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Money and mission: Moving food with value and values

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Abstract
In response to low margins in traditional commodity markets and consumer demand for decommodified food, food value chains have emerged in the last decade as strategies for differentiating farm products and opening new, more financially viable market channels for smaller farmers. These business networks incorporate strategic coordination between food producers, distributors, and sellers in pursuit of common financial and social goals. Our analysis of the aggregation, distribution and marketing functions of eight food value chains of diverse character across the United States reveals four summary findings that encapsulate the challenges and opportunities facing these business organizations: (1) private infrastructure investment should match the organizational stage of development and market capacities; (2) identity preservation is a critical market differentiation strategy; (3) informal networks can be highly effective tools for coordinating the marketing efforts of diverse agricultural producers; and (4) nonprofits and cooperatives both can play key roles in value chain development, but should recognize their organizational competencies and limitations.

Keywords
agriculture of the middle, farmer networks, food distribution, organizational development, regional food systems, value chains

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The Changing Agricultural Landscape

Agriculture in the United States is at a crossroads. It has made tremendous strides in improving labor productivity through mechanization, and land productivity through advances in plant and animal genetics, fertilizers, and pest control technologies (Cochrane, 1993). With these technologies, the overall number of farms in the United States plummeted from over 6 million in 1935 to around

2 million in 2007, even as the population increased 140%, from 127 million to 308 million, in this time period. Compounding this dramatic reduction in overall farm numbers, we have seen intense concentration of farm ownership to the point where 2.5% of all farms — 55,509 farms — accounted for 59% of total farm income in 2007 (USDA, 2009). Never have so many been fed by so few.

While this dramatic increase in agricultural productivity has been a triumph of technology and has released millions of people from backbreaking work, it also has transformed the agricultural landscape; millions of farmsteads have disappeared, and the marketing environment for remaining small and mid-sized farms has become quite onerous as they must compete against much larger farms with economies of scale in production and distribution. Smaller producers often have higher production costs and thus have difficulty competing in traditional commodity markets where margins are quite thin.

One approach by many smaller farmers has been to capitalize on growing consumer interest in food provenance and sell through direct-to-consumer food markets such as farmers' markets, community supported agriculture operations (CSAs), and farm stands. According to the National Agricultural Statistics Service, direct marketing of all types accounted for US$1.2 billion in 2007, and it grew 105% in value between 1997 and 2007, compared to 48% for total farm sales in the same period (Diamond & Soto, 2009).

Direct marketing outlets can increase returns to farmers by allowing them to capture additional income streams from traditionally off-farm food system activities, such as aggregation, processing and marketing (Martinez et al., 2010). Nevertheless, direct marketing channels alone cannot accommodate the bulk of mid-sized agricultural producers, classified as those earning between US$50,000 and US$250,000 in gross farm income (Stevenson & Pirog, 2008), that are declining in number even as 2007 Census of Agriculture figures indicate growing numbers of small and larger farms. More than 270,000 farmers with gross farm income of US$33 billion as of 2007 belong to this so-called "agriculture of the middle" category (USDA, 2009). Generally, they are too big to rely primarily on direct marketing channels to dispose of their output. Farms in this size range are more likely to specialize in one or two crops and be located far enough from population centers to make direct marketing impractical. On the other side of the coin, these "agriculture of the middle" producers are often too small to compete on price with large commodity producers (Stevenson & Pirog, 2008). Their larger competitors are often more able to take advantage of economies of scale related to farm machinery, overall farm management, as well as their ability to get better terms of trade in the marketplace due to their large sales volume. Agriculture of the middle farmers are thus caught short, having difficulty capitalizing on two simultaneous, if contradictory developments in contemporary American agriculture: the growth of small-scale, niche, local production alongside the continued industrialization of agriculture into ever larger production units.

In response to this conundrum, many mid-sized farmers are turning to a burgeoning array of alternative strategies for wholesale food aggregation and distribution, ones that can broadly be characterized as less intermediated and more direct sales from farm to institutions or retailers (Day-Farnsworth, McCown, Miller, & Pfeiffer, 2009; King et al., 2010). Such marketing strategies usually involve some degree of product differentiation based on attributes such as production process, provenance, and product quality, combined with product aggregation to improve producers' bargaining position relative to buyers. These efforts to bypass both mainstream wholesale channels and direct-to-consumer market channels are predicated on the notion that addressing the needs of agriculture of the middle requires the pairing of different kinds of supply chains with different kinds of products. How the product is transmitted from farm to consumer has to change, and what is actually produced has to change as well if mid-sized producers are going to increase the financial viability of their operations.

Key to these new, intermediated food marketing strategies (King et al., 2010) is the establishment of strong relationships between the different actors involved in growing and raising crops, processing crops, and marketing food to retailers, institutions, restaurants, and other food buyers. The phrases *values-based value chains* or *food value chains* are used interchangeably in this paper to refer to emergent supply chains emphasizing vertical coordination rather than integration throughout the supply chain in order to reach mutually beneficial aims. Values-based value chains encapsulate the dual goals of creating economic value through product differentiation, *and* advancing a particular set of social, economic or environmental values through collaborative supply chains that exemplify the broader trend of social entrepreneurship, or doing good works through good business (Barnes, 2006; Porter & Kramer, 2011; Stevenson & Pirog, 2008).

Value chain analysis has been used for decades in the international context as a tool for analyzing how the various activities and actors involved in producing and marketing a product or service are related to each other. Initially used to describe how mineral-dependent economies developed (Kaplinsky, 2004), value chain analysis has since been widely used to explore how better coordination among producers, a stronger orientation toward meeting market demands, and strategic alliances between producers, processors, and retailers can improve rural livelihoods in developing nations (cf Slingerland, Ruben, Nijhoff and Zuurbier, 2006; Stoian & Donovan, 2010; Van Der Meer, 2006). More generally, value chain analysis has been used to describe how value is added at different stages, including primary production, processing, marketing, and sales (Hallam & Rapsomanikis, 2006; Porter, 2008) and to evaluate opportunities for efficiency gains across a system as opposed to particular nodes of economic activity (Kaplinsky, 2004; Taylor, 2005). In these various iterations of value chain analysis, the "value" of value chain analysis refers to economic value, with scholars concerned with how value is distributed among chain actors, or how to increase overall value through changes in governance structures. Stevenson and Pirog (2008) adapt value chain analysis to the U.S. agri-food context by emphasizing the dual connotation of value, referencing both economic value and ethical or social value.

Stevenson (2009), as part of the Ag of the Middle Project, has laid out in a series of case studies how farmers, distributors, retailers, and food processors coordinate their activity for mutual economic benefit while also advancing social and ethical values, such as agricultural sustainability and farm viability. An analysis prepared under the auspices of the Ag of the Middle Project inventories 75 value chains across the United States according to product, region, and sales (Hoshide, 2007). Others have built on this framework to assess the effectiveness of conventional food distributors in building up local food systems (Bloom & Hinrichs, 2011) and the capacity of pasture-raised livestock production to strengthen farm viability and rural communities (Conner, Campbell-Arvai, & Hamm, 2008). These studies have examined how the attitudes and behaviors of food value chain actors facilitate the creation of more regionally based, sustainable food systems. Building on this body of work but also offering a new perspective, this paper focuses on distribution mechanics and operations within the food value chain context.

This focus on distribution is meant to address the oft-cited challenge to regional food marketing, wherein farmers may be willing to grow and sell their produce for local markets, and food buyers want local food, but these two ends of the food supply chain have difficulty connecting with each other (Day-Farnsworth, et al, 2009; Zajfen, 2008). In focusing on the operational details of food value chains this report seeks to explain how mission oriented food distributors can facilitate connections between regional food suppliers and buyers through appropriately scaled and designed business operations.

Research Inquiry and Methods

The following analysis focuses on the myriad ways that value chain distributors:

- Recruit producers and develop producer networks,
- Identify, brand, and market differentiated farm products,
- Manage infrastructure to transform, pack and transport farm products, and
- Negotiate with buyers to secure a fair return for the producers.

By analyzing what has and has not worked in regional food distribution enterprises, existing and future organizations interested in building local food systems will have lessons to build on, blunders to avoid, and inspiration from which to draw. Primary areas of inquiry include the organizational and legal structure of the distribution entity, financing, distribution logistics, buyer-grower relationships, price negotiation, marketing and branding, and more generally, the presence of unique or replicable factors explaining success, either pertaining to internal value chain dynamics or external environmental conditions.

In order to capture the level of detail and richness of various distribution models, a qualitative case study approach was chosen as the primary research method. Our work was informed by grounded theory; we did not begin our investigation with a preconception of what drives value chain development or how they are categorized. Rather, the themes described in this paper emerged out of our analysis of interview transcripts and notes, other primary sources such as organizational newsletters, websites, and journalistic accounts of the entities being studied (Strauss & Corbin, 1998). Furthermore, given the dynamic nature of these alternative models of local food distribution, the study took a longitudinal approach in order to more fully examine how these organizations have faced challenges and seized opportunities to best advance their business goals and social missions.

We first conducted a baseline review of value chain distribution models to ensure a diverse representation of cases. An initial list of about 25 cases was gathered via key informants involved with the regional food distribution sector to create a broad set of cases from which to choose a diverse sample. While this initial list was not exhaustive, we felt it was sufficiently diverse to form our sampling frame. Eight case studies were chosen, considering the following criteria:

- Types of participating farmers (e.g., minority, transitional, refugee/immigrants, new/beginning);
- Geographic location;
- Agricultural products;
- Markets (e.g., institutional buyers, chain and independent retail grocery stores, restaurants, etc.);
- Types of collective producer structures (e.g., cooperatives, farmer networks, associations, etc.); and
- Kinds of partnerships and collaborations

The initial data-gathering occurred through visits to each case study location, beginning in August 2007 and concluding in June 2008. Each site visit lasted an average of two days and included semi-structured interviews with distribution entity staff, including general managers, sales staff, and farmer relations personnel. In most cases, interviews were also conducted with a select number of buyers and suppliers who work with the distribution entity. Periodic follow-up interviews were conducted either in person or by phone with distribution entity staff through February 2011 to chart their progress. In total, this study captures a rich, evolving narrative of over three years in the life of each case study.

Value Chain Distribution Models

The final selection of case studies is shown in table 1 (next page), which indicates the type of distribution model and stage of development for each case study. In this study, value chain distribution models are classified by the type of organiza-

Table 1: Value Chain Distribution Models and Stages of Development

Distribution Model	Stage of Development		
	Startup/Nascent	Developing/Emerging	Mature/Developed
Retail-Driven		La Montanita Co-op, NM	The Wedge/Coop Partners, MN
Nonprofit-Driven	MFA/Big River Farm, MN	CAFF/Growers Collaborative, CA	Red Tomato, MA ASD/Appalachian Harvest, VA
Producer-Driven			New North Florida Cooperative, FL
Consumer-Driven		Oklahoma Food Cooperative, OK	

tion driving the process, in terms of both establishing and growing the distribution enterprise.

In some cases an individual producer, or a group of producers, want to claim greater ownership over the supply chain by carrying out certain aggregation and distribution functions instead of contracting this out to a third party. This would be classified as a producer-driven distribution model.

Likewise, many nonprofit organizations are assisting small-scale producers by providing distribution and marketing services in an effort to create new wholesale market opportunities for producers. To the extent that the nonprofit is largely responsible for carrying out these supply chain functions, they would be classified as a nonprofit-driven model. In the retail-driven model section, we look at how two food cooperatives have taken on distribution functions to maintain competitive advantage and ensure that they can meet their customers' demand for locally grown food. The consumer-driven model refers to new generation buying clubs that utilize online networking and transaction platforms to link consumers with producers. In this model, consumers are actively engaged in the aggregation and distribution of farm products to buying club members.

Along with distribution model type, table 1 also shows the stage of development, which takes into consideration how long the distribution enterprise has been operating, the level of professionalization regarding staffing and division of labor, and the overall scope and scale of the operation.

To show the range of case studies analyzed in this paper, we have included brief summaries of each case study below. They are categorized by model type, with the retail-, consumer- and producer-driven distribution models all representing different types of cooperatives, as compared to the four nonprofit-driven models.

Retail-Driven Models

La Montanita Co-op is a retail-driven distribution model based in Albuquerque, New Mexico, that provides business development, distribution, and marketing services for producers located within a regional foodshed encompassing the Rio Grande River Valley (in about a 300 mile radius around Albuquerque). La Montanita's Regional Foodshed Initiative was established in 2007 to expand purchasing of sustainably grown regional products from small and mid-scale producers by the co-op's four stores, and to assist regional producers in accessing other wholesale market channels for their products. The co-op's distribution business has been operated and funded largely from co-op revenues. It currently stocks and sells more than 1,500 products purchased from nearly 900 growers and producers within the regional foodshed.

Coop Partners Warehouse, located in St. Paul, Minnesota, is a retail-driven distribution model started in 1999 by the Wedge Cooperative, which

has 14,000 member households. Using its own fleet of trucks as well as contract trucking companies, it primarily sells organic produce supplied by a network of 30 or so farmers in Minnesota and Wisconsin during the growing season and from West Coast sources the rest of the year. It distributes to 200 consumer cooperatives, health food stores, buying clubs, and restaurants in the Upper Midwest. Annual sales for Coop Partners are US$16.8 million, with about one quarter of its sales accounted for by the Wedge. This organization is unique in its focus on selling primarily to retail cooperatives and in its commitment to being a full-service organic produce distributor with a regional focus.

Nonprofit-Driven Models

Appalachian Sustainable Development's *Appalachian Harvest* is a nonprofit-driven distribution model located in Abingdon, Virginia, that has been selling organic produce to regional supermarket chains and specialty grocery chains in the Southeast and Mid-Atlantic regions for 10 years. This organization works with more than 50 farmers, ranging from market gardeners with less than an acre to commercial farmers with 200 or more acres, providing technical assistance, farmer mentoring, and aggregation services. Appalachian Harvest distinguishes itself from California organic produce with its local origin and short field-to-shelf time, promising "48 hours fresh."

Minnesota Food Association's *Big River Farms* is a nonprofit distribution model based near Stillwater, Minnesota, that provides production and marketing services to aspiring immigrant and refugee farmers. Big River Farms (formerly Big River Foods) was established in 2007 as a "training distribution company" that combines brokering functions and transportation logistics with on-farm production and postharvest handling training. In any given year, Big River Farms works with eight to 10 farm enterprises in its training program to broker and distribute certified organic fruits and vegetables to supermarkets, food co-ops, and restaurants.

Growers Collaborative is a limited liability corporation (LLC) established in 2005 to offer aggregation, distribution, market promotion, and education services to California family farms. As a nonprofit-driven distribution model, Growers Collaborative is wholly owned by the nonprofit organization California Alliance with Family Farms, whose mission is to promote small and medium-sized family farmers throughout California with sustainable education, public advocacy, and market development. Growers Collaborative works with a network of over 70 fruit and vegetable producers to increase their access to institutional markets in both Southern and Northern California. In 2009, Growers Collaborative transitioned from being a full-service distribution company to playing more of a matchmaker role by connecting farmers, aggregators, distributors, and institutional food service operators, and focusing its efforts on providing marketing and education support services to local supply chain actors through market promotion and education.

Red Tomato, founded in 1996, is a nonprofit distribution model based in Canton, Massachusetts. It arranges for the aggregation, transportation, and sale of a wide variety of produce supplied by 35–40 farmers to grocery stores and distributors, primarily in the Northeast. Relying on farmers and contract trucking firms to provide aggregation and transportation services, it never physically handles the product sold under its name. Its signature Eco Apple™ line of apples is grown using advanced Integrated Pest Management (IPM) methods subject to third-party verification, and accounts for more than half of Red Tomato's sales volume. During the growing season, each tote of Eco Apples contains fruit grown by one farm, which is named and described on every package.

Producer-Driven Models

New North Florida Cooperative is a producer-driven distribution model based in the Florida Panhandle that has been aggregating, processing, and selling produce in the Southeast since 1999. It sells primarily chopped fresh collard greens, sweet potatoes, and green beans mostly from small-scale minority farmers to 60 independent grocery stores

and more than 30 Southeastern school districts serving more than 200,000 students. The cooperative is one of the oldest farm-to-school programs in the country and has achieved considerable success by focusing on supplying a handful of food items that are culturally appropriate, easily accommodated into school menus, competitively priced, and require minimal preparation.

Consumer-Driven Models

The Oklahoma Food Cooperative is a consumer-driven distribution model based in Oklahoma City, Oklahoma, that has been running an Internet-based buying club since 2003. It is a producer- and consumer-owned cooperative in which 200 producer members sell more than 4,000 individual items, including meat, produce, milk, and value-added items to the 3,800 coop members. It uses an Internet ordering portal and 48 member-operated distribution routes that reach cities, towns, and hamlets across Oklahoma each month. Members always know which farmer produced their food, and even have the opportunity to meet their farmer on delivery day. Farmers bring their merchandise to a central drop-off location, where they are assembled into member orders and then routed by a crew of volunteers, who are compensated for their time with work credits redeemable for goods sold through the cooperative. All products sold through the cooperative must be made in Oklahoma.

While there are many differences in both structure and function between retail- and producer-driven models, and between nonprofit- and consumer-driven models, all the case studies selected for this study have several features in common: they seek to improve the economic welfare of small-scale farmers and ranchers within specific geographic areas, they combine traditional business strategies with social missions, and while they move beyond direct-to-consumer marketing activities, they continue to incorporate the basic principle of building more direct connections between producers and consumers.

The next section explains how these four themes cut across the eight case studies and provide valuable insights for value chain practitioners, namely:

1. The level of investment in infrastructure should match the organization's stage of development and marketing capacities.

2. Value-chain managers must ensure identity preservation from farm to market as a way to establish both marketing claims and a negotiating position with buyers.

3. Distribution entities utilizing informal producer networks are well suited to meet the constantly shifting demands of diversified, niche food markets.

4. Nonprofits and cooperatives are well positioned to play key roles in value chain development but should recognize their organizational competencies and play to their strengths.

The following analysis constitutes the summary findings of a much longer forthcoming report to be published by the United States Department of Agriculture. This larger report will include detailed analyses of each case study, as well as a general comparison and contrast of the different case studies similar to that presented herein. Detail on the individual case studies in this paper is necessarily limited; our aim is to present our understanding of some of the major issues confronting values-based food value chains as derived from our analysis of eight case studies. Our focus is on patterns and tendencies across case studies, including how institutional drivers influence how value chains operate, how they make decisions, and how successful they are at achieving their stated goals.

1. Infrastructure

Having an appropriate level of infrastructural investment, commensurate with organizational capacities and business needs, is critical to the financial sustainability of food value chains.

The level of infrastructural investment by the pri-

mary value chain manager changes both across models and within models over time. How much and when a particular distribution entity invests in infrastructure can have a critical impact on the success and even survival of the enterprise. Distribution entities need to think very carefully about how much capital investment they should make, particularly in terms of storage and transportation infrastructure. The appropriate level of investment is influenced by many factors pertaining to the organization and its relationship to its operating environment. The position of the distribution entity's manager within a given food supply chain influences the determination of what is an optimal level of investment, given the organization's asset base, internal capabilities, and opportunities for return on investment.

As a retail-driven distribution model, for example, La Montanita's Foodshed Initiative benefits tremendously from maintaining its own transportation and storage infrastructure, which allows it to better serve its stores with a diverse mix of products in a timely and cost-effective manner. Furthermore, it would be very difficult for La Montanita to carry out the Foodshed Initiative without having its own warehouse and trucks to store product, pick up product from farmers, and deliver product to its own stores as well as other customers. To provide all these services on a contract basis would be infinitely more complicated, as their routes include pickups from farmers, deliveries to the coop's four stores and other customers, and dropping off product at the warehouse for later distribution. In essence, the Foodshed Initiative would not be feasible if La Montanita, as the manager of the value chain, did not have direct control over its distribution infrastructure.

Another benefit for La Montanita investing in "wheels and mortar" is the significant increase in storefront sales since the start of the Foodshed Initiative. This can largely be attributed to the greater local food offerings in the stores made possible by La Montanita's new distribution network. Even though its distribution operation is still running at a loss, these increases in storefront sales more than compensate for the losses incurred, or to put it another way, coop investments in the distribution operation have produced excellent returns for the stores.

However, actually owning warehouse space or trucks is less critical than having control over dedicated trucks and warehouse space. La Montanita decided to lease both trucks and a warehouse to reduce upfront capital outlays. In the case of the trucks, leasing guarantees that a working vehicle will always be available, as the truck leasing company will provide a same-day replacement vehicle if a truck breaks down.

Likewise, Coop Partners Warehouse (CPW), essentially a much bigger version of La Montanita, benefits greatly from controlling its own transportation and storage infrastructure. Its 45,000 square foot (4,181 square meter) warehouse has enabled CPW to expand its business substantially — to its current level of US$16.8 million — while still leaving significantly more room for growth without having to move. What began as an effort to secure better produce for the Wedge from regional producers, giving it a competitive edge, has turned into a medium-sized regional organic produce distributor, with only 23% of its sales accounted for by the Wedge in 2010, down from 80% in 2003. Prior to leasing its own warehouse in 1999, CPW's predecessor organization relied on other distributors to store and transport product from local farmers to the Wedge. This arrangement did not provide enough flexibility, and so the Wedge signed a long-term lease and established CPW, which has now grown into a sizable regional organic produce distributor for the Upper Midwest.

Beyond just facilitating overall business expansion, having its own warehouse space has allowed CPW to operate multiple, complementary market channels. These include its primary wholesale distribution business to cooperatives, stores, restaurants, and buying clubs, and its drop-ship program, in which farmers and small food processors drop off product at the warehouse for CPW to shipment to their customers. CPW charges $20 per delivery to transport these orders while the producers invoice the customers. Additionally, CPW subleases freezer

space to two chicken farmers. In this last instance, the chicken farmers handle all the orders and transportation, and CPW only provides a storage function.

Complementing its warehouse space, owning or leasing a fleet of eight trucks allows CPW to efficiently serve its 200 customers spread throughout the Upper Midwest. The organization generates enough sales volume to pay for the fixed costs of maintaining this infrastructure. However, for certain far-flung customers that do not buy in large volumes and are not close to other CPW customers, it uses three contract trucking companies with broader service coverage. Rather than dedicating one of its own trucks to inefficiently ship a couple of pallets of product to stores in northern Minnesota or South Dakota, CPW calls up Edina Couriers, a medium-sized regional trucking firm serving small communities throughout the Upper Midwest, and arranges for the firm to take the order for a minimal fee, as it already has a truck going in that direction and is happy to accommodate the extra cargo. Careful consideration of when to use dedicated infrastructure versus contracting out is critical to running a food distribution business successfully; margins are tight and miscalculations on such issues as delivery routes can easily drive an organization into the red.

Unlike these two retail-driven models, Red Tomato, as a nonprofit-driven model, has evolved toward a very lean brokering organization with no trucks or warehouse space of its own. It reached this position after operating an infrastructure-heavy produce distribution business in the Northeast, replete with trucks and a warehouse, and learning after three years that it made much more sense to manage the supply chain rather than operate it. Given the abundant trucking and cold storage capacity available on its suppliers' farms and near its office outside Boston, the organization's management team ultimately decided that it did not make sense to invest directly in wheels and mortar. As an "honest" broker, developing profitable market channels for mid-sized growers through creative marketing and development of advanced IPM standards with third-party certification for apple growers, Red Tomato did not need to directly own or operate the infrastructure to perform its mission. It added value through its marketing and branding efforts, and did not have the operational scale to justify running the distribution part of the chain.

In contrast, Appalachian Harvest, another nonprofit model, has felt the need to maintain a fleet of tractor-trailers and a warehouse due to its remote location in southwest Virginia. Being far from metropolitan centers makes it expensive to arrange regular pickups by trucking companies to haul its produce to customers. Furthermore, its farmers are not equipped to aggregate and ship product on their own to the widely dispersed customer base, given the small size of their production and long distances to most of their market outlets.

These locational factors have led Appalachian Harvest to invest heavily in infrastructure to aggregate, grade, pack, and ship organic produce grown by former tobacco growers to regional grocery chains, aiming to meld environmental sustainability with economic development. However, it is not yet clear how financially sustainable its business model is. Appalachian Harvest benefited from tobacco transition money to start its operations but has yet to find a clear path to running a financially self-sustaining food distribution operation from its remote location, and thus still relies heavily on outside funding to maintain its existing operation. One of the major challenges it faces is the lack of backhaul — shipment sent on a returning vehicle — on many of its distribution routes. Significant progress has been made in the last year in addressing this problem by hauling conventional produce for produce brokers and wholesalers in Virginia on the return leg of deliveries to Richmond, as well as creating cross-docking arrangements with a North Carolina distributor to shorten its truck routes and hence the length of empty backhauls. However, it needs to do a great deal more to reduce its transportation costs in order to reduce the group's reliance on external funding to support trading operations.

In contradistinction to Red Tomato and Appalachian Harvest, Growers Collaborative represents a third path for nonprofit distributors. Community Alliance of Family Farmers (CAFF) established Growers Collaborative (GC) as a full service distributor for small farmers in Northern and Southern California, selling fruits and vegetables to schools, colleges, and hospitals. Growers Collaborative demonstrated the feasibility of marketing source-identified, family farm produce to large institutional buyers, but was unable to secure the high volume of orders necessary to maintain the costs of running an aggregation and distribution operation. CAFF has now removed itself from the aggregation, distribution, and sales components of the value chain, instead licensing small distributors to run independent "dba (doing business as) Growers Collaborative" food aggregation hubs in different regions of California. Each GC food aggregation hub markets its produce to mainline distributors such as SYSCO or ARAMARK for sale as Buy Fresh, Buy Local produce to institutions in their service areas. Under this nonprofit-driven model, CAFF provides support services to farmers and does soft marketing with buyers to build demand for Growers Collaborative product (e.g., table tents for use at hospital cafeterias to promote the benefits of local food), but no longer moves or sells produce. This transition is still underway as new GC hubs are being formed. Other nonprofit distributors located in areas with dense populations and abundant food distribution resources would be well served to observe and learn from this shift from operating the value chain to facilitating it.

Combining some elements from the retail- and nonprofit-driven models, the consumer-driven model[1] exemplified by the Oklahoma Food Cooperative (OFC) has shifted from having no infrastructure (renting a building one day a month and trailers for delivery day) to buying trailers and establishing a long-term lease on a 12,000 square foot (1,115 square meter) warehouse. From its start, OFC established a very conservative business model in which it invested in infrastructure only as it became affordable, that is, any infrastructure was financed primarily from operating funds. Rather than consistently writing and getting large grants to subsidize continuing operations, OFC has lived within its means from the start, only seeking outside funding as it grew substantially and could benefit from owning more infrastructure. Shifting to a permanent warehouse and purchased trailers has been very helpful in reducing logistical hassles and improving the flow of operations, thus facilitating more growth. However, the move was not absolutely necessary; if the funds were not available the coop still would have carried on successfully, just at a lower level of activity.

Whether it makes sense for value chain managers to invest heavily in infrastructure depends on the scale of their operations, proximity to customers and availability of existing distribution assets, their overall financial capacity, and their ability to capture value added throughout the supply chain. The four nonprofit distribution models we examined have tended to overinvest in infrastructure. They often identified distribution gaps and sought to fill them through infrastructure investments financed by donations and grants, whether or not business volume justified such new investments. On the other hand, the four cooperative distribution models we examined were much more conservative, as they only invested in infrastructure in tandem with business growth and needs.

2. Identity Preservation

All value chain managers must ensure identity preservation from farm to market as a way to establish marketing claims and establish a negotiating position with buyers.

Food value chains require some type of product differentiation, such as showcasing of product origin, unique varietals, and/or production practices such as organic or IPM. To ensure the integrity of product differentiation, food value chains must have a robust identity preservation system in place. Identity preservation refers to the segregation of a

[1] It is referred to as consumer-driven because it was started by consumers, with producers coming to play a greater role in the cooperatives management through the years. See http://www.communityfoodenterprise.org/case-studies/u.s.-based/oklahoma-food-cooperative/casestudy_history

particular lot of a particular crop or processed food item from an individual farm or group of farms to the consumer. Preserving the identity of farm products through the distribution process has been critical to driving buyer and consumer demand and allowing the more successful food value chains to flourish. The different food value chain models examined in this report use varying degrees of identity preservation to differentiate their products, which are largely dependent on their level of interaction with farmers, retailers, and individual consumers.

In the consumer-driven model we studied, the Oklahoma Food Cooperative, identity preservation is maintained at a very high level, as consumers are able to buy products with the individual farmer's name on the label, read about the farm and the farmer, and even the farm animals, on the farmer's website prior to placing their order, and perhaps even meet the farmer at delivery day. The high degree of identity preservation attached to individual farmers is a very effective tool for binding farmers and consumers together economically and socially as both groups work together to operate the coop and advance its mission of a more just, environmentally sustainable, and financially viable regional food system.

Red Tomato also maintains a high level of identity preservation; its Eco Apple brand of apples is packaged in personalized bags, with each bag containing apples from the farm that is prominently mentioned and described on the package. Other product packaging used by Red Tomato also identifies the supplying farmer — through a sticker, stamp, or twist tie — though the packaging design is less elaborate because the lower volumes sold make it cost prohibitive to create customized packages for these products. In the case of Eco Apple, the strong focus on the farm complements the unique product differentiation embodied in the brand. Red Tomato wanted to promote regional marketing of sustainably grown produce, but growing conditions in the Northeast militate against organic fruit production. Creating and promoting the Eco Apple brand allowed Red Tomato to differentiate itself in a competitive produce marketplace and create a brand based on regional identity and IPM standards.

With the retail-driven distribution models, lower levels of identity preservation are sufficient because there is a high level of preexisting trust manifest in the value chain. La Montanita uses in-store signage and product labeling to designate regionally grown products supplied by the Foodshed Initiative, and uses its newsletter and other media to profile the farms and producers in its Foodshed network. La Montanita also carries out periodic farm visits to ensure that Foodshed Initiative products are produced using sustainable farming practices. There is little need for a third party to verify locally grown product attributes since the coop as an institution carries forward a high level of legitimacy to its member-consumers. When consumers see a particular Foodshed Initiative–labeled product, they can be assured that the stated values of the Foodshed Initiative — such as agricultural sustainability, promoting healthful food, supporting local economies, and enhancing small farm viability — are being upheld.

Coop Partners Warehouse, on the other hand, does not attach its own brand to products it distributes. Some of its local products have in-store displays with the farmer's name, and it sells a considerable amount of produce with a brand label corresponding to the grower/shipper that sold it to Coop Partners, e.g., Cal Organics or Taylor Farms. With CPW, identity preservation is largely a function of its being an organic produce distributor. The standards governing organic produce require a very high degree of segregation of organic produce from nonorganic produce throughout the supply chain. Trust in the USDA organic label exists apart from CPW, and thus mitigates the need for a distinct CPW brand.

Similarly, a producer-driven distribution model may not need high levels of identity preservation because the company is more closely associated with the actual producers. The producer-driven model we examined, New North Florida Coopera-

tive (NNFC), makes no explicit reference to the specific farmers in its cooperative. Rather, it educates buyers, such as school food service directors, about product quality, how it represents a healthy part of the school menu, and how small farmers supply the product. The emphasis on small farmers invokes concern for a socially marginalized group and thus provides justification for buying NNFC's produce. This message is conveyed in several ways: through slogans on NNFC apparel, the product packages containing the phrase "small farmer cooperative," and through verbal exchanges between food service directors and NNFC representatives about the nature of the enterprise and those involved in it. One food service director in Dothan, Alabama, pointed to NNFC's support for small farmers as the primary reason she decided to purchase its collard greens. All things being equal, food service directors may be more sympathetic to a cooperative of small farmers than a produce company that has a more arms-length relationship with its supplying farmers.

Identity preservation is ultimately a bond between the producer and the consumer. The distribution entities in our study are using packaging, communication strategies, and farm inspections to establish this bond. The level of trust and connection between value chain partners (from farmer to consumer) influences the need for verification of production practices and specification of product origin (e.g., locale/farm/farmer). When there is a great deal of preexisting trust between consumers and the selling entity, such as in the case of La Montanita and Coop Partners Warehouse, there is less of a need to either specify which farmer produced the item in question or create a unique third-party certification scheme. However, when there is less trust or social connection between consumers and selling entities, as is the case with retailers carrying Red Tomato Eco Apple products, creating a unique third-party certification system can help establish credible marketing claims and better position products in a competitive selling environment.

3. Farmer Coordination

Value chains involve a high level of coordination between producers and distributors. Our findings suggest distribution entities utilizing informal producer networks are well suited to meet the constantly shifting demands of diversified, niche food markets.

At the core of any successful distribution model serving smaller-scale producers is the ability to effectively coordinate production and aggregate products in a way that can satisfy a buyer's volume requirements, quality standards, and need for consistent and timely deliveries. Historically, agricultural cooperatives as formalized membership structures have played a major role in coordinating the production, aggregation, and marketing of their members' products (Gray, 2009). While many agricultural cooperatives continue to function successfully in this capacity, new models of producer coordination are emerging that offer alternatives to the more formalized and restrictive structure of cooperatives (Hogeland, 2006). Several of the distribution models in our study have shown how establishing informal farmer networks can be an effective strategy for meeting the rapidly changing demands of the local food market. Unlike many cooperatives that require a major share, if not all, of a member's products to be sold through the cooperative, farmer networks have the benefit of allowing greater flexibility in deciding what to sell into the network. Farmers benefit from a more diverse market channel mix by balancing risk and not "putting all their eggs in one basket." In turn, the distribution entities are not obligated to take all of their members' production.

In the case of Red Tomato, suppliers are encouraged to not sell more than 40% of their production through Red Tomato as a hedge against a major downturn in Red Tomato's business. Suppliers benefit from selling directly through Red Tomato while retaining other accounts, or indirectly benefitting from their Red Tomato connection by selling Eco Apple branded apples on their own to grocery store buyers.

Alternatively, with Appalachian Harvest a conscious decision was made by the founders to not

form a cooperative because of a high level of distrust in the area of cooperatives, due in part to a libertarian streak in the region's farm culture, but also due to the well-publicized failure of a produce cooperative several years prior to Appalachian Harvest's start in a nearby town. It made more sense to create an informal network that in many ways functions as a cooperative, with its members closely coordinating production while maintaining the option to sell to other wholesale channels or direct marketing outlets such as farmers' markets.

Furthermore, the network model is highly suitable for situations in which most of the growers are too small to adequately serve wholesale markets on their own, and the buyer/distributor plays a major role in providing production training and business development services to its new suppliers, as is the case with Appalachian Harvest. In a formal cooperative, such an arrangement might prove to be more difficult, as new entrants to farming are unlikely to receive the same level of production and marketing assistance as they would from a nonprofit entity whose express mission is to develop new farmers. An agricultural producer cooperative is a business model that is set up to serve its farmer members, and not necessarily to create new farmers. Additionally, the very ability to support such outreach and educational activities is more challenging given that cooperatives generally have less opportunity than nonprofits to access private grants and donations.

Our research also shows that informal farmer networks seem to be particularly appropriate for marketing a range of diverse products, like fruits and vegetables, and that the more formal cooperative structures may be more appropriate when dealing with single uniform products (Hogeland, 2006). When a diverse range of commodities is marketed through a cooperative, each with different costs of production, processing requirements, and prices, it is difficult to fairly allocate costs across commodities, and hence across producers (Sexton, 1986).

4. Organizational Forms: Creating Opportunities, Presenting Challenges

Our study of four nonprofit and four cooperative distribution models indicates there is a significant relationship between legal structure and value chain development. Recognizing how particular organizational forms tend to foster certain competencies can inform the development of mutually beneficial strategic partnerships with complementary organizations. Each organizational form and structure has unique strengths and weaknesses.

Organizational form has a tremendous impact on how food value chains operate, including funding mechanisms, investment in infrastructure, and propensity to run financially self-sufficient operations. Cooperatives are organized as business entities with the purpose of serving their members' needs (Gray, 2009), whether that be more orderly marketing of their farmer-members' produce or improving their consumer-members' access to healthy food. The members own the cooperative, and any profits earned by the cooperative are either reinvested in coop operations or returned as dividends to the members.

In contrast, nonprofits are established to pursue a public purpose, are accountable to independent boards of directors, and generally receive significant amounts of funds on an ongoing basis from private foundations, government grants, and individual donors. Their tax status makes them eligible for a much wider variety of grants and donations than cooperatives. There are no "owners" or shareholders in a nonprofit to hold employees and directors of nonprofits accountable in the same way that members can hold accountable the managers and directors of cooperatives (Brown & Slivinski, 2006).

The ability of nonprofits to raise significant outside funds in turn affects how they approach risk. Compared to the retail-, producer-, or consumer-driven cooperative distribution models, the nonprofits in this study relied much more heavily on outside grants and donations to fund start-up and ongoing operations, thus reducing how much risk they took on as a business entity. Nonprofits do

not have to pay back grants nor distribute dividends, while cooperatives are much more likely to rely on member equity and bank loans, increasing their exposure to risk. Given this dynamic, the nonprofits are able to absorb more of the downside risk faced by farmers and/or retailers than the cooperatives we examined. This can be highly advantageous, allowing nonprofits to experiment with new models without the restrictions of traditional short-term profit and loss business parameters.

However, this propensity of nonprofits to experiment in ways that cooperatives or investor-owned firms would be unlikely to do can lead them to run their distribution operations at a loss so farmers and buyers can get "good" prices. An essential role for a food value chain is to redistribute economic value among supply chain actors (Bloom & Hinrichs, 2011). While some nonprofit-driven value chains do this, several described in this study use external subsidies to absorb distribution costs, allowing them to offer higher prices to farmers without passing on these costs to retailers. Ultimately, the grantors of such operations may end up creating market distortions, such that retailers develop unrealistic expectations about price, which puts other growers who are not part of the subsidized food value chain at a disadvantage.

The long-term viability and replicability of these nonprofit distribution models is in doubt when substantial ongoing subsidies are required to maintain trading operations. These high subsidy levels are justified in part by the grower training, standards development, and public education activities these organizations engage in, going beyond the scope of what traditional distributors would do. This caveat aside, the nonprofits we studied seemed to be on more precarious ground because of their dependence on grants and donations to run trading operations. The nonprofits studied, with the exception of Big River Foods, have had to obtain outside grants and donations on an ongoing basis to run their trading operations, while the cooperatives uniformly have not. In contrast, three of the four cooperatives studied have received minimal outside funding, choosing to take a more gradualist approach to expanding operational expenses in concert with trading income. Even the New North Florida Cooperative — the one cooperative studied that has received fairly significant grant funding over the last 15 years, totaling approximately US$500,000 — has received 90% of its income over the last ten years from trading activity.

The basic structure of a cooperative facilitates a more bottom-line orientation, which is more likely to align social mission with business objectives from the start. With Red Tomato, Appalachian Harvest, and Growers Collaborative, a social mission was developed, funds were raised to advance the mission, and a trading operation was developed to manifest the mission. In order to serve their mission, both Red Tomato and Growers Collaborative created infrastructure-laden trading operations that were impossible to sustain, ultimately leading to complete reversals in how they operate; Appalachian Harvest is still working on reconfiguring its operations to be more financially viable. In contrast, La Montanita and Coop Partners Warehouse developed their distribution enterprises to simultaneously facilitate regional food system development *and* to further the business success of their retail arms. The mission and the business goals had to be in balance from the start, and the leadership was acutely aware of this fact. Both retail-driven models relied on internal, member capital to develop their distribution operations. With the Oklahoma Food Cooperative, the mission of helping farmers secure better markets for their products and helping consumers gain access to regionally produced, sustainably grown food was manifested in a very frugal, self-sufficient trading operation from the start. And while the New North Florida Cooperative did use its social capital to mobilize outside financial support in its early days, it only did so to get its trading operation up and running. Since then it has been largely self-sufficient.

Nonprofits interested in developing local or regional food distribution entities can learn from the experience of cooperative distributors and take more of an asset-based approach (Stoian & Donovan, 2010). If nonprofits want to foster the

creation of new food distributors that promote local purchasing and sustainably grown foods, it is critical they inventory the existing assets of potential value chain partners that could be used for distribution purposes. For example, if farmers have trucking capacity, storage space, or family labor that could be used for product grading, aggregation, and distribution, this should be considered first before seeking funding to purchase or lease trucks, lease warehouse space, or hire new employees. Not only does such an approach reduce upfront capital requirements, it also may lead to more economic benefits accruing to those ostensibly intended to benefit from the enterprise in the first place.

In addition to taking an assets-based approach, nonprofits would be well served to appreciate their unique capacity to play key roles in the development of value chain enterprises, such as:

- **Matchmaker:** Connect key stakeholders through short-term or one-off engagements. As public interest brokers, nonprofits can bring unlikely partners together to create value chain collaborations.

- **Facilitator:** Be actively involved in building longer-term relationships among food value chain actors by helping to establish effective communication channels, ensuring values are articulated and shared, and fostering a trusting environment.

- **Third-party certification:** Establish a program whereby producers receive independent verification of their adherence to a certain set of standards. Such programs help to differentiate products and build demand in the marketplace.

- **Educator:** Provide marketing and educational support, such as branding that reinforces the values and "tells the story." Education can raise consumer awareness and ultimately drive sales for food value chain products.

- **Catalyst/Innovator:** Test out innovative business models. Through grants and donations, nonprofits can take financial risks that would be more challenging for a for-profit business.

- **Resource prospector:** Identify and pursue resources — such as grants, loans, and service providers — to support value chain collaborators as they develop their enterprise(s).

As nonprofits and cooperatives engage in value chain activities, they should consider what roles are most appropriate given their organizational capacities and recognize how their limitations can be mitigated by building strategic partnerships with other value chain actors. Cooperatives may benefit from partnering with nonprofits for training, education, and resource prospecting purposes, while nonprofits may find it worthwhile to partner with cooperatives or investment firms to provide infrastructure support or supply chain management services. Simply put, find out what you are good at, find out what you are *not* so good at, and then get the right people to help you.

Concluding Remarks

While our findings do not necessarily apply to the full range of extant cooperative and nonprofit food value chains given the case study approach employed, they do provide valuable insights for organizations currently engaged with or intending to be involved in food value chain practice. All food value chains must contend with the issues raised in this paper, whether their particular concern might be the appropriate level of infrastructural investment, the most suitable structure to coordinate farmer production, techniques for identity preservation, or how best to manage supply chain logistics — all in a way that will bring the greatest return to producers, meet the rapidly changing demands of consumers, and build financially sustainable organizations. The full distribution report upon which this paper is based will provide detailed descriptions and more in-depth analysis of each case study, with the target audience

being practitioners (e.g., nonprofit organizations, producer groups, agricultural extension, and for-profit enterprises) that are involved in value chain development for small to mid-scale producers. While no study of this nature can provide the specific answers on how exactly to run a food value chain, an analysis of what seems to be working and what does not can shorten the learning curve for new value chain entrants and help existing food value chains grow and prosper.

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