

# Global Agricultural Value Chains: Sustainable Growth as a Means for Sustainable Development

*Patricia Lee Devaney*

*Root Capital*

Agricultural businesses in developing countries offer an opportunity for market-based economic development that creates benefits throughout global value chains.<sup>1</sup> Supporting the stability and growth of such businesses fosters economic prosperity and job creation in places where poverty is endemic. Further, it addresses key economic and social issues that affect the everyday lives of people in the United States, including immigration, drug production, post-conflict reconstruction, and supply chain stability.

Seventy-five percent of the world's poor live in rural areas and depend on agriculture as their primary source of income. Given the World Bank's estimate that economic growth in the agricultural sector is twice as effective in reducing poverty as growth in other sectors of the economy, strengthening agricultural value chains may be among the most effective ways to address global poverty.<sup>2</sup>

Agricultural cooperatives and private enterprises represent farmer suppliers at the base of many global value chains. A growing number of these enterprises produce and process high-value crops such as premium coffee and cocoa, vegetables, and nuts that have a growing market in North America and Europe. However, despite having quality products with established markets, most of these enterprises lack the financing to invest in inputs such as seeds and fertilizer, purchase raw material, and build processing facilities, warehouses, or other value-adding infrastructure.

In the United States, a variety of government programs, many of which are driven by legislation such as the Community Reinvestment Act (CRA), addresses gaps in rural and other underserved financial markets directly or indirectly through private sector engagement. The U.S. farm credit system provided \$152 billion in financing to agricultural small businesses in 2009.<sup>3</sup> Since the Community Development Financial Institutions (CDFI) Fund's inception in 1994, it has provided more than \$1 billion to community development organizations and financial institutions, while more than 1,000 CDFIs lend billions of dollars to underserved markets in the United States, including small and growing businesses

---

1 We define value chains as "the sequence of value-adding activities, from production to consumption, through processing and commercialization. Each segment of a chain has one or more backward and forward linkages," from C. Miller and L. Jones, *Agricultural Value Chain Finance* (Rome: Food and Agriculture Organization of the United Nations and Practical Action Publishing, 2010).

2 The World Bank, "World Development Report 2008" (Washington, DC: World Bank Group, 2007).

3 Farm Credit Administration, "2009 Annual Report on the Farm Credit System" (McLean, VA: Farm Credit Administration, 2010).

(SGBs). At fiscal year-end 2009, the Small Business Administration had a total loan portfolio outstanding balance of \$90.5 billion, and had guaranteed \$62 billion of loan principal for U.S. small businesses.<sup>4</sup>

By contrast, few such government programs exist at a meaningful scale in developing countries, and thus the financing needs of rural SGBs are largely unmet. Microfinance is increasingly addressing the financing needs for very small businesses clustered in urban centers from Lima to Nairobi to Dhaka. However, microfinance has primarily focused on the smallest enterprises that typically employ fewer than three people and are rarely part of the formal economy. It has yet to reach much beyond periurban and the most densely populated rural areas or to address the needs of businesses employing more than five people and requiring more than \$10,000 in credit.

Commercial banks, for their part, bump up against the same constraints as microfinance institutions when considering expansion into rural markets: high transaction costs to reach enterprises in far-flung areas. Add to that a lack of traditional collateral, real and perceived risks of agricultural lending, cultural and linguistic differences, and often limited managerial capacity, and it is no surprise that rural SGBs are excluded from the financial mainstream and even “alternative” financial markets.

Recent interest by both traditional economic development agencies and a new breed of “impact investors” suggests that support for agricultural businesses is on the rise. Although official development assistance for agriculture declined in both percentage (from 18 percent in 1979 to 3.4 percent in 2004) and absolute terms (from \$8 billion in 1984 to \$3.4 billion in 2004) in the last two decades of the twentieth century,<sup>5</sup> volatile markets, extreme weather patterns, and resulting food crises have prompted a renewed focus on the sector from governments, philanthropy, and the private sector during the past five years.

The rise of impact investing—generating social or environmental benefits and financial returns—provides a new opportunity to address rural poverty with market-based solutions. In a recent study, J.P. Morgan Global Research and The Rockefeller Foundation described the impact investment market as an emerging asset class with invested capital need estimated to be \$400 billion to \$1 trillion over the next decade.<sup>6</sup>

## Financing Agricultural Value Chains

Root Capital aspires to expand access to finance to enterprises operating in rural areas of developing countries—the rural “missing middle” between microfinance and corporate banking. As a social investment fund, Root Capital provides loans to rural SGBs that operate within global value chains but that lack access to credit to support and expand their opera-

---

4 U.S. Small Business Administration, “Summary of Performance and Financial Information, 2009 Fiscal Year” (Washington, DC: SBA, 2010).

5 World Bank, World Development Report 2008.

6 J.P. Morgan Global Research, The Rockefeller Foundation, and Global Impact Investing Network, “Impact Investments: An Emerging Asset Class” (New York: J.P. Morgan Global Research, November 29, 2010).

tions. Root Capital also builds the capacity of these businesses to absorb and manage credit through financial training. Ultimately, it aims to expand financial markets to rural enterprises as a means to improve rural livelihoods.

### *Root Capital's Clients*

Root Capital works with rural SGBs that have little or no traditional collateral. These businesses—associations, cooperatives, and private enterprises aggregating several hundred or a few thousand smallholder farmers—source products from the base of the value chain. They consolidate the harvests of smallholder producers and negotiate competitive prices on international markets. Beyond economic benefits in the form of stable market access, many rural SGBs offer agricultural extension services to boost productivity and help farmers adapt to changing weather conditions. They also often offer social services such as health care, education, and they build physical infrastructure (roads, community centers, water treatment facilities) in the remote areas in which they operate, areas that public services infrequently reach.

Those rural enterprises that supply products to international buyers sign forward purchase contracts several months in advance of the harvest. They can therefore offer a more consistent, reliable, and generally higher price to their farmer suppliers than local middlemen. But the middlemen often out-compete the farmer enterprise on one important dimension: they are able to offer cash at the time of harvest. Most rural businesses, on the other hand, lack sufficient working capital to pay their suppliers until they ship the product and are paid months later by their buyers.

Farmers, for their part, lose out when they sell to the middlemen. Although they receive cash upfront to meet immediate household needs, they are often paid well below market prices. For agriculturalists struggling to feed their families or pay school fees today, waiting for payment for three months may not be an option. Smallholder farmers, like the enterprises they supply, are perennially cash constrained. Although rational for farmers living at the poverty line, when farmers sell to middlemen instead of to the local enterprises, it weakens SGBs which serve an important role as a source of both income and social services benefiting producers and their families in the long-term.

With financing, rural SGBs can pay their farmer members or suppliers competitive prices at the time of the harvest. Producer enterprises can then fulfill their contracts with international buyers, strengthening the long-term viability of the enterprise itself.

### *Root Capital's Model*

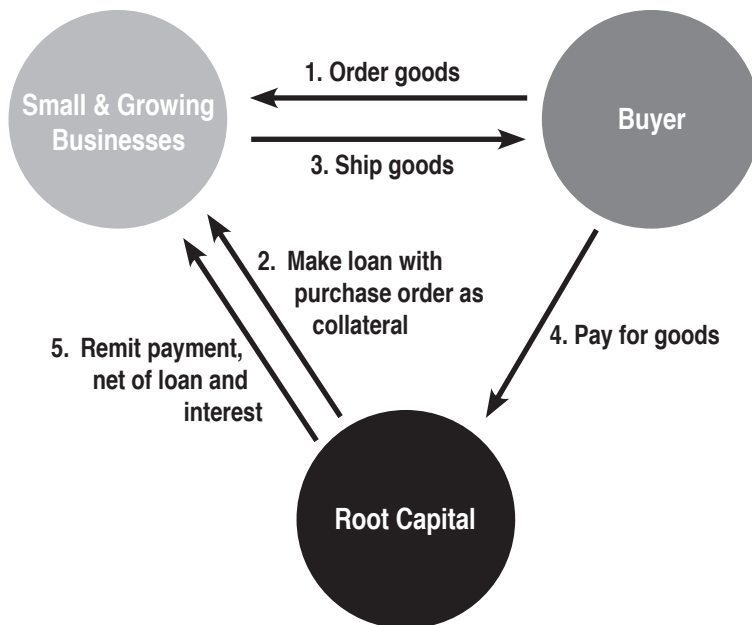
Ninety percent of Root Capital's portfolio is made up of short-term (typically five to nine months) trade credit loans to address the cash flow gap between the time an SGB purchases raw goods from its farmer suppliers and when the business receives payment from its buyers several months later. Pre-harvest loans to SGBs to lend to individual farmers to purchase seeds and other inputs represent a growing portion of Root Capital's portfolio.

The remaining 10 percent of Root Capital's lending is for longer-term capital expenditures that enable enterprises to offer value-added services, lower production costs, and raise product quality. UROCAL, a 115-member banana producer cooperative in Ecuador, has used Root Capital's loan to purchase water-efficient drip irrigation systems for growing bananas. COCLA, a coffee cooperative in Peru, borrowed Root Capital funds to build a warehouse for its spin-off business that processes and sells enriched, pelletized animal feed in local markets.

Root Capital has also expanded into new industries with particularly high social impact for both producers and consumers at the base of the economic pyramid. For example, in 2010, it provided its first loans to enterprises that produce high-yield, drought-resistant seeds to farmers. It also recently began financing businesses that manufacture ready-to-use therapeutic foods aimed at addressing severe acute malnutrition in refugee camps throughout the Horn of Africa.

Root Capital typically employs a form of value chain finance, depicted in Figure 1, whereby the main security is signed purchase agreements between SGBs and their buyers, primarily in North America and Europe. The purchase contract replaces the need for traditional collateral as it represents a discrete, future revenue stream pledged to repay the loan. When the product is shipped, the buyer pays Root Capital directly. Root Capital then recovers its principal and interest and remits the remainder of the payment to its SGB client.

*Figure 1. Root Capital's Value Chain Finance Model*



As of year-end 2010, Root Capital had disbursed a cumulative total of more than \$250 million in credit to 320 businesses, while maintaining a 99 percent repayment rate. Between 2007 and 2010, total loan disbursements grew at a compound annual growth rate (CAGR) of 42 percent. Its loans range from \$25,000 to \$2 million (in 2010, the median loan was \$250,000). The SGBs Root Capital finances provide market access and employment that improve incomes and livelihoods for more than 450,000 rural producer households.

### **What's at Stake?**

Root Capital strengthens the operations of its borrower enterprises by enabling them to purchase more product from their smallholder suppliers, thus increasing supplier loyalty, fulfilling purchase contracts with buyers, and subsequently increasing their revenues. In and of itself, enterprise growth has value in rural communities because of the ripple effect of successful businesses. They hire more people, use and create more ancillary services (such as transportation, agricultural supplies, and labor), and attract financial and other support services to their communities.

Most important, where specialty crops match growing market demand, successful rural enterprises offer high-value export opportunities to marginalized producers whose markets would otherwise be limited to their immediate vicinity or, at best, national or regional markets that may offer significantly lower prices than export markets. By supporting these grassroots enterprises, Root Capital enables them to link small-scale and otherwise disaggregated producers to well-paying international markets.

Root Capital's market-based approach to reducing rural poverty carries benefits beyond the farming communities of its borrowers. Because borders are porous for money, people, and drugs, the impact of strong rural economies reverberates internationally. The United States, in particular, is affected by rural development in remote locations around the world because of the dependence of many U.S.-based businesses on global value chains, immigration to the United States from impoverished rural areas in Latin America, the incidence of drug production in rural communities, and the threat of continued instability in post-conflict environments.

### *Global Value Chains*

The U.S. economy is only as strong as the weakest link in the value chains that stock its stores, clothe its residents, and fuel its cars. Although Root Capital's social mission guides the organization to improve the lives of small-scale producers, international buyers benefit from a more reliable supply chains brought about by third-party financing in two fundamental ways:

1. **Supply chain stability.** Access to capital enables SGBs to purchase greater volumes from their smallholder suppliers, and therefore more reliably meet the volume demands of their buyers. As suppliers prove their reliability, the time buyers must

spend with them—and likewise the cost of maintaining the relationship—declines over time. Further, because financing enables SGB managers to plan ahead and make appropriate capital investments, product quality is often enhanced by access to reliable sources of capital.

2. Lower sourcing costs. The increased volumes that buyers purchase from existing suppliers as a result of Root Capital’s financing reduce their sourcing costs as they no longer must develop relationships with as many new supplier enterprises. Further, with third-party financiers such as Root Capital financing capital expenditures, SGBs may realize increased operating efficiencies, lower energy and water use, and reduced transportation costs, which in turn can lower the total sourcing cost to the buyer.

Root Capital has applied this value chain finance model with 125 U.S. buyers, ranging from specialty importers, such as Equal Exchange and Sustainable Harvest, to large global buyers, including General Mills, Green Mountain Coffee Roasters, Pier 1 Imports, Starbucks Coffee Company, The Body Shop, The Home Depot, and Whole Foods Market.

### *Migration*

Rural poverty frequently compels people to migrate, either to find new employment permanently or to round out volatile agricultural income with seasonal employment when yields or prices are low. Whether pulled by better employment opportunities or pushed by economic hardship, farmers migrate when their existing income prospects are low and expected income at their destination is perceived to be high.<sup>7</sup> Developing-country farmers migrate to other rural areas, regional urban centers, or abroad to manage the risks inherent in agriculture and their other rural-based activities.<sup>8</sup>

Smallholder farmer income is especially volatile because of risks such as weather shocks affecting yields, erratic supply affecting price, and a variety of other factors. Because the incomes of most smallholder producers lag those of their urban counterparts even in “good” years, a bad year—characterized by drought, a hurricane, or low international prices for their goods—can be economically devastating to both individual households and local economies.

In 2001, international coffee prices plummeted to lows below \$0.50 per pound (2010 prices are high at greater than \$1.80 per pound)<sup>9</sup> owing in part to overproduction in Brazil and Vietnam. The economic destruction that befell coffee communities with no safety nets to protect them from the price spiral drove hundreds of thousands of farmers from their land to seek employment as seasonal laborers or for longer-term non-agricultural jobs. In a particularly tragic illustration of the desperation of coffee farmers operating as

---

7 The World Bank, “World Development Report 2008.”

8 International Fund for Agricultural Development, “Rural Poverty Report 2011.”

9 International Coffee Organization, “ICO Indicator Prices 1998 – 2010” (London: International Coffee Organization, 2010), available at <http://dev.ico.org/prices/p2.htm>, Twin Trading Ltd, TwinCafé Bulletin. (London: Twin Trading, August 5, 2010).

“price takers” in a volatile export commodity market, 14 migrants from Mexico’s coffee-producing state of Veracruz died in the Arizona desert after abandoning their farms to find work in the United States.<sup>10</sup>

More stable and higher incomes in rural areas lead to the types of quality of life improvements that discourage migration. Rural enterprises, often the institutional backbone of rural communities untouched by municipal services, foster income and other social improvements, and give farmers and their families incentive to stay on their land. The enterprises that Root Capital supports offer their farmers fair prices, a consistent export market, and social services—stability in an otherwise unstable environment.

Many of Root Capital’s clients, particularly in Mexico and Central America, are directly affected by migration of their suppliers. One client, 21 de Septiembre, a coffee cooperative in Oaxaca, Mexico, witnessed high migration following a coffee price collapse in the early to mid-1990s. Migration trends have continued. Currently, two-thirds of 21 de Septiembre’s members who migrate go to the United States as temporary agricultural field workers or for permanent jobs in construction or food services. Because most of the migrants are traditionally young men, the average age of 21 de Septiembre’s members is approximately 55 years.

The flight of this demographic strains the family, as women, who now account for 45 percent of 21 de Septiembre’s remaining farmer members, are left with the triple responsibilities of farming the land, managing the cooperative, and caring for their families. Although many of the migrants send remittances to their families, amounts have dropped off significantly since the 2008 economic crisis, magnifying the daily stresses of both the migrants and the families they leave behind. With the goal of encouraging farmers to stay on their land, the cooperative has launched a number of training and scholarship programs aimed at local youth, as well as coffee plant renovation projects.

### *Drug Production*

On the eastern slopes of the Andes in Peru, Colombia, and Bolivia, coca, the raw ingredient for cocaine, competes for land with coffee, cocoa, and other legal crops. Although fighting narco-terrorism is the mandate of governments, supporting organizations that can offer an economic rationale to plant, harvest, and sell productive crops is very much in line with Root Capital’s mission. Particularly in Latin America, rural SGBs offer the economic stability and unified voice that farmers often need to resist pressure to produce illicit drugs.

For example, Root Capital client Cooperativa Agraria Cafetalera Pangoa (Pangoa), is a Fair Trade and organic-certified coffee cooperative located in Peru’s Junín region. Peru accounts for a high percentage (39 percent and growing) of global cocaine production, second only to Colombia (at 48 percent and shrinking).<sup>11</sup> The Junín region is one of the four main

---

10 M. Wallengren, “Coffee Crisis Sends Mexico Producers to Death In Arizona,” Dow Jones Newswires, May 29, 2001.

11 United Nations Office on Drugs and Crime, “UN World Drug Report 2010” (Vienna: UN Office on Drugs and Crime, 2010).



coca producing regions of Peru and is considered a “red zone” for its concentration of drug production and trafficking.

During the 1980s, Pangoa’s coffee farmers were caught in the middle of the terrorist activities of the Shining Path movement, which was funded largely by the coca trade. Hundreds disappeared or were murdered, and thousands more abandoned their land. Pangoa all but collapsed under relentless attacks by the Shining Path against its farming communities. The violence was so rampant that locals referred to the main road to the town of San Martin de Pangoa, where Pangoa’s office and warehouse are located, as “el camino donde la vida no vale nada” (the road where life isn’t worth anything).

Although most farmer cooperatives in the area disbanded, Pangoa lost the majority of its members, but remained operational owing mainly to its strong leadership. The days of the Shining Path guerrillas in the 1990s have been replaced by an era of private militias and ongoing drug-related violence today.<sup>12</sup> Amid this upheaval, Pangoa continues to purchase coffee, and more recently cocoa, from its 200 farmer members and sponsors projects in reforestation, women’s disease screenings, other health programs, and education. By linking its members to international markets that pay premium prices for its specialty coffee, Pangoa offers its farmer members economic alternatives to coca production.

### *Post-Conflict Reconstruction*<sup>13</sup>

Economic development plays an important role in post-conflict settings, as economic reconstruction is linked to stronger, longer-lasting peace building efforts. Forty percent of armed conflicts that end in a negotiated settlement revert to violence within 10 years.<sup>14</sup> Economies that can absorb former combatants into other activities and improve the material lives of everyday citizens diminish wide-scale support for violence. Because the majority of people in most post-conflict countries live in rural areas, agriculture plays an important role in such situations. Further, although the industrial base takes time to rebuild, the agricultural sector can rapidly absorb large amounts of labor and rebuild individual livelihoods.

Although investment can help stabilize post-conflict economies, foreign private investment is sluggish to enter such markets for obvious reasons of risk. With a prudent approach to risk combined with an understanding of the social implications of successful reconstruction, Root Capital has worked in post-conflict societies since its earliest days. In fact, its entry point into Africa is very much a story of post-conflict reconstruction. In 2004, one of Root Capital’s international buyer partners approached the organization to finance their coffee suppliers in Rwanda. Beyond offering a quality product to a ready market, cooperatives in Rwanda were playing an important role in rebuilding relationships between Hutus and

---

12 S. Romero, “Coca Production Makes a Comeback in Peru,” *New York Times*. June 13, 2010.

13 Thanks to Nate Schaffran, Root Capital’s Africa Regional Director, for his contributions to this section.

14 P. Collier, A. Hoeffler, and D. Rohner. “Beyond Greed and Grievance: Feasibility and Civil War.” Working Paper 2006-10. (Oxford, UK: Oxford University, Department of Economics, Centre for the Study of African Economics, 2006).



Tutsis. The simple act of coming together with a common economic goal began to repair some of the social fabric of the countryside. In 2010, Root Capital provided \$2.75 million in loans to nine such businesses in Rwanda.

More recently, in December 2010, Root Capital provided a loan to Gulu Agricultural Development Company (GADC), a cotton ginner and exporter based in northern Uganda. Gulu District is recovering from nearly 25 years of armed conflict that left the north as the poorest region in Uganda, with a poverty rate of 61 percent (twice Uganda's national poverty level). The United Nations World Food Programme estimates that nearly 1.4 million people in the region were made homeless by the fighting, most taking shelter in internal refugee camps.

Two years ago, farmers in Gulu District began returning to their farms where they faced the challenge of reconstructing their lives as subsistence farmers. Although cotton had once been the economic mainstay of the region, it had been defunct for a decade as a result of the conflict. In 2009, GADC rehabilitated the cotton production infrastructure and began trading on a limited scale. The following year, Root Capital and its colleague organization, the Acumen Fund, together extended financing to GADC. GADC is emerging as an anchor of the region's economic revival, providing 30,000 farmers with access to seeds, agricultural training, and a secure market.

## Conclusion

The most promising economic development programs are those that are sustainable. That is, they are able to pay for themselves, are embedded in existing systems, and fill a market need while generating a variety of public goods. Root Capital offers a sustainable approach to rural economic development by strengthening enterprises that link smallholder farmers to global value chains.

By addressing the financing needs of rural SGBs, Root Capital's approach improves livelihoods of the smallholder farmers who supply agricultural products to small and growing businesses. Beyond direct economic development in communities at the base of the economic pyramid, filling this market gap benefits actors further up global agricultural supply chains, including international buyers, retailers, and their consumers. At the same time, building rural economies through sustainable products stabilizes communities and improves their resiliency to external shocks.

While Root Capital focuses on rural enterprises in developing countries primarily as an economic development solution, its model can apply to other geographies including the United States, in industries beyond agriculture. There may be particular opportunity for community-focused financial institutions (CDFIs or CRA-motivated banks) that aim to expand beyond traditional asset-backed lending by offering additional financial products that reach underserved markets without compromising their risk profiles.

Cash-flow based lending that replaces traditional collateral with stable purchase contracts could be used to finance a variety of U.S. businesses—from small family farms to urban manufacturers—that hold purchase orders from buyers but face short-term liquidity constraints.

Further, banks that want to deepen their relationships with corporate clients that source products from small businesses may consider financing the enterprises throughout those value chains. A value chain finance strategy both facilitates banks' business development by identifying new clients that meet the sourcing standards of their existing clients, and mitigates risk by stabilizing supply chains and enabling banks to gain deeper knowledge of specific industries.

Fundamentally, Root Capital's approach is predicated on trust, transparency, and a deep understanding of agricultural production cycles and the risks inherent to rural markets, such as drought and changing commodity prices. Establishing banking relationships that respond to the specific needs of underserved markets—whether internationally or in the United States, rural or urban—requires products and repayment terms appropriate to sector-specific realities and risks. Such customization requires investing in understanding the detailed needs of each sector, an investment that can open up large, underserved markets with strong growth potential and that can spark economic and social improvements in local communities.

**Patricia Lee Devaney**, *Root Capital's Director of Knowledge & Impact, oversees the social and environmental impact assessment of the lending portfolio to inform organizational strategy and operations. Ms. Devaney also leads Root Capital's efforts to document and disseminate its experiences in agricultural value chain finance with the ultimate goal of attracting other financial institutions to this market and expanding access to financial services for underserved rural populations. To learn more about Root Capital, please visit [www.rootcapital.org](http://www.rootcapital.org).*