, & administrative offices.	• FONAES helped purchase coffee dry & wet mill w/ ecological module. • Area to receive & make compost. • Have new module to process organic coffee; SCC has also updated machinery. • Income from social price premium used to improve community infrastructure, e.g., gravel roads.
Access to training	• FT/organic training & talks from municipality. • Training from REDCAFES on production practices for farmers & workers (2008-2011). • Talks held once a month to promote among farmers and workers about harvesting red, clean and best quality coffee beans.	• Training offered by outside sources helped farmers switch from conventional to organic & become Fair Trade producers. • REDCAFES Training in organic practices persuaded farmers to avoid selling to conventional "coyotes". • This allowed farmers to learn logistics for selling coffee. • Workshops on alternative practices promote forest protection & conservation; planting diversity of shade trees; renovation, pruning, and intercropping, organic fertilizers; & use of vermicomposting.	• Training and courses about pruning, grafting and vermicomposting. • Training support from "*Universidad Chapingo*" and "*Colegio de Posgraduados*". • "Universidad Chapingo" has provided support for a long time about how to improve coffee production, tips about pruning and organic pest control. • SCC leads summer course for children--farmers teach kids about coffee culture, Fair Trade, & organic practices.	• INVEDER helped farmers' transition from conventional to organic practices. • Provides access to technical instruction to improve coffee practices. • Government technicians aided farmers to legally establish SCC. • Training offered by "CRUO-Chapingo", "Colegio de posgraduados", and "FIRA". • Chapingo provided training in export markets & pest management strategies.

[11] For a detailed description of SCCs quotes, please refer to table B-1 in Appendix B.

	Table 3-2 (continued)			
				• CAFESDES (rural research center founded by SCC with help from the Fair Trade buyer) teaching about coffee culture & alternative systems to other farmers, students and researchers. SCC farmers lead workshops. • CAFESDES aids youth to become coffee professionals (e.g., engineers, technicians, tasters). • CAFESDES does regular training with coffee members
	SCC1	**SCC2**	**SCC3**	**SCC4**
Gover-nance	• Management positions not rotated frequently • Members unwilling to take leadership because of the amount of work involved. • Members lack understanding of leadership. • Farmers lack same level of understanding about SCC needs and markets as leaders do.	• Leaders in management positions usually rotated every 2 years, (with some positions being reelected). • Meetings occur every two months to discuss the budget, leaders' work, harvest needs, and other recent issues (All members participate). • Leaders inform members of SCC income, sales, debts, etc., so members can judge progress and understand challenges on a regular basis.	• Leadership is proactive in solving problems quickly. • Decision-making is democratic and inclusive. All members have a vote; their voices are heard in assemblies (monthly). • SCC promotes values like trust, faith and honesty. • SCC has a supervisory board in charge of what to do with "price premiums". • Decisions must be approved & recorded in general assemblies. • Small changes such as rotating leadership contribute to org. development & more marketing capacity. • SCC facilitates farmer access to infrastructure; e.g., purchasing land where beneficio & offices are).	• General assemblies inform members about goals and challenges for Fair Trade and organic markets (monthly). • Leaders explain budget to all members. This contributes to keeping the organization transparent & accountable. • Management keeps tracking records & informs members of advantages of traceability systems. • SCC administration is proactive in sharing experiences with other SCCs nationally & internationally. • Strong leadership & organization allow meeting people from several organizations • Efforts focused on giving value & recognition to farmers' work and sharing it with other people.

Occasionally, some courses from Federal research centers reach SCC2, but in general workshops and training are limited. One of the leaders in the organization explained:

> The foundation of SCC2 was due to a workshop offered by the municipality. In that training, we started discussing ideas about different approaches to coffee production and it was an agronomist who talked to us about organic production. Later on, we had other training about organic practices but they were organized by REDCAFES (Focus group 1, leader, Veracruz, Mexico, 2013).

SCC3 has established several partnerships with private, public and mixed institutions that allowed them to access more training and resources than SCC1 and SCC2. The diversification of activities and reinvestment of profits in the organization has assured access to professionals (e.g., technicians, accountants, lawyers, etc.). SCC 3 collaborates with researchers and graduate students in projects that help the organization improve its production, organization and marketing skills. For the past 10 years, a combination of training in production and organizational practices plus farmers' experience in the field resulted in the quality improvement demanded by the market. An SCC3 farmer summarizes the combination of factors by saying:

> Every farm is different…and sometimes you have to adapt the practices to your own situation… Even though we have training about the general Fair Trade and organic practices, once you are back on your farm many things need to be adapted; the good thing is to know what consumers are looking for, what countries are interested in which practices, who is more strict with the standards so we can improve our practices and satisfy demand (Individual interview, farmer, Veracruz, Mexico 2013).

The successful participation of SCC3 in the alternative market has opened the opportunity to offer a summer course for children in the community, in which farmers can teach

about coffee culture, as well as production and marketing practices. The course has been offered since 2009- with support from the municipality, Universidad Chapingo, Colegio de Posgraduados, REDCAFES and small local businesses. In this regard a leader mentioned: "We received visits from universities, schools and even kindergartens from all over the region. This is the fourth year we have offered a special summer course for children related to coffee production" (Individual interview, leader, Veracruz, Mexico, 2013). One limitation of the summer course was that only children living near SCC3 had access to the information. In 2013, the idea was supported by SCC4 and they created a similar curriculum, which allowed them to reach children from other regions.

For SCC4 access to training has been a frequent investment promoted by leaders but also by the international buyer. In the past, *Instituto Veracruzano para el Desarrollo Rural*, INVEDER (Veracruz Institute for Rural Development) helped trigger the desire to work in alternative markets and provide training for farmers. Through workshops farmers received the technical instruction necessary to be part of the Fair Trade/organic markets. A leader recalled:

> INVEDER helped us to access training and technical instruction to improve our coffee practices. They talked about whether we wanted to participate and incorporate some changes to improve our coffee parcels. However, economically speaking, INVEDER did not provide any financial support; they just sent technicians to talk with farmers and helped set up the organization (Focus group discussion 9, leader, Veracruz, Mexico, 2013).

SCC4 has been innovative by creating its own rural research center. This center was created originally for farmers to exchange experiences with other peers and to transfer traditional knowledge to the younger generation, but there is also growing interest from the general public

to learn about coffee culture. In the future SSC4 will host a rural peasant school where children and farmers can exchange experiences, knowledge and coffee culture. In summary, this cooperative is doing more than merely receive training and using it only for their own benefit: they are interested in having positive regional impacts.

Infrastructure

SCC1 is the cooperative with fewest investments in infrastructure mainly due to past experiences where national buyers have not honored their contracts to pay farmers a Fair Trade price. Also, SCC1 entered later into the organic and Fair Trade markets while others had some years of experience. The two-to-three-year period of good prices this SCC received when it was part of REDCAFES did not allow it to save enough to acquire the needed infrastructure.

SCC2 indicated that its warehouse is important for storage and grading Fair Trade/organic coffee from members and for collecting conventional coffee from other farmers. A warehouse could serve as collateral when asking for private bank loans, or when government agencies require them to have some type of property. For example a farmer from SCC2 explained:

> This is the group's warehouse, it belongs to all of us and we want people to know this. Accessing credit requires collateral, which could be land, infrastructure or property. Our warehouse has an impact, especially when appraisers come to the cooperative; they usually lend us money because they see the warehouse as a collateral asset. Thus, for us to have our warehouse, trucks, etc., is really important (Focus group discussion 1, farmer, Veracruz, Mexico, 2013).

Even though this cooperative already owns a warehouse, office space and trucks, they have not been able to purchase a *beneficio* (mill). SCC2 depends on third parties to process and

market coffee, limiting their participation in the value chain. Even though leaders are very proactive and have a lot of experience in the coffee business, their connections to the market depend on a third party. Based on current needs, leaders mentioned that next steps are to buy a dry and wet mill to add more value to their coffee and to build a *planilla de secado* (drying yard) to naturally dry coffee without damaging beans or the environment.

The current leadership in SCC3 is helping the cooperative become more efficient and competitive. The president noted: "The land and machinery are formally owned by the cooperative allowing the administration to run the cooperative as a business. Every penny invested in our business is useful in helping members; nobody else can take anything out of us anymore" (Individual interview, leader, Veracruz, Mexico, 2013). SCC3 looked for support from a member of the Veracruz State House of Representatives serving the Huatusco district. In the words of the SCC's president: "In my opinion, he was very helpful to us because he understood our need and he looked for options with us. A one-of-a-kind politician, he did really good things for the state of Veracruz. With his support we knocked on the Veracruz government's door and in the end they supported us financially" (Individual interview, leader, Veracruz, Mexico, 2013). Financial support from local, state, and national government agencies as well as training from universities have contributed to improved decision-making processes that allow SCC3 to invest in more infrastructure.

Since 2000, SCC4 followed alternative ways to improve its product and obtain better prices. The cooperative applied for funding to buy a mill. Farmers got their mill and the infrastructure was improved. A leader described how this happened:

> With the support of FONAES, we were able to purchase a coffee dry and wet mill ecologic module, where we exclusively process organic coffee. FONAES also provided

> us with some seed-money to cultivate bananas and process banana leaves. Once FONAES realized we were working toward long-term goals, they offered us more resources. Because we never failed in our commitments…later they gave us more money to start operating the machinery. However, for coffee plant renovation they did not help us at all (Focus groups discussion 9, leader, Veracruz, Mexico, 2013).

In addition, purchase of the land led to greater member access to infrastructure. Without access to land, many of the innovations implemented in the production and marketing aspects of the SCCs would not have been possible. In contrast, SCC1 explained that without access to land it has been more difficult to make internal decisions about the future of the cooperative; one of the main concerns is if they buy an ecological wet mill, they would not have common land where the mill could be installed. One farmer stated:

> The first step for members and leaders is collecting money out of pocket to buy a piece of land where we can build a new ecologic coffee module; because if I offer my property to install the mill, and later on I do not feel like sharing with the cooperative or something else happens, well… I'm the owner of the land and whatever my decisions are, the cooperative will not be able to reclaim the equipment (Focus group discussion, farmer, Veracruz, Mexico 2013).

SCC2 owns land, where the offices and warehouse were built, and that was a step forward for increasing access to financial resources and improving their participation in alternative markets. However, dependency on a third party for their coffee processing still prevents leaders in the cooperative from independently searching for buyers and markets on their own. For SCC 3 and SCC4, purchasing the land and having access to infrastructure, particularly

mills made a big difference in the decision to pursue Fair Trade and organic markets. A farmer from SCC3 explained:

> Since 1991, farmers have been operating the old wet mill in these facilities, but they didn't have legal ownership of the land. With that restriction, farmers did not replace the equipment, improve the property or mill because of the fear government would remove them. In the end, what happened was that farmers were able to organize… buying the mill and later on updating the machinery. (Individual interview, leader, Veracruz, Mexico 2013).

Ecological wet and dry mills are extremely important for all SCCs, even though only two of them own one. Leaders in SCC 3 and SCC4 explained that a portion of the coffee price premiums must be used for reinvestment in infrastructure. Farmers in these two cooperatives recognized that leaders are on top of market dynamics, which allows them to make better decisions. SCC3' and SCC4' investments in infrastructure, have enabled them to establish a direct connection with Fair Trade/organic buyers and to diversify crops grown and sources of income. Objectives for the future are buying large size machinery for roasting and toasting, which would generate more employment for members and the community. SCC4 is looking to build a medium-sized instant coffee processing plant for the *arábica* variety. Currently, large manufacturers of instant coffee are either using the *robusta* variety - considered low quality - or they used mixes of second grade *arábica* coffee. Thus, SCC4 wants to offer a unique product, instant coffee made with the *arábica* variety that potentially could compete with the instant coffee made with *robusta* variety in the domestic market (Individual interview, treasurer, Veracruz Mexico, 2013).

Governance

SCCs conduct more regular meetings with members since they became involved in Fair Trade and organic markets. Leaders in SCC1 did not specify how frequently they have general assemblies; for SCC2 they meet once every two months and SCC3 and SCC4 indicated that it is reasonable to have meetings once a month. However, when any business matter is urgent they can call for an extra session. Discussions are usually centered on the budget, harvesting needs, updating documents to keep the organization going, and machinery/equipment upgrading. Leaders encourage good record keeping and tracking mechanisms that contribute to the establishment of formal traceability systems. All SCCs agreed that when leaders inform the whole group about sales, debts, loans, credits, etc., it is a great exercise that helps to build trust, transparency and accountability among members, maintain motivation, and show progress to the membership despite many challenges faced. A farmer from SCC2 mentioned:

> During these meetings, administrators informed us about the status of the cooperative, our income, sales, debts, etc. I think it is a great exercise to get all people together and inform them about our progress and challenges. There are discussions, we talk, and like every group we work on a regular basis (Focus group discussion 1, farmer, Veracruz, Mexico, 2013).

Another farmer from SCC4 explained:

> Many farmers in the region want to be involved with the cooperative but there are very strict rules for incorporating new members. The organization has to follow Fair Trade and organic principles as well as internal codes of conduct. Some farmers do not want to follow rules and laws implemented by the cooperative. Others do not have the knowledge and skills necessary… (Focus group discussion 9, farmer, Veracruz, Mexico, 2013).

Leaders interviewed mentioned that management positions in the cooperatives imply more work and responsibilities and that is why members are not eager to participate in management roles. Farmers perceive they are good at producing beans thus, management should be led by professionals or farmers with more experience and willingness to spent time making decisions. Most farmers rely on their leaders to deal with organizational and marketing challenges of the business; but when the topic is about production, most farmers have something to say. Periodic changes in leadership were mentioned in all focus groups as an important factor for success. However, not all cooperatives have changed their leadership positions as frequently as they should. A leader from SCC 3 mentioned to this regard:

> ... the problem with management structures persists if any organization maintains the same management (leadership) structure for more than four years; some organizations allow that time frame in their own statutes... If the organization is not vigilant about responsibilities and power entrusted to managers, they will try to take control of the organization as if it is their own business. In the past, we [SCC3] had that experience and the manager never paid back what he took from us. Changes should be done in a reasonable period of time; leadership rotation works the best for organizations like ours. (Individual Interview, Leader, Veracruz, Mexico 2013).

This is a topic that should be incorporated into the strategies for the future. Having good communication skills among members and leaders in the cooperatives greatly improves their ability to succeed in alternative markets (Individual interview, Key informant 2, Veracruz, Mexico 2013).

Table 3-3 is a ranking of the four SCCs on utilization of training, acquisition of infrastructure, and governance. This ranking shows the level of development for each SCC on these three factors and the degree of consistency in the ranking of the four cooperatives across these variables.

Table 3-3. Smallholder coffee cooperatives ranking

	SCC1	**SCC2**	**SCC3**	**SCC4**
Acquisition of infrastructure	1	2	3	3
Access to training	1	1	2	2
Governance	1	2	3	3
TOTAL	**3**	**5**	**8**	**8**

1=low 2=medium 3=high

Production and marketing innovations

The following table (3-4) summarizes the innovations mentioned during the interviews. There are two main categories, production and marketing. These two variables were analyzed together because good production and farm management practices can lead to successful marketing strategies implemented by SCCs. Innovations in cooperatives are outcomes of investments in infrastructure, ability of leaders to provide access to training for all members in the cooperative, and effective and well-implemented decision making processes for all areas.

Production

Organic practices like establishing buffer strips and stopping chemical applications help to protect the soil. These two practices have brought new life to farmers' soils, and coffee trees are thriving. Farmers acknowledged changing their production practices over time; perhaps not all of them call their efforts "innovations" but the specialty markets have promoted a learning process about relying less on purchased inputs such as chemicals, petroleum-based fertilizers, etc. A farmer from SCC1 mentioned:

> …organic practices help us protect the soil. Building buffer strips and stopping chemical applications, particularly pesticides, protect the soil, too. These two practices bring new life to our soils and make them last longer. By protecting the soil, our cooperative contributes to a healthier ecosystem. I am totally convinced we are on the right track in following organic practices (Focus Group 6, Farmer, Veracruz, Mexico, 2013).

Agricultural practices recommended by the SCCs and adopted by their farmers differ from one another. On the production side, the conventional practices included removing weeds by hoe, using chemical fertilizers, pesticides, herbicides, and planting on steep slopes. Before the formation of the cooperatives, farmers were not concerned about trees for shade, at least not the type that could generate some extra farm income in the short run. Their focus was on quantity not quality, so farmers and workers picked a mixture of green and red beans. Sometimes they were not even careful about leaves, branches, bugs, dirt, etc. Everything was picked and little attention was paid to delivering clean, carefully selected red cherry beans. However, Fair Trade SCCs are now doing things differently, one farmer from SCC2 indicates:

> What has been done? Well, first we stopped adding agro-chemicals to the soil, to improve coffee quality and to obtain the Fair Trade and organic certification. We stopped using chemical herbicides, pesticides and fertilizers. Second, we only pick the red coffee cherries and we do the right fermentation process so the final product is of better quality. For pest problems such as *la broca* (coffee berry borer--the most common in the region), we use homemade traps built in coffee trees with industrial alcohol. The cherry borer comes into the trap and it dies in there. That way there is no chance for the bug to damage our coffee. Once a berry borer starts eating the coffee, the damage produces some dark spots (Focus group 1, farmer, Veracruz, Mexico, 2013).

Table 3-4. Marketing and production innovations

	SCC1	SCC2	SCC3	SCC4
Production	• Transition from conventional to FT/ organic production systems made bushes stop producing beans for a year or two. • Correct application of organic fertilizers brought trees back into production • All members of co-operative implemented a program to replace old coffee trees/ bushes.	• Farmers sold raw cherries; they now clean & dry their coffee in 'patios' (dry yards). • Their use of buffer strips, drainage ditches, pruning & replacing old trees contributes to increase high quality bean production. • Technicians & engineers improved quality processes (e.g., washing and cleaning). • Farmers had coffee production knowledge, but required guidance in switching to organic practices. • This included cutting grass and weeds to 5 to 10 centi-meters, leading to soil health and erosion prevention. • Farmers with plots on steep slopes built terraces with buffers strips around them. • FT/organic practices allow farmers to obtain certificates & improve coffee quality.	• Renewing old trees, increasing soil organic matter, doing pest mgt. control, & collecting only red beans led to higher quality standards. • University of Chapingo conducted research on pest control, organic fertilizer application, & shade-tree regulation on member farms • Production of vermicomposting help in the application of organic fertilizer and increase plant productivity • Planted more species suitable for coffee production and native species of shade trees • Diversified production for extra income: banana trees (for leaves), macadamia nuts, and bamboo.	• Preservation of soil, trees and animal species. • Organic production practices implemented include: buffer strips, drainage ditches, pruning, grafting, & replacing old trees. • Organic practices such as building buffer strips and stopping chemical applications, particularly pesticides, help preserve the soil and increase biodiversity, both animals and trees.

Table 3-4. (continued)

	SCC1	SCC2	SCC3	SCC4
Marketing	• SCC attempted to develop a link with a national trader, but did not sell the beans at the right time nor obtain a good price. • Penalties signed in the legal contract with buyer prevent SCC from selling coffee after the buyer failed to purchase their production	• Workers make sure that coffee delivered to the mill is not contaminated with smells and flavors from other substances (e.g. chemicals, oils, soaps, etc.)	• With 82 hectares of organic coffee SCC is selling carbon bonds. • Young generations worked to determine coffee quality and characteristics that make it special for the national and international market (e.g., Graders "Q") • SCC has identified advantages from offering instant coffee produced from the Arabica variety in the national market. • Parchment coffee mixes allow the SCC to be competitive in the market • Higher quality standards achieved through organic practices allows SCC to have more control over the product and to find new market niches.	• Link with an international buyer (French roaster), improves financial stability. • Good record keeping facilitates certification process • Alternative markets require quality. Quality starts by picking coffee free of defects and at their peak of ripeness. • Licensed 'Q' graders help on the identification of coffee characteristics suitable for international markets (e.g. aroma, flavor, body, balance, cleanliness, etc.). • Participation in agricultural fairs once a year helped farmers gain more experience, show people their work and approach possible future customers.

For SCC1 and SCC2 lack of control in collecting cherry beans was also connected with marketing practices. Previously, when farmers delivered coffee beans to local buyers (*coyotes*), the latter altered the scale, so that bags full of coffee appeared to weigh less than the actual amount. Farmers lacked market knowledge, and were not able to add value to their product. Also, coyotes took advantage of most small-scale farmers because they did not own a truck. They had to pay someone to transport their bags or had to go with neighbors or friends, limiting their ability to go to the market with the best prices in the region. (Field notes, informal conversation with farmer during field trip, Veracruz, Mexico, 2013). Prior to the establishment of Fair Trade cooperatives, farmers delivered as much coffee as possible (sometimes a little bit wet or dirty) because either way the 'coyote' found a way to pay less to them. Buyers justified paying low coffee prices by characterizing the coffee as inferior was a common denominator articulated by members on each of the SCCs. A farmer from SCC4 mentioned:

> My satisfaction is that before we planted and delivered coffee to the coyote -we were just harvesting, and delivering coffee for the coyote and that's it. Intermediaries always told us that our coffee was not good, but we never knew what was wrong or why it was not good. Now, in the cooperative, we have a chance to know what is wrong and what we can do to improve it; so we have learned how to defend ourselves. The cooperative is guiding us through the right steps after harvesting to produce better coffee… If I was not part of the organization… I wouldn't know what happens after we delivered our coffee to buyers (Focus group discussion 9, farmer, Veracruz, Mexico, 2013).

Marketing

In the Córdoba-Huatusco region prior to the establishment of REDCAFES, farmers who were organized in cooperatives were able to sell their conventional coffee production to diverse

local buyers. After cooperatives experienced several coffee price crises and alternative markets became an option for some organizations, government initiatives helped producers to have access to alternative markets. REDCAFES was one of these organizations, established with funding from SAGARPA, to group cooperatives from the states of Veracruz, Oaxaca, Chiapas and Puebla. The goal of REDCAFES was to help cooperatives pay for the cost of certification (Fair Trade and Organic) and increase cooperatives' export capacities. The organization had good results until 2012; in 2013 REDCAFES faced many problems due to lack of members' participation in the decision making process, lack of transparency in the information provided about contracts with international buyers, debts that were not paid, and a tendency to concentrate the decision making process and power in management positions. As a result, three cooperatives decided to leave REDCAFES. SCC1 decided to try and sell their coffee through national buyers with export capacity; SCC2 is part of REDCAFES but they are struggling to get payments on time from the organization; SCC3 and SCC4 decided to join a new initiative lead by the only international buyer (from France) established in the region, which already offered to buy 15 shipping containers per year of specialty coffee (Fair Trade and Organic certified).

Among all SCCs, SCC1 has been least successful in implementing marketing strategies. Despite the fact that it has both certifications, SCC1 is just beginning to participate in alternative markets. Developing marketing strategies that allow them to sell coffee at better prices and to establish a formal link with buyers has not yet been possible. During focus group discussions, farmers complained that the work done for the 2012-2013 season was not fruitful because in the end the SCC did not sell the coffee at a premium price. Moreover, they applied for a loan from a private bank to cover most of the production costs for that season. Thus, when SCC was not able to recover the expected Fair Trade price they were unable to repay the loan on time. This bad

experience with the buyer and with the private bank caused stress and discouragement for leaders and members over the season, as a leader in the cooperative pointed out:

> We attempted to develop a link with a national trader. In the beginning, everything seemed to work fine; but when we were ready to sell coffee to this company, they were unable to buy our product. Later, it became a nightmare for the cooperative. We neither sold the beans at the right time nor the right price. On top of this, we signed a legal contract with the buyer and we were holding the coffee for them because we didn't want any troubles. In the end, we made a deal with the buyer, so we didn't incur any penalty. We were free to sell our coffee and recover some of the money for that season. It was a very bad experience and it caused us a lot of stress and discouragement this particular year (Focus group discussion 6, farmer, Veracruz, Mexico, 2013).

SCC2 ran into a similar problem but instead of having troubles with an external buyer, they had problems with REDCAFES. In alternative markets, it is not only the producers who need to comply with the certification rules, but also the processing mills that transform coffee into a final product; as well as traders and buyers. REDCAFES could not buy coffee produced by SCC2 during the season and sell it as Fair Trade/organic coffee because the certificate of the processors arrived late. "This year we could not sell our coffee as organic because the certificate did not arrive on time. Leaders in the cooperatives explained to us that due to the problem with the certificate we had to sell our coffee as conventional" (Focus group discussion 2, farmer, Veracruz, Mexico, 2013). Coffee is very sensitive, and loses quality and value in the market if damaged during processing in the mill. Due to the lack of financial resources, SCC2 worked with credit obtained from a private bank; it was difficult for them to pay the loan back because coffee prices were not as high as expected for the season.

Most farmers from SCC3 have a well-defined concept about what marketing is. Farmers invest in "quality" and traceability because they are important strategies to sell coffee to Fair Trade and organic clients. In the domestic market, SCC3 needs to invest in promoting and advertising coffee quality so consumers will realize there is a better quality coffee they should be buying and drinking. A leader from SCC 3 explained:

> There are some advantages from offering coffee in the national market, we need to show our products and promote organic and Fair Trade coffee. Farmers need to promote organic coffee as a symbol for quality and organizational integration, especially in national markets. More advertising is needed so consumers realize they can be drinking a better quality coffee. In a nutshell, low quality coffee costs consumers about the same as a pouch of 50 grams from our specialty coffee. For example, 50 grams of coffee is sold at around 10 pesos, we could also offer the same amount of specialty coffee for 10 pesos. Farmers will be getting at least 200 pesos per kilo, and that's enough to begin with (Individual interview. Leader, Veracruz, Mexico 2013).

Marketing strategies have worked better for SCC3 and SCC4 because they are associated with an international Fair Trade buyer and they process their own coffee (value added), which gives them more market advantages. In addition to the infrastructure they already have, their leaders have been able to promote diversification of activities and crops. If for some reason there is a problem with coffee sales, at least they do not have to start from scratch to survive in the next season.

SCC2, SCC3 and SCC4 own office buildings where leaders and farmers can discuss production practices, promote trainings, receive visitors, and show their coffee's quality to interested parties. SCC1 has office space that is located in one of the leaders' properties. Thus,

farmers do not feel that the office space is something the cooperative owns. The SCCs marketing innovations were summarized in table 3-4 but some other strategies mentioned during focus group discussions were the ability to roast and toast their coffee, and improving research and experimentation to develop new quality products. Only farmers from SCC3 and SCC4 mentioned participating in agricultural fairs once a year, which helped them in three aspects: they gained more experience, showed people their products, and approached possible customers in the future.

> Our cooperative has participated in different shows and internationals fairs. I got the chance to go to Mexico City two times last year, also two times to Veracruz City. With three of my fellow farmers, we put together a stand and the municipality paid some of the costs. It was a great experience and there were many people interested in our work (Focus group discussion 9, farmer, Veracruz, Mexico, 2013).

SCCs believe that specialty coffees will continue to provide them with a premium price in the international markets. In the future SCC's are also expecting to be more competitive in the domestic market.

Table 3-5. Marketing and production's rankings for smallholder coffee cooperatives

	SCC1	**SCC2**	**SCC3**	**SCC4**
Production	1	2	3	3
Marketing	1	1	3	3
TOTAL	**2**	**3**	**6**	**6**

1=low 2=medium 3=high

Relationships between, access to training, acquisition of infrastructure and governance to production and marketing innovations

In this section, the study reports the degree to which there is a relationship between the answers provided to the following questions. How do particular innovations in infrastructural

acquisition or access, in governance, in training and learning contribute to marketing and production innovations? When they do not, why not? What relationships were contrary to what was expected? (See Table 3-6 for more details)

Table 3-6. Relationship between access to training, acquisition of infrastructure, and governance to production and marketing innovations

	SCC1	**SCC2**	**SCC3**	**SCC4**
Access to training, acquisition of infrastructure and governance	3	5	8	8
Production and marketing	2	3	6	6

Besides environmental benefits, SCCs indicated that a principal motive for entering international Fair Trade markets was to shorten the intermediary chain and obtain better prices. However, not all SCCs have been successful in doing so on their own, as the president of SCC1 explained:

> When the organization was founded and we got into Fair Trade and organic certification, everybody told us that with organic we would have a great price, much better than the conventional coffee; and Fair Trade will help farmers to get closer to buyers. The deal was that farmers will get a better price and consumers will get more benefits out of our coffee. The problem was with coyotes, because they squeezed prices out of farmers, then they stored the coffee beans and waited until the price was higher. Thus, consumers have to pay a higher price for their coffee but here [we] farmers do not receive anything more for our certified production (Focus group 6, leader, Veracruz, Mexico, 2013).

During the interviews, it was mentioned that having a mill contributes to an SCC's long-term success because it enables them to make their product more attractive to international buyers. Risks of mixing with conventional, low quality coffee, or cross-contamination with

foreign matter are reduced to a minimum (often, external processing mills are not careful about these risks). When coffee production is processed in the SCC mill, there are other benefits. Jobs are created, there is greater opportunity for farmers to learn about different processes, and the extra income can be used for developing new marketing strategies; better promotion, advertising or efficiently market their products. SCC1, which lacks its own mill, offers a contrasting example:

> Our idea is to purchase a coffee wet-mill ecological module that works with less water and has optimal coffee bean handling. In the future, we would like to be independent and create employment for our own people. Currently, we have to pay others for our coffee processing, we are wasting money and risking our coffee because it could be mixed, damaged, or contaminated with other stuff. Our cooperative also needs to become a trader and obtain all necessary certifications to sell our product and avoid middlemen (Focus group 6, leader, Veracruz, Mexico, 2013).

On the production side, in 2013 SCCs had to deal with lower production than in previous years, but the quality of their organic coffee is better. This means that SCC leaders will need to improve the marketing strategies for next season, so they are not dependent on only one buyer and possibly can obtain a better price from other traders interested in their coffee.

The ability of all members to participate directly in the decision-making process of their SCCs is also a big component related to success in the market. SCCs that prepare members to take leadership responsibilities either through training or by pairing-up producers with professionals (coaching) will have a better rate of success in the future. Also, diversification is becoming another component of SCCs' success in the short term. In addition to the diversification of coffee products, SCC3 and SCC4 also incorporated diversification of crops

(e.g., sugar cane, macadamia nuts, *velillo* or banana leaves, bamboo), activities (e.g., summer course for kids) and services (e.g., processing mill for sugar cane, and compost sales to external buyers) which bring more opportunities to learn about business practices, marketing strategies and how to consolidate the organization.

SCC leaders need to work even harder to gain access to training for themselves and their members. Workshops to learn and update knowledge need to be offered and promoted on a regular basis. Due to limited capacity in their organizations, the type of training that most SCCs require at this point concerns marketing strategies. Currently, the French Fair Trade firm working in the region is providing support to farmers and offering more workshops on such topics as processing and quality control. As farmers from SCC3 mentioned, it is not clear if the intentions of the French company is to become the only buyer in the region or if they want to develop SCCs capabilities to create long term relationships:

> We hope with this company, we can end the shortage of funds and shorten the payment process. Also, we expect to build a long-term relationship, where all the coffee shipments signed by contract are valid. We are thinking they will honor their word and establish a good relationship with us (Focus group 3, leader, Veracruz, Mexico, 2013).

The firm has invested resources in the region and has so far been straightforward in the way it does business with coffee cooperatives. At present, there is no other firm with such interest in Fair Trade/organic coffee in the region.

Conclusions

On the production side, SCCs in Veracruz have a lot to share with other organizations but they have to learn even more about organizational and marketing strategies. The implementation of innovations in cooperatives participating in this study developed more intensively during the

past 10 years. Cooperatives have implemented innovations at the organizational level in terms of changes in the way they relate to each other, in the governance aspects, and the decisions they have to implement to improve marketing strategies and production practices. Some SCCs have adapted to the market requirements by shortening value chains linking coffee cooperatives with international Fair Traders, organic distributors and retail firms in other countries that pay better prices. The first major conclusion is that cooperatives with infrastructure investments (e.g., office buildings, warehouses, dry patios and ecological wet and dry mills) are more likely to establish a formal relationship with Fair Trade/organic buyers/traders because they can add more value to their coffee and deliver a product of reliable quality. The diversification of activities and products help SCCs to survive in tough times, and also helps in covering staff (professionals) payroll. There should be a synergy of efforts between the private and public sector to increase organizational and marketing capacity through coaching and training. Thus far, SCC leaders, using international standards (e.g., Specialty Coffee Association of America - SCAA), assure coffee quality.

The international commodity market is controlled by a handful of large conventional roasters and retailers, which has an indirect effect on quantities purchased and prices paid for FT/organic products (Slob, 2006). In general, SCCs continue to experience barriers in accessing financial resources and specialty markets. As mentioned by Hernandez-Rodriguez (2014), one of the big challenges for SCCs is that corporations are also providing training and creating their own certification schemes to gain captive producers for their coffee supply. Even though production practices from farmers selling to corporations are not as environmentally friendly compare with Fair Trade/organic production, MNCs use their schemes to distract farmers who otherwise would be willing to join cooperatives.

SCC1 and SCC2 have limited participation in alternative markets, most innovations are at the production level. SCC3 and SCC4 have designed better strategies for participating in alternative markets and have developed production and marketing innovations. It is clear from this research that in order to succeed in alternative markets, coffee producers must have a well-functioning organization, plans for adopting new marketing strategies, and produce beans with the characteristics required by buyers. Cooperatives' goals in adopting FT/organic practices became:

1. To produce a high quality coffee that could get into the specialty market;
2. To shorten the long chain of intermediaries that take away most profits from farmers;
3. To promote a culture and passion for coffee among the youth (or generations to come).

Promoters of FT/organic practices shared basic information with most cooperatives but there were no follow up plans regarding the details about transitioning from conventional to organic farming and the long period of adaptation in production practices. Production was not the only aspect that cooperatives have had to change. They also had to improve organizational and managerial skills and involve professionals to help them to understand the dynamics of the market.

Before fully implementing FT/organic practices, cooperatives usually sold their coffee to local middlemen. SCCs did not have a marketing strategy nor did they deal directly with national or international buyers. For many years these limitations prevented SCCs from gaining market knowledge. Organizational aspects of the business also represented a problem, because initially farmers did not know how to legally establish their organizations nor even to determine what was an appropriate legal status to pursue (e.g., LLC, incorporated business, cooperative, etc.).

Due to lack of market knowledge, SCCs did not realize that the investment needed to reach specialty consumers could be a burden for organizations without infrastructure (e.g., mills, vehicles, and warehouses), technical support (e.g., field technicians, accountants, etc.) and legal advice (lawyers, traders, brokers, etc.). Once cooperatives recognized difficulties in capturing more of the value paid by consumers and thereby generating a surplus that would allow them to reinvest in their organizations, they started seeking technical support, legal advice and gaining access to infrastructure.

It will be interesting to see if the National Plan for the Coffee Sector that the current federal government is drafting can reactivate the sector. That would require that previous policy mistakes related to the allocation of financial resources and the need for systematic evaluation of results in all coffee producing states are solved. Although cooperatives in Mexico have participated in the Fair Trade movement since the 1960s, most cooperatives in Veracruz entered alternative markets later than their counterparts in states such as Oaxaca and Chiapas.

Implications and Recommendations

Innovations implemented by FT/organic SCCs might have a community impact as well, but at the time field research and interviews took place only two cooperatives identified themselves as promoting changes in the larger community. Information provided by cooperative leaders and members is used to determine whether innovations have contributed to the organizations' success; however, community impacts were not evaluated in this paper as the information gathered is too thin on this question.

SCCs need to innovate and include more participation by young scholars. Research focused on producing quality beans also contributes to improved production practices. Private and public support for SCCs is necessary to assure sustainable agricultural production in the

region; it is also important that farmers continue generating and transferring knowledge to their children and future generations interested in coffee production, processing and marketing. As mentioned before SCC3 and SCC4 have a more solid investment and consistency through their participation in Fair Trade markets. SCC1 and SCC2 have to learn a lot about several strategies to overcome organizational and marketing challenges, if they want to be independent and implement more innovation strategies in the short run. Most SCCs are on the lookout for price increases but it was interesting to observe during meetings that most farmers recognized their labor as stewards of the land and protectors of the environment as being equally important. Farmers commented that even though they are not getting the right income from their efforts, they feel a sense of accomplishment by contributing to the preservation of natural resources.

Three SCCs stated that one long-term goal is to evolve into trader organizations and increase their participation in the international FT/organic coffee market. SCCs realized the importance of identifying changes or 'innovations' that will provide market access, as well as more income for their hard work. However, as all of them experienced, is not an easy task to shorten the value chain and get more cents out of the final consumer dollar. According to SCC leaders, Fair Trade coffee is barely known by consumers in Mexico; only those consumers living in large urban areas have access to specialty coffees, particularly organic coffee. Most of Mexico's coffee is sold in international markets, but coffee producers have to find buyers that can guarantee the Fair Trade price. Perhaps, another option will be to promote Fair Trade/organic coffee more in the domestic market.

Recommendations for the future include: develop new coffee blends, packaging, and by-products that consumers are demanding and would be willing to buy. A more effective way of selling specialty coffee to international roasters is through small batches complying with the

desired quality specify by each client. Another option is promoting the development of SCCs clusters that could be integrated into the alternative market chain. SCCs innovations for the future are related to certifications that are recognized. It is very important that government at all levels create, execute and evaluate on a regular basis programs and policies that improve rural economies and increase the opportunities for SCC in Veracruz and other coffee-producing States in Mexico. On the one hand, decision makers should support the strengthening of organizations in rural areas, so they are capable of access alternative markets. The results from our studies suggest that government programs to support infrastructure development for the cooperatives could have important payoffs in strengthening organizational structure and market presence. On the other hand, SCCs need to improve their planning, management, and marketing strategies based on previous experiences in the market and on the information collected and analyzed at research centers, educational institutions, or government agencies. Perhaps in studies such as this, findings could be used as a guide for overcoming some of the barriers to accessing alternative markets**.**

REFERENCES

Arnould, E. J., Plastina, A., & Ball, D. (2006). Market disintermediation and producer value capture: the case of Fair Trade coffee in Nicaragua, Peru and Guatemala, Paper prepared for presentation at the Product and Market Development for Subsistence Marketplaces: Consumption and Entrepreneurship beyond Literacy and Resource Barriers conference, University of Illinois, Chicago, 2–4 August. Retrieved from http://digitalcommons.unl.edu/marketingfacpub/11/

Barham, B.L., Callenes, M. Gitter, S. Lewis, J. and Weber, J. (2011). Fair Trade /organic coffee, rural livelihoods, and the 'agrarian question': Southern Mexican coffee families in transition. *World Development*, 39(1), 134–145.

Berndt, C. E. H. (2007). Is Fair Trade in coffee production fair and useful? Evidence from Costa Rica and Guatemala and Implications for Policy. *Mercatus Policy Series*, Policy Comment, 11.

Bevir, M. (2013). *Governance: A very short introduction*. Oxford, UK: Oxford University Press.

EqualExchange (2014). What Is Fair Trade Coffee? [Equal Exchange website]. Retrieved from: http://equalexchange.coop/products/coffee/faqs/what-fair-trade-coffee.

Escamilla-Prado, E. (2007). Influencia de los factores ambientales, genéticos, agronómicos y sociales en la calidad del café orgánico en México. *(Doctoral dissertation).* Retrieved from http://hdl.handle.net/10521/1625

Francis, C. (2009). Brewing justice: Fair trade coffee, sustainability, and survival, by Daniel Jaffee. *Journal of Sustainable Agricultural, 33*(4), 484-486, doi: 10.1080/10440040902835282

Giagnocavo, C. (2012). *Civil Society, Cooperative Capacity Building and Eradicating Poverty.* Paper presented at the meeting of Civil Society Forum, Commission for Social Development, The Social Protection Floor Initiative – Bridging the Gap to Poverty Eradication, January. Retrieved from http://social.un.org/coopsyear/documents/NGOPaperGiagnocavo.pdf

Glaser, B., & Strauss, A. (1967). *The discovery grounded theory: strategies for qualitative inquiry.* Aldin, Chicago.

Hernández-Rodríguez, E. (2014). Mercados alternativos en Café: Estudio de caso en la región cafetalera de Huatusco, Veracruz. *(Master's thesis).* Archived by Centro Regional Universitario de Oriente. Universidad Autónoma Chapingo. Huatusco. Veracruz.

Hufty, M. (2011). Investigating policy processes: The governance analytical framework (GAF). In U. Wiesmann & H. Hurni, [Eds.], *Research for Sustainable Development: Foundations, Experiences, and Perspectives* 403–424. Bern: Geographica Bernensia. Retrieved from http://ssrn.com/abstract=2019005

Imhof, S., & Lee, A. (2007). Assessing the potential of Fair Trade for poverty reduction and conflict prevention: A case study of Bolivian coffee producers. *University of Basel, Switzerland.*

International Coffee Organization. ICO. (2013). Total Production of exporting countries. [International Coffee Organization website]. Retrieved from http://www.ico.org/prices/po.htm.

International Food Policy Research Institute. IFPRI. (2008). Capacity Development for Agriculture and Rural Sectors: Lessons and Future Directions. [IFPRI website]. Retrieved from http://www.ifpri.org/event/capacity-development-agriculture-and-rural-sectors-lessons-and-future-directions

Jaffee, D. (2007). Brewing Justice*: Fair trade coffee, sustainability, and survival*. University of California Press.

Matachi, A. (2006). Capacity Building Framework. *United Nations Economic Commission for Africa.* UNESCO-IICBA. Retrieved from http://www.eng.unesco-iicba.org/.

Milford, A. (2004). Coffee, co-operatives and competition: The impact of fair trade. Norway: Chr. Michelsen Institute (CMI). Development Studies and Human Rights. Report

2004(6). Retrieved from http://www.cmi.no/publications/file/1802-coffee-co-operatives-and-competition.pdf

Moberg, M. (2005). Fair trade and eastern Caribbean banana farmers: Rhetoric and reality in the anti-globalization movement. *Human organization*, 64(1), 4-15.

Nadeau, E. G., & Thompson, D. J. (1996). *Cooperation works! How people are using cooperative action to rebuild communities and revitalize the economy.* Lone Oak Press, Ltd: Rochester, Minnesota.

Nadeau, E. G., & Wilson, C. (2001). New generation cooperatives and cooperative community development. In C.D. Merrett & N. Walzer (Eds.), *A Cooperative Approach to Local Economic Development* (pp. 55-71*)*. Westport, CT: Quorum Books.

Organisation for Economic Cooperation and Development, Development Assistance Committee (OECD-DAC) (2006). The Challenge of Capacity Development: Working Toward Good Practice (Report No. DCD/DAC/GOVNET(2005)5/REV1). Retrieved from http://www.gsdrc.org/docs/open/CC110.pdf

Osorio, N. (2005). Action to avoid further coffee price crises. Submission to the G-8 Summit, Scotland, Organización Internacional del café (OIC). Retrieved from http://dev.ico.org/documents/ed1959e.pdf

Osorio, N. (2005b). Los efectos de la crisis causada por los bajos precios del café. Organización Internacional del Café (OIC). Retrieved from http://www.ico.org/trade

Pohlan, H. A. J. (2006). El cafetal del futuro. In H. A. J. Pohlan, L. S. Pinto, & J. F. Barrera (Eds.), *El cafetal del futuro: Realidades y visiones* (pp: 3-14). Shaker Verlag GmbH, Germany.

Prakash, D. (2000). Capacity Building of Agricultural Cooperatives to Meet the Market and Human Resources Development Demands. A Step-by-step Approach. *University of Wisconsin Center for Cooperatives.* Madison. Retrieved from http://www.uwcc.wisc.edu/info/intl/daman_cbac.pdf

Rodale Institute (2014). *Dig deeper: Transition to organic*. [Rodale Institute website]. Retrieved from http://rodaleinstitute.org/transition-to-organic/

Ronchi, L. (2002). The impact of Fair Trade on producers and their organizations: A case study with Coocafé in Costa Rica. Policy Research Unit. Sussex: University of Sussex.

Sayago, R. (2011, February). Transnacionales abaratan café de Coatepec. *Imagen del golfo.* Retrieved from http://imagendelgolfo.com.mx/resumen.php?id=282298

Utting-Chamorro, K., 2005. 'Does Fair Trade make a Difference? The Case of Small Coffee Producers in Nicaragua'. *Development in Practice,* 15 (3/4): 584–99. Retrieved from http://www.tandfonline.com/doi/abs/10.1080/09614520500075706

Valkila, J. (2009). Fair Trade organic coffee production in Nicaragua: Sustainable development or a poverty trap? *Ecological Economics*, 68, 3018–3025. doi: 10.1016/j.ecolecon.2009.07.002

Venture Philanthropy Partners. (2011). *Effective capacity building in nonprofit organizations.* Mckinsey Company. Retrieved from http://www.vppartners.org/sites/default/files/reports/full_rpt.pdf

Walters, H. (2007). Capacity development, institutional change and theory of change: What do we mean and where are the linkages. Preparatory paper for the seminar *"Scrutinizing Success and Failure in Development",* Wageningen University, The Netherlands. Retrieved from

http://portals.wi.wur.nl/files/docs/successfailuredevelopment/Walters_CapacityDevelopmentConceptPaperFIN.pdf

World Bank. (2008). Agriculture for Development, World Development report. Washington D.C. Retrieved from http://siteresources.worldbank.org/INTWDR2008/Resources/WDR_00_book.pdf

World Fair Trade Organization (2013). 10 principles of Fair Trade. [World Fair Trade Organization website]. Retrieved from http://www.wfto.com/sites/default/files/10-FAIR-TRADE-PRINCIPLES-2013-%28Rio-AGM-and-EGM-2013-approved-modifications%29.pdf

CHAPTER 4. SMALLHOLDER COFFEE FARMERS PRODUCTION INNOVATIONS IN FAIR TRADE/ORGANIC COOPERATIVES IN THE CÓRDOBA-HUATUSCO CORRIDOR, VERACRUZ, MEXICO

Manuscript prepared for submission to the *Journal of Development Studies*

Abstract

This is a study of farmers in five smallholder coffee cooperatives (SCC), plus a group of seven unorganized conventional farmers. Data were collected during 2013 through semi-structured interviews with Fair Trade/organically certified and non-certified farmers, with some additional questions for certified households (e.g., certification type, agro-ecological practices, etc.). This study examined the innovations in production that members of smallholder coffee cooperatives adopted as a result of shifting from conventional to Fair Trade and organic production. What innovations were mandated by Fair Trade and organic requirements, and what innovations did farmers make on their own as they adjusted to the new regimes? Why have conventional farmers (not in cooperatives) not adopted Fair Trade/organic practices? Standards promoted by Fair Trade and organic certifiers can become entry barriers for farmers without access to appropriate production and marketing knowledge. The paper examines whether the high cost of complying with certification inspections, and farmers' limited financial resources can constrain adoption of new agro-ecological and socially just practices. These constraints may inhibit farmers' adoption of product and process innovations that could contribute to economic development and environmental sustainability. An important finding is SCCs' farmers recognize production innovations contribute greatly to the conservation of the environment and the promotion of the coffee culture developed in the region 60 years ago. However, they are still waiting for more tangible economic benefits.

Introduction

Smallholder farmer is a term whose definition varies by context and according to the perspective of the scholar. Scholars have made attempts to establish criteria to identify smallholder farmers in several developing countries. However, each country has different geographical, social, and technological characteristics where agricultural activities take place. Thus, while farmers with 50 hectares in Mexico would not be considered smallholders, in some countries in South America they *would* be considered smallholders (Macias, 2013). Definitions take into account land size, but also include other aspects, such as number of family members working in agricultural activities, limited access to resources, dependency on agencies or different actors to buy inputs, limited production, and access to markets (Macias, 2013). Productivity and economic aspects are important, but socio-cultural aspects as well as the relationship of smallholders to the environment. Macias (2013) provides the following criteria to understand the term smallholder: fairly simple production system (limited capacity for storage/processing), uses mainly family labor, limited capacity for marketing and record keeping, and lack of communication capacity.

Later in this study, smallholder farmers' characteristics will be shown useful to understand why farm size (ranging from one-half to 10 hectares), diversity of production on the farm, and type of land ownership, e.g. small proprietors, *ejidatarios* (an *ejido* is a legal entity for common ownership of the land in Mexico, although in most cases the land is operated by individual families), are important in the production innovations achieved over time. Smallholder farmers generally produce a heterogeneous group of crops and livestock as a risk-reduction strategy that includes subsistence production.

In terms of production diversity, two main approaches are available to coffee farmers. Both relate to the ability of farmers to engage in self-provisioning:

> (1) Smallholder coffee farmers sacrifice space for subsistence crops to plant as many coffee trees as possible in an effort to obtain more profit at the end of each season. However, using land exclusively for coffee production reduces the ability of farmers to produce some fruits and cultivate some vegetables or corn in their fields (Morris et al., 2013), an insurance policy, if there is a failure of the cash crop or coffee prices are low in that particular year. With the rise in prices of staple foods—even in rural areas—smallholder farmers' provisions of food for their families is becoming more and more challenging. Hence, smallholder farmers plant all their land to coffee at their own peril (Morris et al., 2013; Steinberg & Taylor, 2009).
>
> (2) An alternative approach is to intercrop coffee with subsistence crops, and/or those with a relatively high, growing demand in both national and international markets, like macadamia nuts, banana leaves, bamboo, spices (e.g. organic black pepper), and some ornamental flowers (Escamilla, 2007).

Several challenges prevent smallholder farmers from participating in alternative markets and to compete at the international level. Some of these challenges are related to lack of access to technical assistance and extension services, limited access to research capacity, limited participation by professionals, and lack of knowledge about international standards. These challenges and requirements at the international level are, in some cases, a potential barrier to market access, but can also encourage upgrading and innovation (Pérez-Alemán, 2012). It is also important to describe the characteristics of these markets as well as their regulations.

Fair Trade and organic coffee certifications generally provide a higher market price per pound and higher gross revenue than non-certified coffee (Méndez et al., 2010). However, for smallholder farmers to make a decent income from coffee, they must produce sufficient quantity and quality of product to make conversion to organic worthwhile and belong to cooperatives that succeed each year in selling the farmer's production at Fair Trade prices (Hernandez-Rodriguez, 2014). When certified farmers have low volumes of coffee and their cooperatives are unable to sell coffee at certified prices, the contribution of coffee sales to total household agricultural income may be relatively small, regardless of certification (Bacon, 2010). However, if Fair Trade/organic prices are obtained, several positive effects are manifest for livelihoods, such as income, education, reduced incidence of migration at the household level, savings, and credit (Méndez et al., 2010). Fair Trade on its own provides a guaranteed price for farmers, but when combined with organic certification, farmers have access to a second tier of premium prices and the diversity of support networks through their cooperatives that foster training, production knowledge, information on marketing strategies, and the elements to add innovation to their farms (Méndez et al., 2010; Bacon 2010; Morales, 2005).

Previous studies (Murray et al., 2003; Gonzalez & Nigh, 2005; Courville, 2008) have documented that smallholder coffee farmers are only vaguely aware of the 'big picture' objectives of Fair Trade certification. In general terms, organic certification has clear regulations regarding agricultural practices and farmers find it easy to understand the reasons behind them. Fair Trade is more challenging, because its standards are based on notions of justice and empowerment (Méndez et al., 2010; Murray et al., 2006; Bacon, 2005). Coffee farmers perceive Fair Trade certification as providing better prices in the short-run (Bacon, 2005, 2007; Murray et al., 2006).

Méndez et al. (2010) also found that, overall, cooperative leaders and staff had a better understanding of Fair Trade certification's *raison d'etre*. It is crucial that cooperative leaders and staff engage farmers on this issue if they are to clearly understand Fair Trade principles and rules. Fair Trade and organic certification are essential components of an alternative market system where farmers' individual performance has serious economic and social impacts on the business dynamics of their cooperatives (Méndez et al., 2010; Pérez-Alemán, 2010; Valkila, 2009). Knowing the rules for both types of certification helps cooperatives to improve their accountability, transparency, and communication. Ensuring that cooperatives are accountable to their members is a challenge, but there are increasing efforts to overcome this barrier (Valkila, 2009).

The overall objective for this research is to analyze the effects of Fair Trade and organic certifications on the capabilities of farmers to adopt and innovate new practices. These specific questions are addressed:

1. What production innovations have members of smallholder coffee cooperatives adopted as they shift from conventional to Fair Trade and organic production?
2. Why have conventional farmers (not organized in cooperatives) not adopted Fair Trade/organic practices?

The remainder of this article is structured as follows. The section 'Data and Methods' introduces the methods utilized in the study for data collection and explains the context in which coffee producers in the Córdoba-Huatusco region in Veracruz, Mexico operate; the section 'Innovations among smallholder coffee farmers: Shifting from conventional to Fair Trade and organic production' explores innovations in response to Fair Trade and organic principles and to

the implementation of these new regimes. The ‘Conclusions’ section summarizes the opportunities and challenges of Fair Trade for improving the livelihoods of coffee farmers in the Córdoba-Huatusco region.

Methods and Data Collection

This section introduces the data collection methods used and explains the context within which Veracruz coffee producers operate. To gain an in-depth knowledge of the Fair Trade and organic context and processes, interviews were conducted with farmers individually and in focus groups using a semi-structured questionnaire for both methods in each of the cooperatives. In addition, one local leader, very well known in the community, helped recruit conventional farmers. Once the first group of seven unorganized conventional farmers was recruited, they were asked to invite their neighbors to participate. However, this strategy did not reach any more conventional farmers. The group of conventional farmers was small, but their opinions about the coffee situation were useful to compare with the arguments from Fair Trade and organic coffee cooperatives’ members. Furthermore, this researcher’s field notes and documents provided by key informants[12] also enriched the information captured during the interviews.

Farmers in the four cooperatives in this study completed a questionnaire that recorded demographics, harvesting timelines, and coffee production practices. SCC3 did not provide any quantitative data because farmers did not complete the questionnaire. However, the focus group discussion with this cooperative provided abundant information about their participation in Fair

[12] Four key informants in Veracruz State—the director of the Fair Trade network organized in the region, a non-government representative, a researcher, and a representative of an international trading firm were interviewed. The information provided by key informants helped verify the relevance of the principal research questions, and contributed towards making changes and adjustments in the research design before moving to the field to interview farmers in the cooperatives.

Trade and organic markets. Conventional farmers completed the same questionnaire. However, some questions did not apply to them because they were not involved in Fair Trade organic practices.

In three cooperatives, the focus groups were split into two sessions either because not all members were available on the same date or due to the large number of participants. Ten individual interviews (all males) were conducted with farmers in Huatusco and Chocamán. In total, nine focus groups were performed among Chocamán, Huatusco, Tepatlaxco, and Ixhuatlán del Café municipalities, where 50 participants (43 males and 7 females) were cooperative members and seven were unorganized conventional producers (4 males and 3 females). On average, eight producers participated in each focus group. However, not all participants contributed ideas equally over the course of the group session. Typically, four farmers led the conversations and the remaining farmers complemented previous comments or extended ideas mentioned by their peers. This researcher used some techniques to persuade quiet farmers to speak, such as asking questions directly to them and going around the table to obtain everyone's comments on particular questions. Often, this technique worked and farmers elaborated their arguments. With the permission of all participants, interviews were recorded using two smart phones; there was only one researcher present at each focus group and individual interview. In five of the nine focus groups, cooperative leaders were interviewed at the same time as the remaining members.

In the Chocamán region, informal conversations occurred during two walks around small coffee farmers' plots and at one workshop held by an international trader. These conversations were not recorded because farmers refused permission. During farmers' conversations about their plots, there were opportunities to discuss several topics, including practices used in their

production systems, challenges in the transition process, and innovations Fair Trade/organic markets demand of them. Field notes were written in a notebook and later transformed into analytic memos. All specific details (e.g., learning experiences) and observations were compared with the information provided by formal interviews. The information collected during informal conversations with farmers was useful to understand the different strategies, changes, and innovations they employed on their farms. Field notes were useful because during the informal conversations, farmers were not under any pressure from peers or cooperative's leaders. It was interesting to see their gestures and hear their voice tones when talking about certain issues—showing anger, some happiness, but most frequently dissatisfaction because their hard work is not paying off in terms of a better livelihood.

In addition, after the fourth focus group discussion, a leader from SCC1 extended a formal invitation to the researcher and everyone in the SCC to participate in a workshop organized by a French Fair Trader in the Chocamán region. The purpose of the workshop was to explain a new initiative to create a cooperative-owned trading company. Among the goals proposed for this new company were the consolidation of research and marketing efforts in the region. Leaders of four SCCs and 14 members attended the workshop. After the workshop, informal conversations with farmers and attendees occurred. These conversations were not recorded on an audio device because farmers did not grant permission. However, field notes from this workshop were transcribed and compared with data from the literature.

Discussions in all nine focus groups and the 10 individual interviews with farmers were transcribed verbatim in Spanish. Key remarks were then translated into English. By reading the transcripts several times, themes were identified that provided clues for answering the research questions. The transcripts were an invaluable component because they facilitated a better

understanding of the overall status of coffee cooperatives, and the socioeconomic and environmental context of small coffee farmers in Veracruz, Mexico. The triangulation of information from focus group discussions with cooperative members, individual semi-structured and informal interviews, and field notes contributed to the trustworthiness of the findings. Quotes, information provided by key informants, and the literature review are used to illustrate and elaborate the basic findings.

Findings

For the past 10 years, a combination of training in production and organizational practices plus farmers' experiences in the field contributed to the quality improvement demanded by the Fair Trade and organic market. However, farmers still had to adapt what they had learned to their specific situation.

Innovations from smallholder coffee farmers: Shifting from conventional to Fair Trade and organic production

Smallholder coffee farmers (SCF) in the Córdoba-Huatusco region cultivate coffee on farms ranging from one-half to 10 hectares. Farmers interviewed have small plots generally ranging from one-half to five hectares (in SCC3, some farmers own more than 10 hectares). Farmers with more than five hectares usually planted the remainder of their land with other crops, such as sugar cane. Farmers are landowners (small proprietors), but a few in each of the nine focus groups had one-half to two hectares under the *ejido* form of common ownership of the land. One farmer from SCC3 mentioned:

> Every farm is different [sized], the conditions are different [weather]. So many details are complementary to the general practices we have to follow [resources]. Sometimes you

> have to adapt the practices to your own situation. There are *ejidos* [commonly-held land, allocated to small farmers during the Presidency of Lázaro Cárdenas, 1934-40] who have their farms on the plains, while others have their ejidos in the foothills. So, as you can see, there are so many variables (Individual interview, farmer, Veracruz, Mexico, 2013).

The conventional farmers interviewed (not members of a cooperative) generally had less than one hectare of land. Some of the reasons why conventional farmers have smaller plots include (1) the large number of family members, (2) excessive land fragmentation that occurred two generations ago, (3) the economic crisis, and (4) lack of other assets they could bequeath to their children (e.g. higher education). Farmers who decided to gift part of their land to their children, rather than bequeathing it to them upon the parents' deaths, only kept sufficient land for their houses and to earn some income for themselves (Field notes, Focus group discussions 2, 3, 7, 9. Veracruz, Mexico, 2013). The perception that land is the only asset they can pass on to their children has contributed to land fragmentation, especially during the last 20 years—since the neo-liberal agrarian counter-reform. During the period of low coffee prices, some farmers with smaller families had to sell land to cover basic needs and others rented out land to other farmers.

Farmers participating in alternative markets acknowledge certification is an essential part of the system and their individual performance has serious economic and social impacts on the business dynamics of the cooperative (e.g., if one farmer applies chemicals to her/his land, it is understood certification will be denied to all farmers selling to that cooperative). Farmers interviewed were aware that knowing the rules for both types of certification helps the cooperative to improve its accountability, transparency, and communication. Overall, cooperative leaders have a better understanding of Fair Trade certification and cooperative members (farmers) understood organic certification better. Farmers need more training to clearly

understand Fair Trade principles and organic rules. All members interviewed from SCC4 agree with one fellow farmer when he explained the advantages of organic production:

> The great advantage of organic production is that soils are healthy. If we continue applying pesticides and chemicals to the soil, I'm sure we are going to deplete it. There are a lot of nematodes we cannot eliminate, but with organic enriched soil, nematodes gradually disappear... I don't know the science behind it... but nematodes stop attacking trees. Maybe, because there is more life and all the microorganisms are helping coffee trees reduce nematodes. This is a great advantage from organic practices (Focus group 9, farmer, Veracruz, Mexico, 2013).

This section also discusses the principles and rules that farmers need to adopt to participate in alternative markets. For organic production, the most common challenge mentioned by farmers was the three-year transition period that allows the soil to rid itself of previous chemical pesticides and synthetic fertilizers applied on the farm. Many farmers have not applied chemicals for several years, due to their lack of financial resources. However, to demonstrate to third party certifiers the soil was free from chemicals, farmers had to show the management practices implemented on their fields to inspectors during the transition period. Farmers were concerned that during the transition process trees would stop producing beans, even though they were applying organic fertilizer in the correct amounts. A farmer from SCC1 explained the challenge of changing from chemical to organic fertilizer:

> Changing chemical fertilizers for organic fertilizers is a huge change. The trees became stressed the first time we started making changes in the type of fertilizer used. Organic fertilizer is good, but you need to know exactly the type of nutrients you need in the soil so the plant will receive it and won't stop producing. Most agro-ecological practices

> incorporated into our farming practices provided good results in the long run… it takes time for new practices to produce adequate results and that's why it is a huge challenge for us because we don't have the financial resources to sit and wait to see if changes will work (Focus group 7, farmer, Veracruz, Mexico, 2013).

Another challenge mentioned by farmers was replacement of old coffee trees on their farms. Based on the rules of the certifier, technicians working for certification entities provided farmers with a renovation (coffee-tree replacement) plan. This plan was neither based on farmer's circumstances nor was it adapted to land size, resources, and access to new trees. In theory, farmers should not have any problems replacing old trees with new ones. However, in practice the story was different. A leader from SCC1 explained the challenge they faced when technicians tried to implement this top-down approach on their farms:

> We started with coffee renovation right away… several engineers came and told us, "Look, if you have a hectare, 1/4 of the hectare must be renewed with this variety of trees. The next year you do the same and so forth. Once you are in the fourth year, your first renewed 1/4 of hectare will be already producing," but, of course, that's not enough for us. If we have a hectare, we barely survive with that; but for them, the renovation plan was perfect in theory. However, once you go into the field, in practice the story is different. Thus, we have several issues in the transition process (Focus group 7, leader, Veracruz, Mexico, 2013).

In addition, farmers described that learning about composting and understanding the importance of leaving organic matter on the field was a challenge. This was mainly because in the past farmers were accustomed to keeping their fields clean of weeds. For farmers, having their plots clean was a symbol of hard work and pride. Once they switched to organic practices

and they had to leave organic matter, farmers struggled culturally to adopt the rule. At the beginning of the implementation of Fair Trade and organic rules, conventional farmers and relatives criticized this practice a lot because it made the field look dirty. These farmers did not know about future benefits from soil restoration and protection. In this regard, a farmer explained:

> In organic production, buffer strips, drainage ditches, pruning, grafting, and renewing coffee trees are some innovations helping us preserving the soil and increasing diversity in our farms, both animals and trees. We have a shared responsibility with the environment and our business… I feel we are really good stewards of the land. Of course, our main goal is to make money from coffee, but at the same time we are protecting the environment (Focus group 9, farmer, Veracruz, Mexico, 2013).

The lack of guaranteed economic remuneration when participating only in the conventional markets and the desire to have a better livelihood are two of the farmers' main reasons for shifting from conventional to Fair Trade and organic production. As farmers explained, most innovations in production are a consequence of Fair Trade and organic principles. However, in some cases, farmers make their own innovations to adjust to the new regimes. Some practices mentioned among farmers in the cooperatives are:

1. Keeping the farm clean from non-organic trash (e.g., plastic bags, trash, chemicals, etc.).
2. Buffer strips to protect coffee from contamination or chemical drift from neighbors (e.g. trees for shade, bushes, tall grasses, and wild flowers).
3. Detailed management plan for clearing and pruning coffee trees.
4. Replacement plan for old coffee trees.
5. Collecting only red coffee beans ready for processing.

In the past, cleaning farmers' fields meant going to the farm, cutting all weeds, and burning them or throwing them away. No further action was implemented. If there was non-organic trash, some farmers would collect it in a pile, burn it, and let the elements do the rest. Other farmers did not even bother to collect it. Instead, they would just leave it there until the rain, the wind, or animals removed it from their fields.

Currently, Fair Trade/organic farmers recognized their role as stewards of the land. With their agro-ecological practices, farmers feel proud protecting, recovering, and cleaning the environment. Two practices implemented in all farms are: (1) the protection of land edges through buffer strips. Farmers explained buffers have several applications in practice. (2) During the rainy season, it is important to remove weeds. Detailed description of these practices were mentioned by two farmers, one member from SCC2 and the other from SCC3:

> Another practice we [farmers] implemented is to cut the grass and weeds only to a certain height. This measure contributes to soil health. The norm is to leave at least 10 centimeters minimum, so we can prevent erosion. Some farmers with deep slopes on their plots have to build terraces and create buffers strips around those terraces… we [farmers]…follow those practices to have our certificates and proof of our coffee's quality (Focus group 1, farmer, Veracruz, Mexico, 2013).

The leader from SCC3 explained:

> With buffers planted around the edges of our farms, we [farmers] are more confident that spores or pollutants traveling through the air are not directly contaminating our beans. Also, our pruning techniques keep our coffee trees healthy and in decent shape. Now, we cut weeds around 10 to 20 centimeters from the ground. Drainage ditches are helpful when heavy rains hit the region. They also help trap all organic matter that otherwise

> would be washed away from our plots. We feel protected, but constantly learning about more practices to improve our systems (Individual interview, farmer, Veracruz, Mexico 2013).

Despite the fact farmers in Fair Trade and organic cooperatives have buffers strips to protect land from erosion and contamination of other chemicals, natural barriers are not sufficient to prevent contamination from neighbors or people in the community who continue to throw trash in their fields. For these reason, most farmers pick up garbage dumped in their plots at least monthly. One female leader from SCC1 mentioned:

> Another important change I am making on my plots is to have the farm clean, without any non-organic trash, because sometimes people throw trash in our fields. At least every month we clean the plots to avoid contamination. People dump plastic bags, cans, and more into our fields. Fortunately, buffer strips help us prevent contamination, but there is always some trash in our fields (Focus group 6, leader, Veracruz, Mexico, 2013).

Another issue among farmers is the lack of access to organic fertilizers. Most farmers struggle to apply organic fertilizers in sufficient quantities for their coffee trees. Only two cooperatives have invested in compost facilities allowing them to provide organic fertilizers at low cost for all members. SCC3 and SCC4 use most of the residue from trees (e.g. branches and old trees are cut into woodchips), the waste from the wet mill (e.g. pulp, peel), as well as the organic waste coming from the hoop-house. In addition, certain organic residues can be used in the vermicomposting pile to serve as food for the worms (e.g., over-ripe fruits). The remaining cooperatives either buy organic fertilizers or seek financial support (private or public) to reduce the cost of purchasing fertilizer. In the short-run, the idea is that all cooperative members learn how to remove organic residue from their fields and convert it into organic fertilizer. Organic

rules restrict the use of chemical fertilizers by farmers, but they do not provide guidance regarding the type of organic fertilizer that should be used, how much, or how often to apply it.

One farmer from SCC1 explained his organic fertilizing technique. Other farmers listening to his suggestions mentioned it as an innovative process, but that it will require more labor, time, and financial resources to follow this practice:

> On the production side of the business, we need to work with technique. Every plant needs organic fertilizers and we need to apply them at three different times during the season. First, [we apply organic fertilizer; compost] at the beginning, so trees have a good start; second, [we apply fertilizer] in the middle, so the plant can hold all the beans through the season; and third, right after harvest. We need to apply compost three times, because it helps coffee trees to replace all nutrients and energy required in the process (Focus group 6, farmer, Veracruz, Mexico, 2013).

Farmers in cooperatives without access to organic fertilizers mentioned it is costly and they do not apply fertilizers on a regular basis. This perception of costs differs from SCCs with better practices in the collection of organic matter coming from the same coffee system (branches, weeds, tree leaves, etc.). Moreover, SCCs with composting or vermicomposting facilities have a steady supply of organic fertilizers throughout the year at a very low cost.

> …in the past, we did not know how to do composting or that we could even evolve to vermicomposting (use worms to produce fertilizer). But, thanks to technicians, we learned about the process and we figured out where to buy our worms. Vermicomposting is another innovation in our cooperative…most knowledge gained from technicians was worth it, because there were several new things we didn't know about it (Focus group 2, leader, Veracruz, Mexico, 2013).

Two to three females were present during interviews with farmers from two cooperatives. One of these groups had a male farmer member who could not attend the focus group discussion, so he sent his wife to represent him. The farmer's wife reported on the farm's activities and commented about the learning process for composting and some other practices learned through her husband. This female representative[13] mentioned:

> I've learned through the cooperative and my husband about organic fertilizer, compost, and vermicomposting. Before, we didn't know how to produce any of these organic fertilizers, but now it is a different story. There are so many new things we have learned with my husband—pruning, grafting, etc., before, we didn't even know what that was (Focus group 1, farmer's wife, Veracruz, Mexico, 2013).

Farmers' production innovations start with the selection of coffee varieties more suitable for the type of soil. If the right variety is planted, chances to meet standards for the target market increase. With respect to desirable coffee varieties, a farmer explained:

> If we [farmers] want to receive something from our land, investing money is the first step… the economic situation is not good, but we need to farm with technique… seeds must be the best and the most suitable varieties for our types of soil, weather, altitude, etc. It's necessary to use organic fertilizer during three stages…and keep an eye on trees' growing process. All trees should share a similar height, width, etc. (Focus group 6, farmer, Veracruz, Mexico, 2013).

[13] In this particular case, only the husband is a cooperative member. Interviews did not directly discuss whether women can be members in the cooperative. However, Fair Trade principles stipulate that women should not be discriminated against in participation in Fair Trade cooperatives.

Farmers from SCC2 explained that weather plays a tremendous role, depending on the location of their farms. The rainy season has been long and intense during the last two years but, four years ago, it was a very short rainy season. There are three main latitudes in which farms are located: (1) High region— 1200 meters or more above sea level (masl), (2) medium region—600 to 900 masl, and (3) low region—below 600 masl. Both kinds of farmers (conventional and Fair Trade/organic) agreed that weather temperature, droughts and intense rain affect coffee yields from one season to the next and there is no way to control the weather. The hope is agro-ecological practices will have a positive impact in the future.

> I don't think anybody can control nature. We are depending upon several external factors that we cannot control. For example, some of my partners live in the mountain area (higher elevation), some of them in the middle, and the rest live in the lower areas. Weather changes dramatically in each of these areas and usually plays against people in the higher areas (Focus group 1, farmer, Veracruz, Mexico, 2013).

In regard to the target market, Fair Trade /organic farmers plant the type of coffee trees that will be more productive after red beans are processed in the mill to obtain value-added coffee. Coffee varieties that produce large, red cherry beans require more time, energy and water at the processing mill to remove the *mucilago* (mucilage). If farmers were conscientious about selecting the best varieties for the type of soil and targeted appropriate markets, the immediate result would be an energy-efficient, value-added process that saves costs allowing farmers to obtain higher prices in alternative markets (Field notes, Focus group discussions, 1,3,8,9, Veracruz Mexico). Fair Trade/organic principles required farmers to design budget plans for pre- and post-harvest, fertilizing, etc. Access to financial resources is crucial. However, payment

schemes for Fair Trade/organic certified coffee require cooperatives and farmers to wait for full payment. A farmer from SCC4 explained:

> Farmers have to be patient with our cooperative to receive payment. It is a waiting process that we cannot avoid but it is really difficult to be patient. At the end of the day, we always obtain a fair price for our coffee and a decent amount of money. It is way better than suffering individually with the "coyotes" because they really squeeze the price out. Our cooperative is always looking for better deals with buyers (Focus group 9, farmer, Veracruz, Mexico, 2013).

The common perception is that even though the waiting process could be a hassle for farmers and their cooperatives, premium prices represent an advantage over conventional farmers, who not only receive a lower price for their coffee but they do not build any type of relationship with buyers that could help them gain more resources in the future.

Personal and community development attributed to Fair Trade and organic practices were also important. Two farmers expressed their opinions about non-economic, non-environmental gains. A farmer from SCC3 mentioned:

> Our goal is to reach more young students and professionals, sooner or later there will be a need for sharing our knowledge to younger generations. If we don't pay attention to this transition and we don't involve young farmers in the coffee sector, they won't know how to deal with most problems… besides, younger generations need to appreciate what we do and fall in love with coffee…as much as we are (Individual interview, farmer, Veracruz, Mexico 2013).

Another farmer from SCC4 mentioned:

> I need to be fair with my family and community… how to convince more people that we are on the right track if I am not showing with my example how to do things differently. If I continue my same bad personal habits from 13 years ago, then how can I speak about Fair Trade and organic practices? …nobody will believe me… For example, before I drank alcohol every weekend and I was spending the money my family needed. Currently, I've stopped drinking and the money goes to my family—is that fair or unfair? Before, communication was an issue, it was difficult for me to talk to them; lately we get together during meals to plan, and discuss things as a family. We are making progress one step at a time (Focus group 9, farmer, Veracruz, Mexico, 2013).

The overall satisfaction of producing coffee beans, and following Fair Trade and organic practices has changed the attitudes and to some extent behaviors of farmers actively involved in cooperatives. Finally, in one of the informal walking conversations with a farmer member of SCC5, he mentioned that a small piece of his land is used to cultivate corn, beans, and some vegetables. However, he observed some neighbors do not even have fruit trees anymore. For neighbors, it is all about planting cash crops and no staple foods. However, when it is time for harvesting this farmer's staple crops, all family members have to take turns watching their crops because many people passing by would not hesitate to take some home without permission.

Unorganized conventional farmers' perceptions: Reasons for not adopting Fair Trade and organic practices

Conventional farmers explained why it is not attractive or possible for them to adopt Fair Trade/organic practices. First, land size is smaller compared to cooperative members. Four conventional farmers mentioned fragmentation of the land is becoming a problem in the region.

When farmers' sons are unable to make a living off production from the farm, they usually sell the land to other farmers or people outside the community. There is no control over land use. Additionally, yield is insufficient during the transition period and the cost of organic certification is high. Very small landholders cannot absorb short-term reductions in income. Table 4-1 shows characteristics of conventional farmers (not organized in cooperatives) and the SCCs. SCC1 is struggling the most, while participating in Fair Trade and organic markets. SCC2 is in a better position because of its investments in the infrastructure achieved in the past. SCC3 does not have quantitative data available because farmers did not complete the questionnaire, but their participation in Fair Trade and organic markets is remarkable. SCC4 has implemented successful strategies for participating in alternative markets.

Table 4-1. Comparisons among characteristics for conventional farmers and Fair Trade/organic SCCs

Variables/Co-ops* (means)	**SCC1**	**SCC2**	**SCC4**	**SCC5**	**Conven-tional**
Land size (Hectares/acres)	2.5/6.2	4.8/11.9	3.0/7.4	3.4/8.4	0.4/1.1
Education (years)	8.1	5.2	7.6	4.3	3.0
Age (years)	58	56	47	59	62
Family members in the household	3.3	4.1	3.9	5.0	2.6
Years of farming	25	26	20	19	23
Number of farmers	15	19	8	8	7

* Quantitative data not available for SCC3. 1 Hectare = 2.5 acres. Source: Own data.

Table 4-1 also helps to understand that besides farm size, education is another factor in the development of innovations among members of cooperatives and conventional farmers. Age appears to be a proxy for education; that is, the older farmers are of an age who did not have access to school beyond third or sixth grade, while younger farmers did. By examining the number of years of education for individual farmers, it is possible to have an idea of the impact

of education on simple practices required to obtain certification—like record keeping. In a discussion with a key informant, one of the arguments mentioned was:

> When farmers' education is low or they do not know how to write or read, providing them information becomes twice as hard. Even for those who have elementary or middle education, their skills for taking notes, making summaries, and understanding information are limited (Individual interview, key informant 4, Veracruz, Mexico, 2013).

The number of members in the household is relatively low for conventional producers. However, one possible explanation could be related with the age of conventional farmers. Older farmers have already raised their children and they might not live with them anymore. While for younger farmers in cooperatives, their sons and daughters are still living in the household. Again, this argument should be taken cautiously because there are other factors like migration or lack of jobs in the area that could cause family members to move from the main household. The latter variables were not part of this study.

For the conventional farmers interviewed, there is not even an option to think about becoming organically certified. Fair Trade/organic cooperatives encouraged conventional farmers to obtain the Fair Trade certification so they could obtain better prices, but among the seven farmers interviewed, no one expressed any intention to become either Fair Trade or organically certified in the short-run. Farmers willing to transition from conventional to organic production can only use what is authorized by Fair Trade/organic rules. Farmers not in co-operatives, who are in contact with SCCs, are learning indirectly how to take better care of their trees. However, most conventional farmers mentioned they do not feel comfortable following new practices. One female farmer said, "We use whatever fertilizer is available; if we have money we try to use one of a better quality, but if prices are not good, and we don't have

sufficient money, we apply the cheapest fertilizer available" (Focus group 8, conventional female farmer, Veracruz, Mexico, 2013). In summary, conventional farmers expressed their desire to be independent. They do not want to follow any rules about what to do on their farms, how to pick and deliver their beans, or when to sell the coffee. Their plots were very small and they did not perceive any advantage in being part of a cooperative or following Fair Trade, and organic farming principles and rules. A female farmer in this group commented:

> In the past, I've been involved in farmers' organizations and I tried to become a member in this cooperative, but I couldn't handle it. As a single female, I do most of the work on my plot by myself. Most of the time participating in meetings organized by the cooperative was not feasible for me. Without going to meetings it was difficult to coordinate efforts, such as selling the coffee long term. My plot is too small. If I was part of the organization, maybe I'd have been able to do better, but that didn't happen. I didn't like it and I want to act freely. I don't know if that's the right way to think, but that's my opinion (Focus group 8, conventional female farmer, Veracruz, Mexico, 2013).

Also, conventional farmers mentioned they could not wait over a month to receive payment for their coffee. They knew Fair Trade farmers had to wait a month or longer to receive their payment.

In the last two seasons a combination of relatively high prices for conventional coffee and high yields for conventional farmers led some cooperative members to have doubts about the benefits that Fair Trade and organic farming could have in return. However, Fair Trade/organic leaders' main counter argument is that in the long-run, when prices in the commodity market hit lows again and conventional farmers experience low yields, the effects on their livelihoods will be devastating. A leader from SCC3 explained:

> Coffee yields could be described as cyclical…there is one year with really high production (like this year), but next year is going to be a low yield season. Thus, for those coffee producers who based their hopes on the commodity market, next season is going to be really hard on them. On the one hand, there is not going to be a lot of coffee available; on the other hand, who knows what the price is going to end up being—maybe 7 to 10 dollars per quintal (bag of 46 kilos of coffee). An advantage of being in the cooperative is access to financial resources and the ability to keep surviving, even when coffee prices are extremely low (Individual interview, leader, Veracruz, Mexico 2013).

Among those farmers in SCCs doubting the benefits in Fair Trade/organic farming, there were also farmers supporting the arguments of their leaders. A female farmer from SCC2 commented:

> The cooperative is on the right track, I don't see any advantages in conventional farming… we already have a guaranteed price, plus the premium based on quality. Conventional farmers don't even know what the standard price for their coffee should be. Some of them have told me, "Coffee prices are going to be extremely low. I've heard our coffee is not going to be worth it again." In our cooperative we don't have that uncertainty anymore, the price is known in advance. Fair Trade/organic farmers know what the minimum price is and there is no price ceiling. We can get more for our beans if quality is good… (Focus group 1, farmer, Veracruz, Mexico, 2013).

Conventional farmers (not organized in cooperatives) recognized several changes in production. One was their ability to pick ripe, red cherries and avoid any contaminants in the bags they use to collect the beans. Second, despite their lack of financial resources, training, and

limited support to build a network, farmers acknowledge that replacing old coffee trees is a long-term benefit related to soil quality and increased production.

For this study, changes in production that correspond to Fair Trade and organic principles were not considered innovations unless farmers adapted or modified them to incorporate practices in their farms (A summary of production innovations is shown in Table 4-2). Smallholder farmers organized in cooperatives considered the following practices as innovations: composting, especially when they use organic residues that in the past were considered waste; different techniques to replace old trees that takes into account the size of their farms; quantity of coffee needed annually to obtain a decent income and financial resources; pest management strategies derived from hands-on experiments with natural low-cost remedies (e.g., home-made traps filled with industrial alcohol to control cherry borer); taking advantage of the opportunity to diversify the range of crops that could be traded as organic and, subsequently, increase farmers' incomes.

Another production innovation challenge for SCCs leaders and farmers is record keeping and formal planning. Particularly for the organic market, smallholder farmers struggle to implement traceability systems effective for international market requirements, but sufficiently simple that farmers can handle it on their own. On one hand, the previous production culture did not require farmers to keep records of what they applied, removed, or added on their farms. On the other hand, farmers' limited education might be also a factor in understanding why it is important to keep records on the farm, inputs, and personal activities, including their own salary and labor costs.

Table 4-2. Production innovations

SCC1	SCC2	SCC3	SCC4	SCC5	Conventional
• Transition from conventional to FT/ organic production made bushes stop producing beans for a year or two • Correct application of organic fertilizers brought trees back into production • All members implemented a program to replace old coffee trees	• Before, farmers sold raw cherries; now they clean & sun-dry coffee • Buffer strips, drainage ditches, pruning & replacing old trees increases high quality bean production • Technicians & engineers improved quality processes (e.g., washing & cleaning) • Farmers had coffee growing knowledge, but needed guidance to switch to organic practices • Cutting grass and weeds to 5-10 cm leads to soil health & erosion prevention • Farmers with plots on steep slopes built terraces with buffers strips around them. • FT/organic practices allow farmers to obtain certificates & improve coffee quality.	• Renewing old trees, increasing soil organic matter, doing pest mgt. control, & collecting only red beans led to higher quality standards • University of Chapingo researched pest control, organic fertilizer application, & shade-tree regulation on member farms • Production of vermicomposting improves organic fertilizer and increases plant productivity • Planted more species suitable for coffee production & native species of shade trees • Diversified production for extra income: banana trees (leaves), macadamia nuts, and bamboo.	• Preservation of soil, trees and animal species • Organic practices implemented include: buffer strips, drainage ditches, pruning, grafting, and replacing old trees • Organic practices such as building buffer strips & stopping chemical applications esp. pesticides, help preserve the soil and increase biodiversity of animals & trees.	• Farmers care for environment by building buffer strips to protect trees from pesticide drift & heavy winds or storms • Farmers planted new coffee shade trees. Trees are not producing coffee yet, but farmers are slowly renewing old trees. • FT/organic practices help farmers avoid contamination of streams & rivers. Farmers attempt to convince other people to stop polluting rivers and streams. • Effective farm record keeping & planning.	• Farmers picked the best ripe red cherries & looked for workers who are careful to picking only red berries. • Despite the lack of resources farmers replace old trees but not as effectively as FT/organic farmers • Conventional farmers do not practice formal planning, record keeping, or training.

Conclusions

This study investigates the perceived social, economic, and environmental benefits small coffee farmers derive from adopting Fair Trade and organic practices, and how the benefits from participating in these specialty markets relate to other innovations. Specialty markets present opportunities for small producers to innovate, care for the environment, and participate in market niches that can generate higher profits. In general, Fair Trade and organic premium prices promote a higher relative standard of living when non-certified coffee prices are low, but when additional investments are required, small farmers are not willing to participate in specialty markets in the short-run. Increasing gaps in market knowledge among cooperatives are limiting the ability of farmers in certain cooperatives to innovate and adapt. From farmers' perspectives, agricultural innovations contribute, first, to compliance with Fair Trade/organic principles and markets, and second, aid in preserving their embedded culture and passion for coffee production. As mentioned by Bacon (2005) certified Fair Trade and organic agriculture are two alternative forms of production and trade that may offer opportunities for small-scale producers to reduce farmers' livelihood vulnerability. However, not all coffee cooperative farmers are optimistic concerning improvement in their standard of living and satisfaction in economic terms as a result of engaging in Fair Trade/organic agriculture.

Individual coffee farmers participating in the Fair Trade and organic markets are not always guaranteed access to price premiums for all of their production. This limitation challenges the adoption of production practices and also affects the possibilities of improving the living conditions of coffee farmers in the Córdoba-Huatusco region in Veracruz, Mexico. Farmers stated their intentions to utilize as many sustainable practices (indicated by Fair Trade and organic principles) as possible, but the main barrier is the unreliability of access to the Fair

Trade/organic markets which makes it more difficult to access financial resources. As mentioned previously, the fact that farmers obtain production certification does not guarantee their coffee will be sold at Fair Trade prices. Overcoming the barriers to engaging Fair Trade buyers in the international markets is independent of the process for production certification. Farmers' cooperatives unable to establish a solid relationship with Fair Trade buyers could not obtain the expected niche-market price. Farmers expressed frustration because they invested financial resources—many had to deal with bank debts or loans from local credit unions or family members—to comply with certification standards. In the end, they did not receive the expected economic benefits in return.

One unexpected finding concerns farmers' opportunities to serve as an example to other farmers. Coffee farming has a strong cultural component. Farmers talking about being able to affect the decisions of other farmers with their example was an unanticipated research finding. In this regard, one leader from SCC1 noted:

> All changes implemented in our fields have brought benefits… Organic practices help us conserve water, deal with land-erosion problems, and maintain diversity in our *parcelas* (plots). Our farms looks like a jungle, everything is green, nourished and more animals live there. In a nutshell, we [farmers] are contributing to keep a healthy environment. If we compare our land with that of our neighbors, it is sad to see completely abandoned parcelas, where you can see the dry soil and old trees trying to survive in their plots (Focus group 6, farmer, Veracruz, Mexico, 2013).

Despite the comparison among SCCs and the production strategies implemented on members' farms, it is difficult to differentiate among innovations developed by cooperatives and

followed by the farmers, those that sprang independently from the farmers, or alternatively—those adapted by farmers from the recommendations of the cooperatives.

Coffee production as an ecological and environmental culture and passion

Culture and passion for coffee production is something researchers would not normally consider a trigger for innovation. This study found that farmers in Veracruz, Mexico have a passion about the coffee culture transferred from their parents. Their current mission is sharing that 'coffee passion' with future generations. During interviews, it was evident farmers were eager to share this coffee culture with people in their communities, especially with their children and young farmers' generation. A farmer participating from SCC2 stated:

> I can see some benefits in our hard-working culture... We might need to work more on our habits and practices, but we are on the right track. Also, we need to share our passion and love for coffee to our children. They need to experience the same culture as us, so in the future they can also be good stewards of the land and the environment. We are working to promote our coffee culture to our children; I hope it will last forever (Focus group 2, farmer, Veracruz, Mexico, 2013).

Fair Trade and organic principles have become stimuli for farmers to adopt new practices on their land. Farmers agreed even though they are not currently receiving all the benefits from Fair Trade/organic markets, there is an intrinsic responsibility to take care of land, water, animals, trees, and the ecosystem. Coffee production should be a tool to promote diversity, providing some space where humans, animals, trees, and crops can grow and thrive. The following quote of a farmer from SCC1 illustrates this point:

> Sometimes, I go to one of my plots, where I have planted only sugar cane. I cannot believe how hot the weather is there. The heat feels very intense, even when the wind is

> blowing because there is nothing that can protect or prevent the warm winds from coming to the farm. In contrast, when I go to my coffee farm, which has plenty of trees, you can feel the difference. The air is fresh and you can feel there is more life (Focus group 6, farmer, Veracruz, Mexico, 2013).

Even though conventional farmers (not organized in cooperatives) and those farmers participating in alternative markets share similar dilemmas as smallholders in the coffee sector, the perceptions on issues, such as land fragmentation and land use, are different. Particularly in the last 10 years, smallholder coffee farmers who join cooperatives have been using their resources more effectively so they can maximize quality production and, therefore, access better prices than those offered by the commodity markets. Effective use of compost, pest management, and tree varieties resistant to pest attacks are good examples of the resources farmers could use more effectively to maximize quality production.

The comments, perceptions, and points of views from the unorganized group of conventional farmers demonstrated four things. First, these farmers were alienated from the concept of 'innovation;' second, working alone in a very competitive and unregulated market gave them more concerns than benefits (especially when the exchange market hit low prices); third, it is more difficult for individuals to implement innovations on their farms because they do not belong to any type of support network or, in this region, a cooperative; and fourth, conventional farmers agreed peers organized in cooperatives obtain more advantages from the guaranteed prices obtained in alternative markets, but they do not see how cooperative membership would be beneficial in their particular situations.

Furthermore, when farmers in SCCs are able to access Fair Trade and organic markets, and secure a buyer who will pay on time for the amount of coffee assigned, the expected

outcomes are appropriate innovations that will increase cooperatives' production strategies and improve farmers' livelihoods after every harvesting season. However, alternative markets are growing but the demand for certified coffee is small compared with all the production available from cooperatives in Mexico and other producing countries. In contrast, even if the market price for commodity coffee rises during the next harvest season, conventional farmers would not make sufficient money to pay previous debts and to cover costs and future commitments for their farms.

Implications and Recommendations

Nelson and Pound (2009) analyzed 33 case studies of certified Fair Trade coffee and found that empowerment impacts were explored in many studies, but only a few analyzed other social impacts such as changes in health and education, or impacts on farmers in the conventional market. The literature reviewed showed that cooperatives involved in Fair Trade encourage their members to make long-term investments in their housing, appliances and education (Ruben et al., 2008). A common finding is that when cooperatives have a good financial management system and external auditing, resources are used in a more transparent manner (Murray et al., 2003). When cooperatives achieve financial stability, a key benefit for members is the increased ability to send their children to school to pursue higher education. Senior farmers belonging to Fair Trade cooperatives who did not have the opportunity to complete some level of basic education when they were younger, are not seeking formal education anymore (Nelson & Pound, 2009). However, most farmers in the Fair Trade cooperatives are still interested in gaining more practical knowledge. In this regard, financial stability allows cooperatives to offer more training (non-formal education) to farmers.

The education that senior cooperative members received in the past came primarily from public rural elementary and middle schools in Veracruz. Cooperative members who were able to finish high school or pursued further education had to travel to nearby cities during the morning to attend school and later return to help with the farm. Farmers with low levels of formal education are learning through training from organizations that support the Fair Trade network, Universities, research centers, and the infrequent training offered by government agencies. Fair Trade farmers in SCCs are learning about how the coffee market works, understanding how to fill out permits, import and export licenses, paperwork for organic certification as well as how to perform well the administrative tasks of coffee cooperatives.

When an SCC has a substantial number of farmers with high school education or more, it appears the cooperative is more effective in its decision-making process. It would be interesting to conduct a deeper analysis of the education variable, because this plays an important role in effective participation of Fair Trade and organic markets, as well as in the level of development that cooperatives can achieve in the short term. Further research is needed on the impacts of farmers' education on the success of Fair Trade coffee growers.

REFERENCES

Asociación Mexicana de la Cadena Productiva del Café. AMECAFE. (2011). Café para siempre. Nemátodos en cafetos. *Boletín informativo,* Centro Regional Universitario de Oriente. Universidad Autónoma Chapingo. Retrieved from http://amecafe.org.mx/uploads/Nematodos.pdf

Bacon, C. (2005). Confronting the coffee crisis: Can Fair Trade, organic and specialty coffees reduce small-scale farmer vulnerability in northern Nicaragua. *World Development*, 33, 497–511.

Bacon, C., Méndez, E., Gliessman, S., Goodman, D., Fox, J., Eds. (2007). *Confronting the Coffee Crisis: Fair Trade, Sustainable Livelihoods and Ecosystems in Mexico and Central America.* MIT Press, Cambridge, MA, p. 390.

Barham, B.L., Callenes, M. Gitter, S. Lewis, J. and Weber, J. (2011). Fair Trade /organic coffee, rural livelihoods, and the 'agrarian question': Southern Mexican coffee families in transition. *World Development*, 39(1), 134–145.

Bray, D., Sanchez, L., & Contreras, E. (2007). Social dimensions of organic coffee production in Mexico. In C. Bacon, V. E. Méndez, S. R. Gliessman, D. Goodman & J. A. Fox. (Eds.), *Confronting the coffee crisis: Fair Trade, sustainable livelihoods and ecosystems in Mexico and Central America* (pp. 237-260). MIT Press, Cambridge, MA.

Chamberlin, J. (2007). Defining smallholder agriculture in Ghana: Who are smallholders, what do they do and how are they linked with markets? Prepared as part of the Ghana Strategy Support Program (GSSP) and submitted for consideration to The International Food Policy Research Institute (IFPRI). Discussion Paper No. GSSP 0006. Retrieved from http://www.ifpri.org/sites/default/files/publications/gsspwp06.pdf

Courville, S. (2008). Organic and social certifications: recent developments from the global regulators. In C.M. Bacon, V.E. Méndez, S.R. Gliessman, D. Goodman & J. A. Fox (Eds.), *Confronting the coffee crisis: Fair Trade, sustainable livelihoods and ecosystems in Mexico and Central America* (pp. 289-310). MIT Press, Cambridge, MA.

Escamilla-Prado, E. (2007). Influencia de los factores ambientales, genéticos, agronómicos y sociales en la calidad del café orgánico en México. *(Doctoral dissertation). Colegio de Postgraduados, Institución de Enseñanza e Investigación en Ciencias Agrícolas.* Retrieved from http://hdl.handle.net/10521/1625

Gliessman, S. R. (2008). Agroecological foundations for designing sustainable coffee. In C.M. Bacon, V.E. Méndez, S.R. Gliessman, D. Goodman & J. A. Fox (Eds.). *Confronting the coffee crisis: Fair Trade, sustainable livelihoods and ecosystems in Mexico and Central America* (pp. 27-41). MIT Press, Cambridge, MA.

Gonzalez, A.A. & Nigh, R. (2005). Smallholder Participation and Certification of Organic Farm Products in Mexico. *Journal of Rural Studies*, 21, 449-460. Retrieved from http://dx.doi.org/10.1016/j.jrurstud.2005.08.004

Hernández-Rodríguez, E. (2014). Mercados alternativos en Café: Estudio de caso en la región cafetalera de Huatusco, Veracruz. *(Master's thesis).* Archived by Centro Regional Universitario de Oriente. Universidad Autónoma Chapingo. Huatusco. Veracruz.

Macias, 2013. Introducción. Los pequeños productores agrícolas en México. *Carta Económica Regional*. ISSN 0187-7674. Año 25, núms. 111-112. Enero - diciembre 2013 [7]. Centro Universitario del Sur (CUCSur), Universidad de Guadalajara. Retrieved from http://cartaeconomica.cucea.udg.mx/administracion/uploads/articulo1079.pdf

Méndez, V. E. (2008). Farmers' livelihoods and biodiversity conservation in a coffee landscape of El Salvador. In C.M. Bacon, V.E. Méndez, S.R. Gliessman, D. Goodman & J. A. Fox (Eds.), *Confronting the coffee crisis: Fair Trade, sustainable livelihoods and ecosystems in Mexico and Central America* (p 207). MIT Press, Cambridge, MA.

Méndez, V. E., Bacon, C. M., Olson, M., Petchers, S., Herrador, D., Carranza, C., … & Mendoza, A. (2010). Effects of Fair Trade and organic certifications on small-scale coffee farmer households in Central America and Mexico. *Renewable Agriculture and Food Systems*: 25(3); 236–251. Retrieved from http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=7853191&fileId=S1742170510000268

Morales, F. (2005). Instituciones e innovación: la experiencia del grupo K'NAN CHOCH en Chiapas, México. *Revista Europea de Estudios Latinoamericanos y del Caribe, 79*, 69-84. Retrieved from http://www.cedla.uva.nl/50_publications/pdf/revista/79Revista Europea/79MorralesBarragan.pdf

Morris, K., Méndez, E., & Olson, M. (2013) 'Los meses flacos': seasonal food insecurity in a Salvadoran organic coffee cooperative, *The Journal of Peasant Studies*, 40:2, 423-446, doi: 10.1080/03066150.2013.777708 Retrieved from http://dx.doi.org/10.1080/03066150.2013.777708

Murray, D. L., Raynolds, L.T., & Taylor, P.L. (2003). *One cup at a Time: Poverty alleviation and Fair Trade coffee in Latin America*. Fair Trade Research Group. Colorado State University, Fort Collins, CO, USA.

Murray, D. L., Raynolds, L. T., & Taylor, P. L. (2006). The future of Fair Trade coffee: Dilemmas facing Latin America's small-scale producers. *Development in Practice, 16(02)*, 179–192. Retrieved from http://www.tandfonline.com/doi/pdf/10.1080/09614520600562397

Murray, D. L., & Raynolds, L. T. (2007). *Globalization and its antinomies: negotiating a Fair Trade movement*. In Fair Trade: The challenges of transforming globalization, ed. L.T. Raynolds et al., 3-14. London: Routledge.

Nelson, V., & Pound, B. (2009). The last ten years: A comprehensive review of the literature on the impact of Fairtrade. *Natural Resources Institute,* 1-48. Retrieved from http://www.fairtrade.net/fileadmin/user_upload/content/2009/about_us/2010_03_NRI_Full_Literature_Review.pdf

Pérez-Alemán, P. (2012). Global standards and local knowledge building: Upgrading small producers in developing countries. *Proceedings of the National Academy of Sciences* (PNAS). *109*(31), 12344-12349. Retrieved from http://www.pnas.org/content/109/31/12344.full.pdf

Raynolds, L.T., Murray, D. L., & Wilkinson, J. (Eds.). (2007). *Fair Trade: The challenge of transforming globalization.* Routledge: London and New York.

Ruben, R., Fort, R., & Zuniga, G. (2008). Fair Trade program evaluation: Impact Assessment of Fair Trade Programs for Coffee and Bananas in Peru, Costa Rica and Ghana. *Centre for International Development Issues Nijmegen*, Radboud University, Nijmegen, The Netherlands. Retrieved from http://hdl.handle.net/2066/73192

Steinberg, M. K., & Taylor, M. J. (2009). The direct and indirect impacts of population growth and economic development on maize (Zea mays L.) diversity in highland Guatemala. *Area*, 41(1), 72-81.

Valkila, J., & Nygren, A. (2009). Impacts of Fair Trade certification on coffee farmers, cooperatives, and laborers in Nicaragua. *Agriculture and Human Values 27*, 321–333. doi: 10.1007/s10460-009-9208-7

CHAPTER 5. CONCLUSIONS

This study focuses on the production, processing, marketing, and organizational innovations that result from coffee farmers taking the decision to form cooperatives for the purpose of marketing their coffee as a specialty crop (Fair Trade /organic) rather than simply as a commodity. These innovations are examined at both the level of the cooperative and the individual farm. Fair Trade and organic smallholder coffee cooperatives in Veracruz, Mexico provide a way to preserve farmers' livelihoods individually and collectively. The conditions brought about by neoliberal policies represented challenges, but also opportunities for smallholder coffee cooperatives and their farmers to change practices and focus efforts on production, marketing, and organizational innovations.

Field research was conducted in the Córdoba-Huatusco corridor from July to October 2013, where six coffee cooperatives and an independent group of seven conventional farmers agreed to participate in this study. For smallholder coffee cooperatives (SCCs), challenges, such as increasing production costs, stagnant coffee prices, and lack of low- or moderate-interest credit options, have reduced their opportunities to make a living through their participation in the coffee value chain.

Background information to understand challenges, both at the international level and in the particular situation of farmers in the Mexican coffee sector, was essential for understanding this issue. Chapter 2 focused on how changes in agricultural policies, particularly government financial support programs for the coffee sector, have influenced the responses of SCCs to changes in the market. Since market liberalization occurred in Mexico, several economic policies were implemented to comply with the rules and regulations imposed by international organizations, such as the World Trade Organization, the International Monetary Fund, and the

World Bank. It was an adaptation process that resulted in severe disruptions in various sectors, including agriculture. The current global trend is for multinational corporations (MNCs) vertically integrated in the value chain to replace governments as the principal actors in international coffee markets. Among those cooperatives that received Fair Trade payment for their coffee production in an alternative market chain, the more successful attributed steady incomes to the following factors. First, cooperative leaders are more familiar with procedures and paperwork to obtain certification and re-certification annually on time; second, farmers received more training to improve record-keeping on their farms, thus, passing all inspections; third, investments in infrastructure, training, and hired professionals have led to an increase in the quality of their production.

Chapter 3 examined how governance, infrastructure investments, and training programs contributed to marketing and production/processing innovations in smallholder coffee cooperatives. The 'free' (unregulated) market did not provide a level playing field for all participants. Since government agencies and private parties introduced the concept of specialty markets in Veracruz, several lessons have been learned by farmers about changes in production, organization, and marketing systems over time. In this regard, SCCs' main contributions consisted of improving organizational skills, involving youth and professionals, improving decision-making processes through participation of all SCC members. In addition, SCCs have promoted production and marketing diversification strategies, and investing scarce resources in infrastructure; primarily processing equipment. By providing training to leaders and members of the cooperatives, many of these changes were advanced.

Chapter 4 concentrated on understanding which innovations in production SCC's members had adopted as a result of shifting from conventional production to Fair Trade and

organic production. Some innovations were mandated by Fair Trade and organic requirements, and farmers made others on their own as they adjusted to the new regimes. Farmers explained how practices have changed, since they have incorporated themselves into the Fair Trade and organic markets. SCC farmers implemented the following innovations: composting, especially using organic residues previously considered waste; various techniques for replacing old coffee trees that take into account the size of their farms, the quantity of coffee needed annually to obtain a decent income, and the financial resources available; pest management strategies derived from hands-on experiments with natural low-cost remedies; and diversifying the range of crops that could be sold as organic, thereby increasing farmers' incomes. Still, there is a lot to learn, but SCC farmers participating in alternative markets have a better chance to succeed and continue working in the coffee sector than most independent conventional farmers.

Farmers are looking for alternatives that can guarantee steady prices and a decent income to sustain their families and farms. SCCs are working with a new set of opportunities developed as an alternative to the commodity market, specifically Fair Trade and organic markets. However, to participate in alternative markets, each organization experienced a distinct learning process; varying learning curves shaped SCCs' experiences in alternative markets. Two of four cooperatives experienced more challenges than their counterparts. For those two cooperatives the full benefits of price premiums, innovations, and new marketing strategies are not completely tangible, yet.

In order to understand the economic situation that smallholder farmers faced in Veracruz, one of the key informants provided data presented in following table which demonstrate the difference in price they can obtain when selling their coffee to Fair Trade buyers.

Table 5-1. Example of price premiums that smallholder cooperatives can obtain after certification.

Per quintal/ bag	USD $*	Pesos (MX $)*
Baseline price	$ 140	$ 1,750
Social premium	$ 20	$ 250
Environmental premium	$ 30	$ 375
Quality premium	$ 5-10	$62.5 - $125
SUBTOTAL	$ 190-200	$ 2,375 - $2,500
Export costs	- $ 28.5	-$ 356
FINAL	$ 161.5-171.5	$ 2,019 - $2,144

* Exchange rate: MX$ 12.5 = US$1. From 250 kilograms of cherry beans, farmers can obtain a quintal/ bag of 46 kilograms of processed coffee (green coffee). Source: Data provided by key informant #1 (2011-2012)

Veracruz State ranks as the second largest coffee production in the nation, behind Chiapas. Veracruz's production is approximately 35% of the national total; in 2012, the state reported 153,000 hectares of coffee planted (378,071 acres) which produced around 300,000 quintals. According to the *Sistema de Información Agroalimentaria y Pesquera,* (SIAP, 2013. National Service for Agrifood and Fisheries Information) more than 300,000 families are working in coffee cultivation and Veracruz obtained an average of 2.96 tons per hectare of coffee planted. During 2012, the average price for a ton of cherry beans was $4,456.33 pesos (USD $ 356.50 at an exchange rate of 12.5 pesos per dollar) (SIAP, 2013). Even though prices went up from 2006 to 2013, the amount of increase is still not enough to cover farmer's production costs. Having prices that allow farmers to make a profit from the coffee business is a longstanding expectation in coffee producing communities. The following table is an example of how prices can increase substantially when farmers add more value to the quality coffee they already have.

Table 5-2. Prices paid for Fair Trade coffee at different processing stages (2011-2012).

Coffee	Kilograms (lbs)	Price (Pesos/kilo)	Total pesos (USD)
Cereza/Cherry	250 (551)	$ 8.076	$ 2019 ($161.52)
Pergamino/Parchment	57.5 (126.8)	$ 35.11	$ 2019 ($161.62)
Morteado/NA	49 (108)	$ 44	$ 2156 ($172.5)
Tostado/Toasted	38 (83.8)	$160-200	$ 3080-7600 ($246.4-$608)

Source. REDCAFES Data.

This study did not collect information directly on farmers' income at the individual level, but through interviews and conversations with cooperative leaders it was possible to create estimates of the amount of money that cooperatives received from their Fair Trade coffee sales. At the cooperative level, the financial information gives an example of the payment received by cooperatives and the group of conventional farmers. One of the main problems revealed by the study was that cooperatives could not sell all their certified Fair Trade coffee production at premium prices. Thus, although the unit price received for Fair Trade and Fair-Trade/organic coffee is fixed, market prices affected the long-term sustainability of Fair Trade cooperatives, since they must sell part of their coffee on the commodity market. The present difficulty in finding Fair Trade markets for most of their production gives farmers the feeling that all efforts and investments made to get the certification are not really worth it.

Table 5-3 shows estimates of payment received by smallholder Fair Trade coffee cooperatives and the group of conventional farmers. The example uses the maximum amount of quintals (60) that conventional farmers produced for the 2011-2012 season.

Table 5-3. Comparisons of payments received from the sale of conventional coffee and Fair Trade and Organic certified coffee in 2011-2012 (estimates).

Variable	SCC1	SCC2	SCC3	SCC4	Conventional growers
Number of Quintals	60	60	**60**	**60**	60*
Price per quintal	MX $1062	MX $1250	**MX $2250**	**MX $2500**	MX $1500
Estimated payment 2011-2012 season	MX $63,720 USD $5097.6	MX $75,000 USD $6000	**MX $135,000 USD $10,800**	**MX $150,000 USD $12,000**	MX $ 90,000 USD $7200
Access to Fair Trade prices	No	No	**Yes**	**Yes**	No

* Conventional farmers interviewed produced a combined 15 tons (60 quintals of coffee); in order to be able to compare with the co-ops, the example is based on 60 quintals. Only cooperatives SCC3 and SCC4 were able to sell all 60 quintals at Fair Trade prices. Source: Interviews with farmers and focus groups.

The documented average price paid by intermediaries in the region during the 2011-2012 harvesting season was 5.5 pesos per kilo (US $ .44 cents) of cherry coffee beans (Sayago, 2011). However, conventional producers interviewed managed to obtain 50 cents more over the regional price by selling to local intermediaries with whom they have built relationships in the past (Conventional producers, focus group, 2013).

Cooperative leaders estimated that to have one hectare of land (about 2000 trees) ready to produce Fair Trade and organic coffee a minimum of MX $25,000 pesos is required to manage production (interviewees did not specify if their calculations include certification costs, farmers' salary or quality). A well-maintained farm can produce 4-6 tons of coffee per hectare (2.5 acres), and if the price paid by the cooperative is around MX$9,000 pesos per ton, a farmer could obtain a maximum of MX$54,000 pesos, which at least relieves some financial stress. However, most farmers are only producing 2-4 tons per year, which accounts for a maximum gross income from coffee of MX$36,000 and usually there is no money left from previous years. Under these conditions, it is quite a challenge to obtain production of great quality. Two of the four Fair Trade cooperatives in Veracruz were not able to sell members' coffee production at Fair Trade

prices. For this reason farmers in those cooperatives were not able to obtain a higher gross income in the season 2011-2012 (see Table 5-3).

Even though Fair Trade and organic markets offer opportunities to sell coffee at better prices, improving marketing strategies and organizational capacity require a process of adaptation. SCCs must invest financial, human, and political resources to obtain certification, but a greater challenge has been obtaining dependable access to Fair Trade/organic buyers. Also, large multinational corporations (MNCs) and their subsidiaries in Mexico have taken control of the mainstream channels, thus, bringing new challenges to cooperatives trying to avoid conventional channels. MNCs have also created their own labels to focus on a different set of variables, mainly environmental issues, but lacking strong social and economic components for improving rural livelihoods (e.g. Rainforest, 4C, etc.).

Findings in relation to the literature

The importance of this study lies in the gap observed in the literature regarding the extent to which Fair Trade and organic farming have assisted smallholder farmers in developing countries to implement innovations, especially those innovations contributing to improve rural livelihoods and add economic value to smallholder coffee cooperatives in developing countries. Specific practices developed by smallholder coffee farmers and adapted to their own circumstances to comply with principles and rules for alternative markets were also determined. Some scholars have written about what motivates farmers to adopt organic and Fair Trade standards (Loureiro & Lotade, 2005; Valkila, 2009), but few studies were available that attempted to understand the Fair Trade regime and organic agricultural systems as fostering innovations for agriculture in developing countries (Parvathi & Waibel, 2013).

Our study determined that when farmers engaged in Fair Trade and organic markets, a number of questions arise, particularly those related to management, technology issues, and transaction costs. Some factors, like education, information access, and government policies, play an important role in the ability of cooperatives to take decisions in a highly competitive market. Parvathi and Waibel (2013) support similar findings at the cooperative level only.

Introduction and utilization of new agricultural management practices and technologies by cooperatives are associated with the ability and skills of leaders to help their member farmers learn how to deal with regulations and principles for certification in Fair Trade and organic markets. Establishing and maintaining good record-keeping practices is a key element for this. Every season, farmers must report in detail to the cooperative the financial status of their farms and report the average yield they expect for the next season. The average yield reported by each farmer is very important in the operation of cooperatives because it indicates the quantity of coffee the cooperative expects to have available to sell to Fair Trade and organic buyers.

Support from the federal government to cooperatives is a politicized issue, with financial resources controlled by state agencies and political parties. Financial resources are not distributed equitably between smallholders and large farmers nor among regions. Government policies should include more support for coffee growers who want to sell in specialty markets. The government should provide assistance in bringing cooperatives and international Fair Trade buyers together (market promotion) and it should enforce contracts so buyers could be penalized if they reneged on an agreement to buy coffee from a cooperative. Government policies should provide grants to co-ops and directly to farmers during the transition to organic, or payments for conservation measures. However, scarce financial support from the government and limited alternative activities in many coffee growing areas prevent smallholder coffee farmers from

achieving economic sustainability. When the concept of alternative markets was introduced to cooperatives, many Fair Trade and organic practices were implemented with the assistance of technicians and engineers from government institutions and research centers. These external agents provided workshops and training to members of cooperatives, and talked with them during visits to their fields so farmers became familiar with new practices.

Concerning cooperatives, there are two main sources of innovations: (1) changes implemented are due to Fair Trade and organic practices required to obtain certification (supervised by inspectors and third party certifiers), and (2) farmers have initiated changes on their own, adapting some strategies and practices in compliance with Fair Trade principles and organic rules. All cooperatives are following the rules, but when implementation presented some challenges, cooperatives worked with inspectors to develop strategies feasible for farmers to follow.

Cooperatives belonging to REDCAFES had the opportunity to participate indirectly in Fair Trade and organic markets. Cooperative leaders and members stated REDCAFES, in the first year of operation, was eager to purchase quality coffee from them at full prices in a timely manner. However, this organization later faced many problems, due to members' non-participation in the decision-making process, lack of transparency in information provided about contracts with international buyers, unpaid debts, and a tendency to concentrate the decision-making process and power in management positions. In 2012, most cooperatives decided to abandon this organization. Without the expertise to participate directly in alternative markets, all cooperatives experienced different challenges, and, in some cases, benefits from being on their own. As shown in chapters 3 and 4 different levels of success have been achieved since then.

Members and leaders noted that learning to adapt to international standards and regulations has helped farmers to more fully understand the meaning and importance of quality of products. Each farmer is proud of changes that have improved coffee production, even small changes. In 2013, when this study was conducted, most cooperatives were experiencing a 'bad year', not because of low quantity or quality of coffee produced, but due to the failure of marketing strategies that did not earn income reflecting their hard work in production. Farmers have been surviving in the coffee sector for decades and all of them consider coffee production as part of their culture. They are not planning to quit, but in some cases they are forced to do so. With support from family members, relatives, and fellow farmers, the experience gained will translate into positive gains in the coming years. As explained by farmers, it is not easy to recover from a bad year, particularly because starting the next season requires out-of-pocket expenses to pay for fertilizers, pruning, grafting, and other practices that family members are not always able to perform.

One of the cooperatives' principal strategies has been to identify other cash crops that can be intercropped with coffee to enrich the soil rather than competing with coffee trees. Farmers understand the standards required for organic farming and the reasons for these standards. They have focused on prevention of water, soil, and environmental contamination. Many of the practices described in Chapters 3 and 4—such as building buffer strips, creating terraces, avoiding use of the hoe, weeding, cleaning only 5 to 10 centimeters above ground, pruning, and composting, are some of the changes brought about by Fair Trade and organic practices. Innovation is reflected *in situ* strategies that farmers develop to maximize the use of resources available to them. Organic farmers should be composting and applying fertilizers regularly on their fields but in practice, not all farmers nor their cooperatives have a compost facility or are

producing organic fertilizers on their own. The investment most cooperatives have made in either creating their own compost facilities or negotiating with other cooperatives to gain access to organic fertilizers shows their willingness to comply with rules and follow practices adapted to their needs.

Most cooperatives were aware that infrastructure investments are required to ensure quality and add value to farmers' coffee. However, the economic situation does not allow smallholder cooperatives to invest more in machinery and training. Each cooperative would have better circumstances if they had access to wet and dry mills, industrial toasters, or a sugar cane mill (for those who also process sugar cane). Only two cooperatives received assistance from the state to buy a coffee mill and this is how they became owners. Others must pay for the service to third parties. Federal government should considering setting up a program that would formalize acquisition of infrastructure and facilitate access for SCCs.

For cooperatives in this study, a longstanding challenge has been to modify the culture surrounding production and marketing practices among their farmer members. In the past, farmers used 'coyotes' to deliver their coffee to buying points (*compras*) and get paid immediately, even though it was not a good price. 'Coyotes' had a great deal of autonomy until the liberalization of the market took place. After liberalization of the market, many 'coyotes' were eliminated and the few remaining had to become couriers for the multinational corporations they represented. In the past Fair Trade farmers delivered their coffee at 'compras' feeling the payment was not sufficient either to cover operating costs nor to pay debts, but they did not know about quality or what else to do to obtain a better price in the future.

Currently, conventional farmers are experiencing the same situation because the commodity market is complete with ups and downs. For cooperative farmers engaged in Fair

Trade and organic markets, the situation is a bit different because implementing quality standards have sped the process of coffee certification. However, for two of the cooperatives marketing practices have not been successful, and cooperative leaders have not been able to sell all certified coffee in the Fair Trade/organic market. Innovations implemented to date are providing more benefits in the productions side but marketing is still more problematic than production.

Fair Trade organic farmers mentioned they were so 'blind' before that it did not occur to them to do something about low prices that the 'coyotes' paid for coffee. Some farmers added that following the practices learned from their parents and grandparents was useful for production but it was terrible for marketing and selling their coffee. Now, they can compare the commodity system with other types of production strategies. This has opened their eyes to ways that production for quality can be translated into premium prices. Coffee farmers are incorporating new practices to improve the quality of coffee production, and the quality of life coffee farming can provide their families.

The impact of production, marketing, and organizational innovations implemented by farmers belonging to cooperatives is not completely visible, yet. More research is needed to observe and document how much progress these and other cooperatives in developing countries will make. What is evident is many coffee farmers in the Fair Trade co-operatives have changed their paradigm. Rather than producing low quality coffee beans because they were not rewarded for quality production, they have adopted a new world view in which innovation both on and off the farm is necessary and continuous to build a system in which family well-being increases and Mother Earth is nurtured at the same time.

REFERENCES

Loureiro, M. L., & Lotade, J. (2005). Do Fair Trade and eco-labels in coffee wake up the consumer conscience? *Ecological Economics*, 53, 129–138. Retrieved from http://www.sciencedirect.com/science/article/pii/S0921800904003611#

Parvathi, P., & Waibel, H. (2013). Fair trade and organic agriculture in developing countries: A review. *Journal of International Food & Agribusiness Marketing*, 25(4), 311-323. Retrieved from http://dx.doi.org/10.1080/08974438.2013.736043

REDCAFES. Red Nacional de Organizaciones Cafetaleras Sustentables. (2012). La cadena café en la REDCAFES. A.C. Reporte. Hard copy.

Sayago, R. (2011, February). Transnacionales abaratan café de Coatepec. *Imagen del golfo.* Retrieved from http://imagendelgolfo.com.mx/resumen.php?id=282298

Sistema de Información Agroalimentaria y Pesquera, SIAP. (2013). [National Service for Agrifood and Fisheries Information, Website]. Retrieved from http://www.siap.gob.mx/

Valkila, J. (2009). Fair Trade organic coffee production in Nicaragua: Sustainable development or a poverty trap? *Ecological Economics* 68, 3018–3025. doi: 10.1016/j.ecolecon.2009.07.002

APPENDIX A: FAIR TRADE ORGANIZATION PRINCIPLES (WORLD FAIR TRADE ORGANIZATION: WFTO)

According to the World Fair Trade Organization (2014), there are 10 principles that Fair Trade organizations must follow in their day to day work:

Principle One: Creating Opportunities for Economically Disadvantaged Producers. Poverty reduction through trade forms a key part of the organization's aims.

Principle Two: Transparency and Accountability. The organization is transparent in its management and commercial relations. It is accountable to all its stakeholders and respects the sensitivity and confidentiality of commercial information supplied.

Principle Three: Fair Trading Practices. The organization trades with concern for the social, economic and environmental well-being of marginalized small producers and does not maximize profit at their expense. Suppliers respect contracts and deliver products on time and to the desired quality and specifications. Fair Trade buyers, recognizing the financial disadvantages producers and suppliers face, ensure orders are paid on receipt of documents; Fair Trade recognizes, promotes and protects the cultural identity and traditional skills of small producers as reflected in their food products and other related services.

Principle Four: Payment of a Fair Price. A fair price is one that has been mutually agreed by all through dialogue and participation, which provides fair pay to the producers which takes into account the principle of equal pay for equal work by women and men, and can also be sustained by the market. Fair Trade marketing and importing organizations support capacity building as required to producers, to enable them to set a fair price.

Principle Five: Ensuring no Child Labor and Forced Labor. The organization adheres to the UN Convention on the Rights of the Child, and national/local law on the employment of children.

Principle Six: Commitment to Non Discrimination, Gender Equity and Women's Economic Empowerment and Freedom of Association.

Principle Seven: Ensuring Good Working Conditions. The organization provides a safe and healthy working environment for employees and/or members. It complies, at a minimum, with national and local laws and ILO conventions on health and safety.

Principle Eight: Providing Capacity Building (ongoing evidence driven process to improve

the ability of an individual, team, organization, network, sector or community to create measurable and sustainable results). The organization seeks to increase positive developmental impacts for small, marginalized producers through Fair Trade. The organization develops the skills and capabilities of its own employees or members. Organizations working directly with small producers develop specific activities to help these producers improve their management skills, production capabilities and access to markets - local / regional / international / Fair Trade and mainstream as appropriate. Organizations which buy Fair Trade products through Fair Trade intermediaries in the South assist these organizations to develop their capacity to support the marginalized producer groups that they work with.

Principle Nine: Promoting Fair Trade. The organization raises awareness of the aim of Fair Trade and of the need for greater justice in world trade through Fair Trade. Honest advertising and marketing techniques are always used.

Principle Ten: Respect for the Environment. Organizations which produce Fair Trade products maximize the use of raw materials from sustainably managed sources in their ranges, buying locally when possible. They use production technologies that seek to reduce energy consumption, minimize the impact of their waste stream on the environment and where possible use renewable energy technologies that minimize greenhouse gas emissions. Also, agricultural commodity producers minimize their environmental impacts, by using organic or low pesticide use production methods wherever possible. All organizations use recycled or easily biodegradable materials for packing to the extent possible, and goods are dispatched by sea wherever possible.

APPENDIX B: TABLE B-1 FARMERS AND LEADERS QUOTES RELATED TO MARKETING AND PRODUCTION INNOVATIONS

ID	Marketing innovation	Innovation production
SCC1	F2: We attempted to develop a link with a national trader. In the beginning, everything seemed to work fine, but when we were ready to sell coffee to this company, they were unable to buy our product. Later, it became a nightmare for the co-op. We neither sold the beans at the right time nor the right price. On top of this, we signed a legal contract with the buyer and we were holding the coffee for them because we didn't want any troubles. In the end, we made a deal with the buyer, so we didn't incur any penalty. We were free to sell our coffee and recover some of the money for that season. It was a very bad experience and it caused us a lot of stress and discouragement this particular year. F2: We worked in the past with the network—*la Red*. They connected us with other organizations and taught us how to change our practices, how the coffee should be grown; however, currently, we are independent from that organization**.** Everything has been working, thanks to a credit with a private bank—BANAMEX©. F1: There are many changes in the co-op and farmers are slowly changing too… even though our production is lower than in previous years. The quality of our organic coffee is better and we can sell it at a better price in the market.	F2: In the beginning it was really difficult for us to switch from conventional to organic practices. Most trees stopped producing beans for a year or two, and we were scared because we didn't know what to do. They just stopped....For a year or two they stop producing beans, but we were patient. In the meantime, we advocated more of our efforts in the renewal of old trees. Right now, if you see the trees, it is a different story. The coffee trees became used to the new system, particularly the applications of organic fertilizers. Fortunately for us, they are back into production F3: As my partner was saying, organic practices help us protect the soil. Building buffer strips and stopping chemical applications, particularly pesticides, protect the soil, too. These two practices bring new life to our soils and make them last longer. The mission and vision of the co-op is to protect the soil, and have a healthier ecosystem and product. I am totally convinced we are on the right track.
SCC2	F2: We learned about processing and some other practices that help us to do a better job on our farms. For example, when we wash our coffee, we need to pay attention to the weather, water temperature, etc. For example, if the water is too cold or hot affects the quality of the beans. When it is too cold and we try to process our coffee, we know for sure we are not going to have a good yield. Every little detail counts. We	F7: We keep changing a lot. Before, some farmers did not process their coffee, and they were selling only raw cherries. Now, most of us process the coffee. This is another advantage we have. F2: To be a good organic farmer, we need to take care of every aspect of the production cycle, together with the processing and packing. Everything has its own time and

	have learned from the COOP most of the tricks. Also, when coffee is delivered to the mill, workers need to be sure everything is clean—no chemicals around, oil, gas, soaps, etc.—because coffee is very sensitive. If there are any aromas around the beans, they will be contaminated with the smell and flavors from other substances.	practices. We should follow exactly the book. Otherwise, we can easily have troubles with our coffee. Fortunately, we have learned a lot, thanks to our partners and also the technicians and engineers who have been helping us during the process. I remember one engineer telling us, "if you cut your coffee beans today, don't wait too long for processing them. If you wait, let's say two days, the quality of your coffee will decrease dramatically"…the same with washing and cleaning. F1: As farmers, we do not realize we are the ones having the knowledge about coffee production systems. The other day, an inspector from the certifier agency came to talk to us about coffee. He just talked about stats, values, and yields, but he didn't know much about production, how to seed, plant, etc. Another engineer who came to the COOP told us, "I can tell you about some aspects of the coffee production, but, in general, farmers are the ones who know more in detail how to deal with the trees…perhaps you need some guidance once in a while, but you guys are generating and transferring knowledge all the time…that's the process, there is nothing else." F8: Another practice we implemented is to cut the grass and weeds only to certain height, this measure is to contribute to the soil health. The norm is to leave at least 10 centimeters, I mean 5 to 10 centimeters minimum, so we can prevent erosion. Also, for some farmers with deep slopes on their plots is necessary to build terraces and create buffers strips around those terraces. Again all of these practices are implemented to prevent erosion. I think in general terms, we are asked to follow those practices to have our certificates and proof of our coffee's quality.
SCC3	Most farmers in our organization have a well-defined concept about what is marketing, -maybe not a 100%- for example, they know "quality" is important if we want to sell coffee to our clients. The other concept is traceability of our products	This is basically a different strategy that has not been mentioned before by any other coop, it could be even less risky than trying to sell only to the international market and maybe producers will be able to have more control over the chain or find specific market niches in specialty coffee shops.

	Even though we are working for a specialty market and we were supposed to receive a Fair price for our work, the international mainstream market is controlled by a handful of big conventional roasters and retailers that also affects the prices for FT/Organic products. Apparently, we are away from those market traps, but in general we keep experiencing barriers to access financial resources and specialty markets (Individual interview. Leader). With our 82 hectares of organic coffee we are also selling carbon bonds. Also, farmers' sons and daughters are working or contributing with the organization; for example one young lady is a "Q taster", and she is going to help us to determine (together with other two people from CAFECOL) the quality of our coffee and the characteristics that could make it special for the national and international markets… we are investing a lot in quality and traceability issues (Individual interview. Leader). There are some advantages from offering coffee in the national market, we need to show our products and promote organic and Fair Trade coffee. We should use Fair Trade as a symbol for quality, integration (specially the work from our cooperatives) In general terms farmers will need to promote organic coffee, especially in national markets, more promotion and advertising is needed so consumers realized about the poor quality coffee they are drinking. In a nutshell, poor quality coffee is costing consumers more than a pouch of 50 grams from our specialty coffee. For example, 50 grams of bad coffee is sold around 10 pesos, we could also offer the same amount of specialty coffee for 10 pesos. Farmers will be getting at least 100 pesos per kilo, and that's enough to begin with.	For example, here in the coffee sector, we have innovated with the participation from young scholars that come here and help us to do research, some of them at the master, others at the doctorate level, but in general the government does not know what to do. The COOP has built a vermicomposting site and has developed parchment coffee mixes allowing us to be more competitive in the market (Individual interview. Leader). On one side, we are planting more trees than before, not only the species that are suitable for coffee productions but also we are reincorporating native species of trees. On the other side, we are also producing vermi-compost that is a really good fertilizer for trees and trees. It is a long term investment, but it is worth it. Also, we are planting banana trees because we used the leaves as an extra source of income. The fruit is not that great so we cannot market bananas but the leaves are great. Lately, we are also incorporating macadamia nuts -not many trees right now- but the idea is to plant more in the future so we can profit out of the nuts too.
SCC4	F7: Thanks to our link with an international buyer (French roaster), we are dealing with a	F5: Besides soil conservation, there is also tree and several animal species protection.

	lot of money each season. We are also very concerned about keeping good track and records of our work. Some farmers don't want to follow the rules and laws implemented by the COOP. This is why we went from 55 farmers to only 16. However, I don't see this as a disadvantage; I just see it as a result of our hard work. Coffee producers need to get into the new concept of 'specialty coffees'; they need to look for certification, perhaps a certification on specialty coffees. Even conventional farmers, should look for specialty markets. We all need to know for sure the characteristics of our coffee, so we can adapt to the taste of international markets or find our target countries or consumers. We need to sell environmental friendly coffee so everyone realize that we are against climate change and we don't pay the consequences in the future (Individual interview. Leader). F6: Our co-op has participated in different shows and internationals fairs. In my case, I got the chance to go to Mexico City two times last year. Also two times to Veracruz city. Together with three other farmers, we put together a stand and the municipality also helped us pay some of the costs. It was a great experience and there were many people interested in our work. The market is requesting quality and not quantity, in alternative practices the idea is the opposite than in the conventional market.	There are many farmers and people, in general, who are killing flora and fauna in the region. In our COOP, we are providing a conservation example…it is giving us results, particularly, positive impacts on water conservation…my partners already told you, environment preservation and protection is among the main goals of the COOP. We are taking care of the environment for future generations. F1: In organic production, we talk about buffer strips, drainage ditches, pruning, grafting, and renewing trees. All of these innovations are helping us preserve the soil and increase diversity on our farms, both animals and trees. We have a responsibility with both, our environment and nature. Even though we are doing this for business, the trees planted have another purpose—protect nature. I feel we are really good stewards of our land. Of course, our main goal is to make money from coffee, but at the same time, we realize we are protecting the environment.