

What's Going into the Box? An Inquiry into the Social and Ecological Embeddedness of Large-scale EU and US Box Schemes

MARCIA OSTROM, CHRIS KJELDSEN, SUSANNE KUMMER, REBECKA MILESTAD AND MARKUS SCHERMER

Abstract. Food distribution systems referred to as box schemes have gained a foothold in organic markets across Europe and North America. This model has the potential to scale up direct-marketing strategies by aggregating products from multiple producers and efficiently assembling and delivering them on a regular basis to large networks of consumers. Box scheme organizers generally seek to attract regular customers based on the distinctive attributes and values associated with their products and their unique business model that attempts to build long-term relationships between consumers and farmers. This article explores the organizational dynamics of five large, multi-farm box schemes in relation to their stated values and organizational strategies using cases from Sweden, Denmark, Austria, and the United States.

Different aspects of ecological and social embeddedness are considered and analysed for the five cases based on their stated values and their organizational strategies, including to what degree non-economic values are identified, communicated, and applied throughout the supply chain. The value of geographical proximity is examined with respect to the tension created by consumer demand for variety throughout the seasons and the spatial organization of sourcing and distribution that such a system entails. Additionally, the organizational challenges encountered by box schemes during periods of rapid growth are compared and contrasted with respect to the different organizational strategies employed across the five cases. This article seeks to contribute to the research literature by analysing box schemes as an institutional innovation that can potentially bridge the

Marcia Ostrom is Associate Professor at the School of the Environment and the Center for Sustaining Agriculture and Natural Resources, Washington State University, 1100 Western Ave. N., Wenatchee, WA 98801, USA; email: <mrostrom@wsu.edu>. Chris Kjeldsen is Senior Researcher at the Department of Agroecology, Aarhus University, Tjele, Denmark. Susanne Kummer is at the Research Institute of Organic Agriculture (FiBL), Vienna, Austria. Rebecka Milestad is Researcher at the Department of Sustainable Development, Environmental Sciences and Engineering, KTH Royal Institute of Technology, Stockholm, Sweden. Markus Schermer is Professor of Rural Sociology at the Department of Sociology, University of Innsbruck, Innsbruck, Austria. The authors acknowledge the financial support for this project provided by national funding bodies, being partners of the EU FP7 ERA-net project, CORE Organic II for the case studies on Achleitner and Ekoladan. The Full Circle case study was funded by the US National Institute of Food and Agriculture AFRI #2010-85211-2057.

interests shared by producers and consumers in harnessing market relationships to accomplish larger social and environmental goals.

Introduction

Collectively referred to as an emergent 'agriculture of the middle', new types of mid-scale marketing channels that lie somewhere between commodity and direct markets have been identified as holding promise for improving the sustainability of small and medium-sized producers (Stevenson et al., 2011; Lev et al., 2015). Often the producers who participate in these marketing organizations are too large or otherwise unsuited for direct marketing yet too small to compete successfully in global commodity markets. When they are associated with particular sets of values related to the food or the business relationships along the supply chain, these mid-level food supply chains are referred to as 'values-based food supply chains' (VBFCs). VBFCs can potentially offer advantages to farmers in the form of market premiums, larger market shares, or more stable and reliable supply chain relationships, as well as provide opportunities to aggregate products with other like-minded farmers to supply larger markets. Such initiatives offer the opportunity to expand the amount of food sourced outside of mainstream markets through engaging more producers, processors, distributors, and consumers. At present, however, the specific organizational configurations of these marketing entities and their associated environmental and social dimensions are poorly understood.

Over the past several decades, a form of distribution and marketing known as a 'box scheme' has gained a foothold in fresh produce markets across Europe and North America. These farm-to-table delivery programmes are a variation of the community supported agriculture (CSA) concept. In contrast to CSA, however, rather than making an upfront commitment to support a particular farm financially and/or volunteer throughout a growing season in exchange for a weekly share of the harvest, in box schemes consumers can custom order deliveries from a farm as desired. In a US context, such an arrangement has sometimes been termed 'subscription agriculture', while in Europe it has been called a box scheme. Like CSA, a box scheme can be organized utilizing products sourced from multiple farms in a cooperative fashion or with one farm or organization serving as the primary organizer or distributor. Over the past decade, a strategy of sourcing and aggregating products from multiple farms located in a variety of growing regions with minimal advance commitment by consumers has fueled the growth of a handful of very large box schemes. Like smaller box schemes and CSA farms, the products supplied through these emerging market structures are typically differentiated by distinctive product qualities or attributes linked to the values, identities and practices of the producers and/or their distribution and marketing entities.

While there is a growing body of critical literature on the significance of CSA for agri-food movements in a US and European context (Cone and Kakaliouras, 1995; Fieldhouse, 1996; Ostrom, 1997, 2007; DeLind, 1999; Lamine, 2005; Hayden and Buck, 2012), few studies (e.g. Milestad et al., 2017) have focused specifically on box schemes other than works that mention their increasing prevalence in passing (Venn et al., 2006; Feagan, 2007; Goodman and Goodman, 2009; Tregear, 2011). A few studies have explored the distinctive aspects of e-business in the context of food, and several have included box schemes as a particular form of e-business (Purdue et al., 1997; Sparkes and Thomas, 2001; Baourakis et al., 2002; Mille, 2003; Papathanassiou

et al., 2003; Adelaar et al., 2004; Venn et al., 2006; Cheung et al., 2008; Torjusen et al., 2008; Chiffoleau, 2009; Tregear, 2011; Smaje, 2014). The online positioning of box schemes and their competitiveness in e-commerce arenas is generally accepted as a necessary condition of growth; however, this aspect has not been investigated from social or environmental perspectives.

This article examines the organizational dynamics and the associated social and environmental dimensions of five large-scale box schemes as VBFCs, using cases from Sweden, Denmark, Austria, and the United States. Different aspects of ecological and social embeddedness are considered and analysed for the five cases in relation to the stated values of the organizations and their capacity to communicate and apply these values throughout their supply chains. Additionally, the challenges and successes encountered by different box schemes as they scale up from direct-marketing relationships are documented and compared. The values of geographical proximity and personalized relationships, in particular, are examined with respect to the tension created by consumer demand for variety and consistent supply throughout the year and the extended spatial organization of sourcing and distribution that such a system entails.

We seek to contribute to the research literature on the potential of large-scale box schemes to coalesce producers and consumers around shared social and environmental values. Specific research questions to be explored include: 1. What are the environmental and social goals or claims of the box schemes in relation to the attributes of the food and/or their supply chain relationships? 2. What kinds of processes are employed to communicate and implement social and environmental values throughout the supply chain? 3. Do large box schemes offer a new market innovation for connecting consumers with producers and distributors who share their values and goals? 4. Are critical barriers encountered during the growth phase of box schemes that can negatively impact social and environmental goals?

Re-embedding Food Supply Chain Relationships

Embeddedness theory offers a useful analytical framework for exploring how box schemes may be shaped by the non-economic values of their organizers and participants even while functioning as sophisticated entrepreneurial enterprises within a highly competitive market economy. Originating from Karl Polanyi's (1944) broad critique of the construct of a 'self-regulating market' and the underlying premise that land and labour can be bought and sold as commodities, the concept of 'embeddedness' establishes market exchanges as inextricably enmeshed in social and environmental processes. Pointing out how 'labor and land are no other than the human beings themselves of which every society consists and the natural surroundings in which it exists' (Polanyi, 1944, p. 41), he warned against allowing 'the market mechanism to be the sole director of the fate of human beings and their natural environment' as it would 'result in the demolition of society' (1944, p. 42). His book, *The Great Transformation*, chronicles the historical development of capitalism and the rise of countermovements designed to protect people and land from the destructiveness of unbridled markets.

Polanyi scholar Block (1990, p. 51) has conceived of a continuum of 'marketness' for categorizing and contrasting 'different types of arrangements for organizing economic transactions' where at the highest extreme of marketness, price considerations dominate but, at lower levels, economic behaviours are embedded in a 'web of social relations' that compete with price for influence. Following from Polanyi and Block, an embeddedness perspective can be utilized to investigate the extent to which the institutional or social arrangements that make up a specific food supply chain can serve to moderate the role of market pricing mechanisms and help reshape market exchanges to better meet the practical needs of human life and natural systems. Such an approach encourages scrutiny of the ways in which supply chains may be influenced by the non-economic values of food system actors, such as community, place, history, culture, social justice, or nature (Hinrichs, 2000; Jessop, 2001; Ostrom, 2007; Chiffoleau, 2009; Lyson, 2012; Krzywoszynska, 2015; Laursen and Noe, 2017), yet still survive as resilient business entities. Accordingly, Hinrichs (2000) and Jaffee (2007) have utilized Block's continuum to assess the marketness of alternative food initiatives such as fair-trade coffee, CSA, and farmers markets, and concluded that economic instrumentalism can be intertwined with other civic, environmental, ethical, and social values in these marketing approaches. Recognizing the complex interplay between pricing mechanisms and non-market value systems, even in settings considered to have low marketness, avoids the creation of a false dualism between 'alternative' and 'conventional' food chains as aptly critiqued by Holloway et al. (2007).

For the specific case of box schemes, we will explore their social embeddedness by asking whether these new institutional forms offer opportunities for consumers, farmers, and other supply chain partners to act on their social values and whether these arrangements respond to the needs of specific sets of farmers, consumers, or communities. Accordingly, we investigate the stated social values of the organizations, the communication processes along the supply chain, and the character of the relationships and social processes formed, including the social ties between farmers (Chiffoleau, 2009) and between farmers and consumers (Ostrom, 2006; Holloway et al., 2007). Other than the work of Renting et al. (2003) and others on short food supply chains (SFSCs), the bulk of the research on alternative consumer–producer relationships (DeLind, 1999, 2011; Hinrichs, 2000; Sage, 2003; Winter, 2003; Lamine, 2005; Ostrom, 2007) has focused on direct market interactions, rather than intermediated relationships such as in box schemes.

Another aspect of social embeddedness we consider here is the strength of the non-market ties the box scheme has maintained within a specific community or civic network, a hallmark of the original CSA concept (Day and Murdoch, 1993; Putnam, 1993, 2000; Cone and Kakaliouras, 1995; DeLind, 1999, 2011; Liepins, 2000; Bauman, 2001; Brint, 2001; Ostrom, 2007). Tom Lyson's (2012, p. 73) construct of civic agriculture draws on Polanyi to juxtapose agricultural development that is embedded within the fabric of 'civic communities' against 'free-market, neoclassically based, commodity agriculture' that is globally organized. Because all but one of the cases under investigation evolved from a community-based, hyperlocal box scheme or CSA project, examining the ways that civic engagement with particular communities has been maintained, adapted, or reframed offers an important window on embeddedness during growth processes.

Exploring box schemes from the standpoint of ecological embeddedness facilitates consideration of the extent to which environmental goals are clearly identified, aligned, and communicated throughout the supply chain (Morris and Kirwan, 2011a, 2011b). Previous work on the environmental dimensions of alternative food chains, while insufficient, suggests several promising lines of inquiry. Barham (2003) has utilized examples from eco-labelling movements to show how labels can re-embed products in nature through revealing explicit connections with a producer and a production system. She further argues that Polanyi's view of market exchanges as embedded within natural systems invites conceiving of connections to nature that move the conversation beyond the 'market/money nexus' (Barham, 2003, p. 351). Ilbery et al. (2005, p. 118) looked at the ways different labeling schemes employ the 'intrinsic environmental qualities of places and sustainable environmental management practices' to construct difference. A recent study by Krzywoszynska (2015) also focused on how alternative food networks appreciate and elevate ecologically embedded qualities using the example of nature wines. Most recently, Admiraal et al. (2017) found that formulaic approaches to valorizing biodiversity or nature in economic terms based on functional models of ecosystem services were less likely to motivate conservation behaviours than approaches that cultivate personalized attachments to place or an appreciation of the intrinsic values of nature.

A common theme of this literature is a focus on how ecological qualities are selected, distinguished and sustained throughout the food chain; however, the most significant emphasis is generally placed on the production system itself. Another important emerging body of literature examines governance mechanisms and methods for fulfilling or guaranteeing environmental quality standards in multi-stakeholder alternative food supply chains (Bouagnimbeck, 2014; IFOAM, 2014; Loconto et al., 2017). Again, the emphasis is generally placed on ensuring and communicating sustainable production practices rather than the performance of the entire supply chain or its relationship to place. Our approach will fill a gap by considering not only whether environmental values related to production systems and place are emphasized by multi-farm box schemes, but also whether these values are aligned and implemented throughout the supply chain. Additionally, we ask whether box schemes offer an institutional innovation that can build knowledge and incentivize environmental commitments and practices along an entire supply chain. To examine these questions we compare and contrast the cases of five box schemes.

Overview of Case Studies

Five large-scale box schemes with 2,000 or more weekly deliveries were selected from a variety of geographic locations and origins for in-depth exploration of the research questions outlined above through comparative case studies. Each case has a distinctive organizational configuration, history and growth trajectory that can help to illuminate the challenges and opportunities faced by mid-scale organic value chains undergoing growth processes and the extent to which these organizations have evolved in keeping with their value statements. Data for the case studies was collected during a three-year period (2012-2015) using semi-structured interviews with organizers and participants from each box scheme, participant observation during site visits, and collection and examination of content from printed and internet documents and websites. In three cases, interviews or surveys were carried out with farmer suppliers. A strength of our methods was that each case study was led by a researcher (and co-author) from the study region of interest; however, a weakness was that not all research protocols were identical or funded by the same grant project. Table 1 provides an introduction and overview of the different cases and their organizational characteristics.

	Achleitner	Adamah	Årstiderne	Ekolådan	Full Circle
Weekly shares	6,800–8,000	5,700–6,000	35000	2,000	15000
Date estab- lished	1990 (box scheme in 1998)	2001	1997	1968 (box scheme in 2003)	1996
Business organization	Originally a small vegetable farm. Private family-owned and operated business: own vegetable production and a distribu- tion company. Box delivery, on-farm retail, restaurants, wholesale, sales to other box schemes.	Originally a vegetable farm. Now two private businesses: own vegetable farm and a sales company. Box deliv- ery, on-farm retail, farmers' markets, sales to other box schemes.	Originally a local box scheme; reorganized and scaled up to national level in 1999. Own vegetable production and box de- livery. Private company with board and external inves- tors.	One of three parts of a biodynamic not-for-profit foundation. Box schemes and wholesale distribution of fruits and vegetables. All products sourced from other farms.	Originally a small CSA farm. Reorgan- ized in 2009 as two separate businesses: own vegetable farm and de- livery service. Box delivery and wholesale marketing. Pri- vate company with board and external investors.
Location	Eferding/Up- per Austria, Austria	Glinzendorf (near Vienna), Austria	Copenhagen, Denmark	Stockholm, Sweden	Seattle, United States

Table 1. Overview of box scheme case studies.

Achleitner

In 1986, Günter and Ilse Achleitner took over a 20 hectare vegetable farm from Günter's parents. In 1990, with encouragement from Günter's uncle, an organic pioneer in Austria, they fully converted their farm to organic production. Their farming philosophy centred on the creation of healthy soils through the application of organic manure and making compost. They started out marketing their products directly, delivering to restaurants and canteens, and selling via a small farm shop. By 1990, they had developed collaborations with other organic producers and processors from the region such as an organic bakery (Mauracher), an organic dairy (Lembach), and a butcher (Höglinger), all still important business partners. In 1996, cooperative marketing and distribution was expanded to incorporate additional fresh fruit and vegetable farmers from the region. In 1997, Achleitner founded a limited liability trading company and began to import organic products from Italy and, later, Greece and even the Dominican Republic. The next year they started delivering boxes to households. In 2002, after suffering from severe flooding, Achleitner separated the aggregation, storage, packing, and distribution premises from their farm buildings. They constructed a sales and trading house 5 km away at a more suitable site for transportation and accessibility. Their new buildings were constructed according to green building standards and employ passive solar energy.

Until 2009 the wholesale business branch delivered exclusively to specialized organic and natural food stores in Austria and the neighbouring Bavarian area. In 2010 they entered into a cooperative arrangement with BioGast, a large organic wholesaler for organic food stores. The agreement is for Biohof Achleitner to provide all vegetables and fruits, while BioGast sources additional products such as dry goods and cosmetics. Hence, this was an important extension of the existing network. However, in terms of public perception and appreciation, the box system is the most important business line for Biohof Achleitner. They deliver between 7,000 and 8,000 boxes per week using their own vans within the region of upper Austria and through an outsourced logistics company to adjacent areas of Styria, Salzburg, and lower Austria.

Hence, apart from being an organic producer, Biohof Achleitner today has developed into primarily a marketing and wholesale company for fruits and vegetables focused on professional distribution and logistics. At the premises of the marketing, sales and distribution site they have established a restaurant and a small retail shop, where they sell not only their own products, but also those of their partners (including those of wholesale partner BioGast). They have also started to supply the major supermarket chains in Austria with selected products and developed a network of box schemes that cooperate with each other. They supply other organic box schemes in eastern Austria and in Bavaria with products and engage in reciprocal trading with Biohof Adamah, the other major box scheme in Austria. While they have separate areas of distribution, these two major box schemes of Austria regularly exchange products with each other and collaborate on research projects with the Research Institute of Organic Agriculture (FiBL) and other research institutes. (For a full account of the Achleitner case, see Furtschegger and Schermer, 2015.)

Adamah

The Adamah Biohof organic farm and family business in Austria delivers about 5,700 vegetable boxes per week to households in and around Vienna. The box scheme started in 2001 with 50 boxes per week and has grown by 10–30% per year. Adamah employs around 80–120 people, depending on the season. The boxes are filled not only with produce from their own farm (about one-third of the box content comes from Adamah Biohof itself) but also with products from approximately 100 additional organic farms in eastern Austria and with imported products from organic distributors. For consumers who want to buy local products only, Adamah offers a 'regional box' that does not contain imported products. Additionally, the customers' invoices list the provenance of every product in the box, either by the name and location of the farmer or by the country of origin for imported products. Adamah does not explicitly define local or regional (e.g. by distance in kilometres, or by defining a certain geographical region), but most of the farms supplying the box scheme are situated in eastern Austria or within a 300 kilometer radius. One important strategy employed by Adamah is to sell 'organic food with a biography', i.e. making transparent where the food comes from and how it was produced. Leaflets included in every box contain information about the purchased products, and the 'story' behind them.

Adamah interacts with the local community by offering invitations to farm tours, selling at farmers' markets in the region, maintaining a farm shop, and holding open days and festivities at the farm. Biohof Adamah also participates in a social farming project offering a sheltered workspace where differently abled workers produce organic herbs, lettuce, flowers, and potted plants. On their farm tours, Adamah discusses the labour conditions for their employees, especially seasonal workers from foreign countries. The workers have quality housing in the form of flats rather than

large dormitories and have official working contracts and fair wages, i.e. in accordance with legal requirements.

The intensive growth of the box scheme has necessitated various coping strategies and logistical innovations, including hiring a business economics consultant and a management consultant to help improve the organization and structure of the company. One important step was the implementation of specific packing software to make the packing process faster and more precise. The packers had been worried that some packing jobs would be redundant because of the software, but Adamah managers stated that altogether, more jobs had been created in the company since the software was implemented, as the box scheme had grown considerably since then. Adamah also intensified collaboration with two organic vegetable producers and box scheme providers in other provinces of Austria (one of those being Achleitner detailed above), establishing close collaboration on production and logistics. The three vegetable producers have identified their core strengths in agricultural production and now coordinate and swap their products, and, at the same time, share their transportation logistics. As a consequence of this close collaboration, some smaller producers that originally supplied Adamah became less involved. Adamah also realized that intensive collaboration with a multitude of suppliers was complex and time-consuming. These practical organizational problems were seen by some farmers as counter to the company's credo of transparency about where products come from and how they were produced.

While the farmers who supply Adamah were generally satisfied that their products were being marketed in successful and promising ways, they stated that they did not have influence or a decision-making role within Adamah. Due to the strong growth of Adamah, producers who could provide larger quantities have become more central as suppliers. The farmers that delivered to Adamah utilized a high diversity of marketing channels and most only delivered a relatively small share of their produce to Adamah. Therefore, if Adamah did not buy their products, they could fall back on other trading partners or on direct marketing. Nevertheless, 16 of 19 interviewed producers said they hoped to deliver a higher quantity to Adamah. Altogether, the farmers wanted to be part of the box scheme because they valued marketing products directly to consumers, felt they received fair prices, and believed they were treated in a fair way. Additionally, interviewees saw marketing via the box scheme as advertising for themselves since the leaflets provided in each box contained information about the products and supplying farms (for more details on the Adamah case, see Milestad et al., 2017).

Årstiderne

Årstiderne has its roots in a local initiative, Barrittskov Urtehave, started in 1997 as a collaboration between a local Danish farmer, Thomas Harttung, and a chef, Søren Ejlersen. The aim was to supply 100 local households in the Vejle area with weekly boxes of locally produced, seasonal vegetables. A specialist in the field of organic vegetable farming was hired to produce the crops on the farm, a large manor estate near Vejle Fjord, Denmark. The basic organizational model was 'one man, one box scheme', meaning that the employed farmer should grow, pack and distribute the produce to the subscribers via pickup points, and the chef should supply the weekly boxes with input on how the customers could utilize the seasonal produce. However, the box scheme encountered many practical challenges: distribution was both timeconsuming and challenging with regards to logistics; and the working environment turned out to be very stressful for the employed farmer, who developed health problems. In 1999, the two owners decided on a radical reorganization of the enterprise. Their evaluation of the past two years was that the enterprise had experienced major economic losses, and the level of specialization was insufficient to provide both socially and economically sustainable working environments (Kjeldsen, 2005).

The reorganization entailed taking on a new name, Årstiderne, and devising a new plan to deliver seasonal, locally produced vegetable boxes to subscribers across all of Denmark using the market in Copenhagen as the focus. Instead of a physical shop, they decided to use ecommerce as the main interface with customers. Reorienting the strategic direction of the enterprise was costly in terms of investments and development (including a new visual identity). For financial purposes, Årstiderne formed a partnership with the Dutch investment bank Triodos, which invested the equivalent of DKK 10 million in the enterprise. In return, Triodos was granted a seat on the board and gained an active role in ensuring that the enterprise put a significant focus on growth and revenue. During the next 3–4 years, the enterprise expanded significantly, and reached a scale of approximately 35 000 boxes per week. In addition the enterprise also started generating revenue.

During the growth phase, Årstiderne consolidated their core concept: delivering weekly boxes of vegetables to the doorstep of urban consumers, using their own fleet of leased delivery trucks. The boxes were supplied with recipes developed by Søren Ejlersen and his staff, suggesting how the contents of the boxes could be used. Instead of traditional marketing, the enterprise utilized eventsbased marketing supplemented with word-of-mouth marketing. Årstiderne also enhanced their customer service, renamed to 'Samtalerne' (Conversations), which signified a distinct perception of how the enterprise was supposed to interact with mainly urban consumers.

In 2005 the enterprise entered a phase of consolidation focused on cost-cutting and reorganization of the supply structure. During this period, a significant portion of the vegetable supply was outsourced to domestic and European producers. Originally only the fruit had been supplied by southern European or overseas producers. From 2008 and onwards, the enterprise reversed course and began insourcing production again. Today, their own production constitutes a larger portion of their vegetables than during the growth phase and the enterprise seems content to remain at their current scale of approximately 35 000 boxes per week. They have, however, expanded to Sweden, increasing competition in the Swedish box scheme market. Recently, they have also opened an 'on-farm' produce shop and expanded gardening and cooking programmes for school children. The growth trajectory and characteristics of the Årstiderne enterprise were documented by student research (see Kjeldsen, 2005; Poirier et al., 2006).

Ekolådan

The Ekolådan box scheme in Sweden was started in 2003 by the 'Stiftelsen Biodynamiska Producter' (Biodynamic Product Foundation) to support the sustainability of Swedish farmers by making planning easier for them. In this system, the foundation rather than the subscribers decides what goes into a box. This undertaking went from solely focusing on the farmers (as wholesalers) to incorporating consumers into the food supply chain. They launched their box scheme through promotions at farmers markets and by word of mouth among quality-conscious consumers in Stockholm's inner city. They began by making home deliveries with small trucks to neighbourhoods around Stockholm wherever a minimum of 10 subscribers had signed up. They continued to expand in this way to other neighbourhoods and to other cities. They experienced rapid growth in their early years, reaching a peak of 4,000 boxes per week in 2008. To supply this market, they had to develop quickly by adding capacity for sourcing, packing and drivers. There were plans to make a new node with its own sourcing, packing, and drivers in a second city in Sweden; however, growth came to a halt during the financial crisis that started in 2009. Business challenges arose from 1. households cutting out extra costs, 2. competition from the Danish box scheme Årstiderne (described above), 3. competition from other dinner baskets and home delivery services by retailers, and 4. the improved range of organic produce offered by retailers in supermarkets. The organization then had to quickly shrink and make lay-offs to accommodate the loss of subscribers and refocus on their economic viability. Three years of losses were covered by the foundation until the box scheme could be profitable again. The number of boxes delivered per week has plateaued at around 2,000, which is disappointing to organizers since the market for organic products in Sweden has grown approximately 40% during the last two years (Ekoweb, 2016).

Important strategic decisions were made in the early days to focus on organic vegetables ('what we are good at') and to not follow trends such as dinner baskets, etc. 'We want the consumer to think, not to make them stop thinking [as with dinner baskets].' Another important decision was to remain independent as its own (fully organic) value chain rather than enter into collaborations with larger actors in the conventional market. The downside of this strong value commitment could be a loss of flexibility, however (Axelsson, 2012). The foundation started out as a buyer and seller of biodynamic foods exclusively (fresh and processed), but currently has less-ened its focus on biodynamic, expressing a preference for biodynamic foods when available. This is mirrored in the contents of the Ekolådan boxes where most items are organic, with a smaller portion being biodynamic. In keeping with being a not-for-profit foundation, Ekolådan invests any surplus funds in sustainability projects and other activities that support the overarching goals of the foundation, which are to support sustainable farming and farmers and provide healthy food for consumers (see Milestad and von Oelreich, 2015; Larsson et al., 2016).

According to the organizers, Ekolådan is currently limited by the low number of subscribers. However, if they could succeed at attracting more customers again, the lack of Swedish organic vegetable growers could present a new limitation. These growers are aging and going out of business, with few new farmers to replace them. With around 4,000 boxes per week the organizers believe that Ekolådan could make a difference to Swedish growers as a substantial economic force that could inspire farmers to invest and expand. With fewer boxes, however, as in the current situation, Ekolådan can only provide a supplemental income for growers rather than drive their development. The reasons farmers provided for choosing Ekolådan as an outlet was the desire to have a trusted partner (the foundation had existed since the 1960s) who also cared for the food, the ability to plan ahead (but without a written contract), and the opportunity to sell larger volumes in comparison with a farm shop or a market stall (Axelsson, 2012). Many farmers expressed that they did not want to be part of the conventional retail system (for a full account of the Ekolådan case see Milestad and von Oelreich, 2015).

Full Circle

Andrew Stout and Wendy Munroe began developing the idea for Full Circle Farm in 1995 while working as apprentices on one of the pioneering CSA farms in the US Midwest. In the spring of 1996, they moved to the West Coast and started farming with their friend on five rented acres 50 kilometers from Seattle. They sold their produce through farmers markets, restaurants, and a small CSA of 60 members who picked up their shares in the driveway. In 2000, they located to a larger tract of land closer to Seattle and increased the size of their CSA. In 2001, they decided to incorporate produce from other farms so they could have year-round shares and retain customers from year to year. Over time they added multiple delivery locations in the greater Seattle area, a home delivery service, and a weekly, customized ordering system. They began year-round deliveries to Alaska in 2005.

In 2009, Full Circle split into two separate divisions: the farm operation, known as Full Circle Farm, and a farm-to-table delivery service known as Full Circle. The farm division included the organic vegetable and fruit production, harvesting, packing, and produce sales. They sold produce to their own delivery service as well as wholesale. The delivery division aggregated their products with those sourced from partner farms and value-added businesses, and packed and delivered the boxes. The company created a five-member board consisting of Andrew, Wendy and several outside investors who could provide funding, leadership, ideas and decision-making for both divisions.

In 2011, they expanded their geographic range to California by purchasing an established farm-to-table delivery service called 'Eating with the Seasons'. This acquisition brought them a new network of organic farm suppliers and subscribers. By 2012, they had 525 pick-up sites plus home delivery in four states divided into three markets: Washington and Idaho, Alaska, and California. Full Circle grew 37% in 2011. By 2012 the farm division employed around 80 seasonal workers and 10 fulltime equivalents, including farm managers, a packing shed manager, administrators and a sales team. They sold around half of their produce to their own delivery service and the rest to groceries, restaurants, food cooperatives, wholesale organic distributors, and through local farmers' markets and restaurants. Wholesale and commercial grocery accounts were growth areas. They continued farmers' markets and on-farm sales for many years as a way to interact directly with Seattle-area customers, but eventually discontinued them due to low profitability. In recent years, they have scaled back the diversity and scale of their own farm production, with the farm-to-table delivery division now comprising the bulk of company revenue. Full Circle offers both home delivery and traditional, CSA-style drop-off sites. Customers receive a discount if they pick up their own produce.

About 30 key partner farms have supplied Full Circle throughout the years. Partner farms are selected based on organic certification, produce quality, and reliability. The goal is to have a stable group of farmers who supply each product and for products to be identified and associated with a 'meaningful farm story'. Agreements with core farmer suppliers are rarely formalized. Andrew Stout said he prefers to negotiate with farmers individually on prices because they are in the best position to know their true costs. Partner farmers are featured on the Full Circle website. Full Circle has regular, but less frequent, direct business relationships with 50 to 75 additional farms. They have also formed relationships with what they call 'green grocer artisans' whose specialty products, including bottled milk, breads, cheese, eggs, meats, seafood, tofu and fair-trade sweets, can be added to customer orders.

Full Circle also sources products from two regionally based organic-produce distributors: Organically Grown Company and Charlie's Produce. In a reciprocal relationship, these distributors are also contracted to provide long-haul trucking for the farm-to-table delivery service, while Full Circle uses its own trucks and drivers for local delivery services. Seattle-based Alaska Airlines is another strategic business partner that provides reasonably priced transportation to Full Circle's locations in Alaska, as well as business development consultation. Full Circle's business headquarters are in Seattle, with distribution centres in Washington State, California, and Alaska. The distribution facilities are approximately 12 000 square feet with coolers, packing lines, office space and loading docks. The company owns about 30 refrigerated delivery trucks and hires their own drivers and warehouse employees in each region. Drop-off sites and home delivery services are generally co-located so the same trucks can cover both services.

As obtaining organic produce from other farms has become increasingly central to their business model, Full Circle has focused on developing sustainable sourcing guidelines. In addition to organic certification requirements, Stout says that preference is given to family-scale farms with strong stewardship practices, fair labour practices, and unique stories. When buying from distributors, they use their purchasing power to request the identities of the individual farmers. The company has committed to achieving full traceability for all delivery items (for a full account of the Full Circle case, see Ostrom and Stevenson, 2013).

Social Values Associated with Box Schemes

To investigate and compare the social embeddedness of the different box schemes, we looked at their stated values, their organizational structures and processes, their communication strategies, the relationships between farmers and consumers, and their community involvement; all institutional and relational factors that might be expected to offset the influence of purely market-based transactions or marketness (Block, 1990). Table 2 summarizes the following elements: 1. values and attributes used to distinguish the organization and products, 2. communication strategies, 3. visibility of farmers and their roles in the organization, and 4. the strength of connections to communities. Special attention was focused on social relationships and the way participants constructed the concepts of 'quality', 'community', and 'farmer', and whether farmer identities were maintained throughout the supply chain. We also identified the channels and strategies used to communicate with customers. Finally, we studied the role of farmers and other supply chain partners in the organization.

The most notable similarity across the box schemes was the emphasis placed on the quality of the products, the customer service, and the reliability and professionalism of the delivery system. Representatives from all cases noted that they had built their reputation and distinguished themselves from other produce sources by offering the freshest products, along with outstanding customer service. They also believed that focusing on quality and reliability was the key to their early success in gaining access to markets, attracting and keeping customers, and solidifying relationships with other businesses along the supply chain, essentially creating the platform that enabled their growth. The concept of quality was constructed in very similar ways across the different case studies and included: 1. a concern with *process* based on how the crops were raised (organic farming methods), the idea that con-

	Achleitner	Adamah	Årstiderne	Ekolådan	Full Circle
Distinguishing values	High quality organic vegetables produced with strict environmental standards. Reliability and exceptional cus- tomer service	High quality organic vegetables, wide product range, strong customer service, emphasis on transparency, active engagement in social projects	High quality organic vegetables and fruits, wide product range, meal boxes, meats, and fish. Culinary emphasis. Customer service special- ists via email and phone	High quality organic or biodynamic fruits and vegetables. Goal is to support farmer viability, responsive and first class customer service	High quality organic vegetables, meats, dairy, and value-added prod- ucts. Health, environ- ment, and social change emphasis, plus reliability and customer service
Communication strategies	Webshop, Facebook, homepage, blog, weekly newsletter in box	Webshop, Facebook, weekly newsletter in box, emails, phone	Webshop, homepage, blog, emails, phone	Homepage, newsletter	Webshop, Facebook, homepage, blog, web ads, newsletter in box
Farmer identity main- tained through end consumers	Supplying farmers featured in blog on the homepage	Receipt lists provenance of every product (either by name of farmer or country of origin)		All produce in the box is linked to a farmer /farm using the newsletter	List of farms associated with each product in box
Role of farmer suppliers in organization	Own farm production plus long-term stable relationships for partners in and outside of Austria. Long-term relations with local processors	Own farm supplies 1/3 of produce, flexibility for suppliers (no binding contracts), long-term relationships, ability to negotiate price	Own production is prioritized, long-term relationships with some suppliers	Long-term relationships with farmer suppliers, higher prices than from retailers	Long-term relationships with core suppliers, abil- ity to negotiate price, can specialize, do not have to do own marketing
Community connections	Networking and coop- eration with other box schemes, farm tours for customers	Farm festivals, farm tours, social farm- ing projects (sheltered workspace), photovoltaic plant (crowdfunded by customers), sell at local farmers' markets	On-farm demonstration projects, teach garden- ing and cooking to local school children, con- nected with Copenhagen culinary circles	Active in local com- munity, delivering to schools and cafeterias within anthroposophic movement	Farm festivals, vol- unteers participate in environmental restora- tion projects, host school visits, participate in local agricultural commission
Emphasis on access for low-income households		Donations to social markets and homeless shelters, customers can donate their boxes to low-income households during holidays			Donations to emergency food banks, free food for farm workers, work with school food programmes, subsidized shares

Table 2. Social dimensions of box schemes.

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sumers should be connected to the farmers, and customer service; and 2. a concern with the *products* themselves, including freshness, taste, and nutrition.

In each case, the box schemes had to rapidly evolve and professionalize their organizational structures to deal with the logistics of rapid growth and geographically dispersed delivery areas, adding layers of employees and management. As they grew, transportation, packing and warehousing became primary concerns. Some of the businesses split their companies into distinct enterprises in addition to the delivery service, such as a restaurant, a wholesale distributor, on-farm production, etc. Two of the box schemes, Achleitner and Full Circle, created separate business branches and physically distinct locations for production and distribution activities. Only Ekolådan followed a not-for-profit model.

Regardless of the business structure, customer communication has taken on increasing importance with growth. All but one of the box schemes started out as a small, community-based direct-marketing farm; now they all rely on e-business. Increasingly sophisticated Internet and social media platforms have replaced face-toface opportunities to convey information about the products, the farmers who produced them, and the box scheme itself. Telling the story of the items in the box has also become more complicated as multiple producers from multiple regions have been incorporated. Regardless of the geographical distances and the number of links in the supply chain, the box schemes make concerted efforts to promote connections to farmers. While physically visiting *the* farm and meeting *the* farmers was an increasingly remote possibility for most subscribers, a lively complement of blogs, photos, stories about products, and biographic descriptions of farmers, as well as recipes and other educational tips invited ongoing customer attention.

Despite efforts to raise the visibility of the farmers, some mixed reviews came from the farmers themselves. Farmers from two of the case studies indicated that because they were so small, they did not feel as highly valued by the box scheme after it began operating at a larger scale. Another producer who was located near the headquarters felt it was hard to compete with suppliers from the warmer climate zones and that local purchasing was not always prioritized in the face of cheaper produce from outside the region. On the other hand, most of the box schemes appeared to have a stable core group of organic suppliers in their home regions and, to some extent, had begun to form stable relationships with them. Regardless of their size, most of the producers interviewed said they wished they could have sold even more of their produce through the box scheme, indicating at least some level of satisfaction with this market channel. It did not appear, though, that contributing producers had a formal role as decision-makers in the overall organization other than their role as strategic trading partners who could negotiate individually. As an organization, Ekolådan had the strongest stated mission of supporting farmers. They were concerned, however, that their current market scale was insufficient to support enough viable organic production in Sweden. Interestingly, only Adamah seemed to address the issue of farm labour directly, calling attention to their efforts to ensure good labour conditions during farm tours.

From the standpoint of civic engagement, as outlined in Table 2, beyond business relationships, each of the box scheme organizations appeared to have strong social ties with their home communities or wider social networks that allowed implementation of non-economic values such as educating or feeding school children, supporting low-income consumers, participating in public research and demonstration projects, or hosting community events. Taken as a whole, box scheme commitments

to product quality, social processes, and long-term social relationships are all factors that might be expected to increase embeddedness and offset the influence of purely market considerations or marketness (Block, 1990).

Ecological Dimensions of Box Schemes

Returning to Polanyi's arguments about the critical importance of 're-embedding the economy in the social and environmental relations on which it depends' (Barham, 2002, p. 352), a consideration of box schemes offers a window on the ways that alternative food initiatives attempt to make connections between food and nature more visible. To better understand the ecological embeddedness of the box schemes, Table 3 highlights the following dimensions: 1. production standards, 2. spatial aspects of sourcing and supplying, 3. extent of own production, and 4. innovative environmental initiatives.

All of the box schemes required organic certification for produce, whether grown on their own farms or by others: this ensures at least a minimal level of environmental standards even among distant suppliers. Some box schemes supported additional standards beyond organic for certain products such as biodynamic, grass-fed, fair trade, or 'salmon safe'. Several of the box schemes have implemented conservation programmes on their home farms such as composting and soil building, native habitat enhancement, riparian zone restoration, green buildings, and renewable energy projects. It was also common to host on-farm research projects and offer public education and demonstration programmes on environmental topics. In some cases, consumers had opportunities to take environmental action in the form of volunteer restoration projects or crowdfunded alternative energy projects.

Due to organic certification protocols, environmental values and standards seemed most straightforward to articulate and implement in terms of production practices. While many innovative initiatives are evident at additional nodes along the supply chain, in most cases it is unclear whether these environmental practices and values are systematically aligned and enforced throughout the entire chain of producers, distributors, and other logistical partners. As shown in Table 3, all of the box schemes source products across national boundaries, while some deliver products across national boundaries; Full Circle delivers products from Washington State to Alaska via airfreight. Given their high energy use, several of the projects have made efforts to conserve fossil fuels by conducting sustainability audits and utilizing alternative energy sources for delivery vehicles, working with backhaul transporters, or building renewable energy sources at their headquarters, such as a photovoltaic plant or energy-efficient buildings. In their public relations materials, however, the box schemes tend to focus on the environmental sustainability of the production practices rather than on the environmental performance of the entire supply chain. This makes sense given that 1. production practices are easier to guarantee because of organic certification and 2. organizers may want to minimize the visibility of their role as intermediaries so they can foster a closer sense of connection between the consumers and the producers.

Thus, the ecological aspects of place are complicated by growth trajectories. Besides the added environmental costs of sourcing, packaging and distributing across geographically dispersed areas, it is less straightforward to create product identities or inspire consumer connections to a place. For example, some websites explain that products are sourced locally 'when available'. In another case, Full Circle developed

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	Achleitner	Adamah	Årstiderne	Ekolådan	Full Circle
Certifications	Organic	Organic	Organic	Organic, Biodynamic if available	Organic, Salmon Safe
Geographic range (sourcing)	Preference to local and re- gional suppliers (mainly vegetables and fruit) and selected regional proces- sors for bakery and dairy products. Suppliers from Italy, Greece, Dominican Republic (bananas), New Zealand (apples)	Preference to local and re- gional suppliers. Mainly produce from own farm and ~100 producers in (Eastern) Austria, but also imported products (via Achleitner)	Sources vegetables from domestic and European suppliers, supplemented with own produce. Sources fruit from over- seas producers	Preference for Swedish organic vegetable grow- ers. Also imports large quantities from farms in Europe and overseas	Own farm and: a. California farm network, b. Washington farm net- work and value-added processors, c. organic distributor on West Coast (OGC), d. farmer cooperative in Mexico (working through OGC)
Geographic range (deliveries)	Focus on Upper Austria and adjacent regions, na- tional and international distribution via whole- sale partner (BioGast)	Vienna and surrounding areas	National level, but with the Greater Copenhagen area as the most impor- tant market. Have also established a Swedish branch	Focus on Stockholm metropolitan area, but will deliver anywhere in Sweden with at least 10 subscribers	US states of Washington, Idaho, California, Alaska
Extent of own production	Own vegetable produc- tion (100ha)	Own production, focus- ing on vegetables, cereals and oilseeds (100ha). One-third of vegetable box content is from own production	Own vegetable produc- tion on three sites	Own fruit production, but no vegetable produc- tion	Own vegetable produc- tion on 3 sites (80ha)
Additional environmen- tal initiatives	Energy-saving buildings, solar energy, electric cars for delivery, composting and compost courses for suppliers (even in Dominican Republic)	On-farm research (or- ganic vegetable breed- ing), photovoltaic plant on farm	On-farm research and demonstration on com- posting and soil building including efficacy of inputs (biochar)	Supports environmental and social projects in line with the main goal: to support organic farmers and deliver high-quality produce	On-farm research on composting and soil fer- tility, use volunteers for environmental restora- tion projects, participate in government conserva- tion programmes
Additional approaches to environmental manage- ment of supply chain	Has own canteen, aims to reduce food waste	CO ₂ -neutral box delivery (works with a compensa- tion company)	Research on ways to 'close the loop' through waste management	Assesses environmental impacts of box material, delivery cars, etc.	Energy audit, sustain- ability audit for entire business

Table 3. Ecological dimensions of box schemes.

different networks of producers to supply different regions so that the food could be local to those regions. In a third strategy, Adamah customers can select a 'regional box' if they prefer to have only products from Austrian growers. Having a home farm was valuable as a way of connecting consumers with a particular piece of land in both physical and symbolic ways, as well as a site for investing in social and environmental networks with nearby communities. Further, ecologically based farming practices could be fully implemented and demonstrated at the home farm, with environmental standards and innovations often exceeding those stipulated by organic certification agencies. However, since the majority of the production no longer takes place on the home farm, it is unclear whether the other farmer suppliers share such high environmental performance standards.

Opportunities for educating and interacting with subscribers on environmental topics abound and from the web interfaces and farm events hosted, it appears that box scheme organizers take this opportunity seriously. For example, Ekolådan states 'We want the consumer to think'. Ekolådan, Full Circle, and Achleitner use their homepage, newsletter, blog, and product descriptions to call attention to environmental problems in the mainstream food system, explain and promote alternative farming practices, and build consumer confidence that their purchasing decisions can help create changes on the land. In another example, Årstiderne hosts school children in intensive gardening, harvesting, and cooking projects. Further research with consumers would be required to understand the extent to which environmental learning is taking place as a result of participation in box schemes; however, it is clear that organizers view their environmental responsibilities as larger than a marketing tool.

Discussion

Considering Block's hypothetical poles of a continuum running between full marketness on one end and full embeddedness on the other (Jaffee, 2007), we can ask whether box scheme organizers are succeeding at inserting non-market values alongside the tasty and conveniently delivered products in the boxes. On the one hand, just as the original founders of CSA envisioned, these market transactions are taking place outside of the commodified spaces of retail grocery chains and global agri-food conglomerates, allowing the creation of alternative norms and relationships. They have set out clear social and environmental goals and have taken practical steps to implement them. On the other hand, large-scale box schemes are increasingly organized as 'marketized' private corporations replete with CEOs, investors, and slick social media-based marketing campaigns. Scaling up in a highly competitive organic market has necessitated a focus on business logistics, efficiency, and professional management. Thus, investigating and comparing the social and ecological embeddedness of the different box schemes does not lead to any simple conclusions.

Many of the challenges encountered related to the mediation and enforcement of social and environmental values stem not only from the expanded scale and geographies of the box schemes, but also from the creation of additional nodes along the supply chain. As sourcing involves growing numbers of producers from multiple locations, the box scheme organizers increasingly become intermediaries or packers rather than producers themselves. An inherent feature of these arrangements is an increasing distance between the producer and the consumer, both practically and conceptually. To counteract these tendencies, box scheme organizers have established new ways and to help consumers feel personally connected to farmers, often through electronic and social media platforms, and have also returned to their roots by emphasizing a physical farm site that offers subscribers a connection to a particular place and to nature. The box scheme organizations want to position themselves as 'alternative' to conventional markets and they have every reason to benefit from attracting customers who think about more than price when making food purchases. Consequently, most box schemes make explicit appeals to people who want to improve their own health and eating habits, yet also want to make change in the food system through their purchasing choices. For example, the Full Circle website urges, 'let's change the food system together' (Ostrom and Stevenson 2013, p. 11).

A weakness of the box schemes was that the social equity aspects of the supply chain were somewhat downplayed. Several of the box schemes hired 100 or more workers at peak times, yet labour standards did not always surface as a high priority in interviews. Adamah was the exception in calling attention to their use of fair labour practices and quality worker housing. Otherwise it was unclear to what extent the box schemes had devised systems for encouraging strong labour practices among supplying farms, in packing warehouses, among delivery drivers, or among partner businesses. As mentioned previously, another weakness of the box schemes was a lack of formal mechanisms to facilitate input into organizational decision-making by grower suppliers or a focus on supporting the success of supplying farms. Ekolådan stood out because they had clearly stated values about improving the viability of small and mid-scale farmers in their region.

On the environmental side, the ecological qualities highlighted in the products appeared to be largely based on the production methods rather than through cultivating a consistent connection to a place or to nature. Indeed, geographic dispersion has entailed new approaches to constructing concepts of 'place' with an emphasis on virtual relationships and consumer communication that promotes or explains the reasoning behind more complex sourcing strategies and priorities. As mentioned above another weakness from the standpoint of environmental objectives was the lack of consistent strategies for enacting environmental values along the entire supply chain in addition to the point of production.

In the marketplace, most of the box schemes appeared somewhat vulnerable to competition from other types of e-commerce and delivery services. It is unclear whether this market niche could eventually become saturated. The interaction between the different box schemes has already intensified due to expansions into overlapping delivery areas. Three of the businesses ended up becoming overextended and having to scale back and reorganize in the face of the economic recession and competition from other box schemes and delivery services. In particular, Ekolådan has struggled due to the expansion of the Danish box scheme into Sweden. Notably, instead of competing with each other, the two Austrian box schemes are cooperating to exchange products and to define distinct delivery areas. These organizers envision establishing an entire network of box schemes with distinct delivery areas that could work together collaboratively to exchange products in case of weather calamities or other needs (Milestad et al., 2017).

Conclusion

Should box schemes be viewed as socially and ecologically embedded 'values-

based' food chains guided by a core set of values or are they simply innovative marketers who have found a novel way to compete in mainstream markets? Our study on the embeddedness of large-scale box schemes examined the establishment and evolution of these new institutional arrangements to better understand whether they can successfully introduce social and environmental considerations into economic transactions among producers, consumers, and other supply chain actors, as well as whether they offer opportunities for food system actors to act on their values commitments. When scaling up from a direct marketing model such as a box scheme, it clearly becomes increasingly challenging to mediate specific quality and values propositions due to the introduction of multiple suppliers, geographic distances, and additional nodes along the supply chain; all of which make interactions between consumers and farmers less personalized or place based. Nonetheless, from a business perspective, organic box schemes fit the model of mid-scale VBFCs that can efficiently aggregate products and scale up from direct marketing, in some cases quite significantly. They have developed strategic business alliances with multiple business partners, including wide networks of organic farmers, making the logistics of sourcing a wide range of high quality 'values-based' foods throughout the year more accessible for consumers and providing income and market exposure for larger numbers of growers. Many growers seemed to prefer working through these market channels to other options.

When analysed, we found both strong and weak points in the capacity of box scheme organizations to identify, mediate, and implement social and environmental values throughout the supply chain. Strengths included: 1. a commitment to building connections between farmers and consumers, regardless of physical distances or the presence of intermediaries; 2. strong connections to civic networks in their home communities; 3. a system for ensuring a base level of environmentally based production practices through organic certification standards; 4. uncompromising standards on product quality and reliability of service; and 5. ample opportunities for educating thousands of consumers about the food system while expanding their consumption of sustainably raised produce throughout the year.

Several areas of potential weakness were also uncovered. From a social equity aspect, more research is needed on the perspectives of farmer suppliers and other workers along the chain, such as farm labour, packers, delivery truck drivers, etc., to see whether they were receiving any benefits from these supply chains. In general, these organizations seemed to lack a formal way for farmer suppliers to collaborate with one another or to provide input into decision-making. Other areas for improvement could be attention to fair labour standards beyond the production system and throughout the supply chain and opportunities to solidify fair-trade types of relationships with distant suppliers. From a consumer equity perspective, a few of the box schemes did have systems in place for making their foods more readily available for low-income households, but it is still unclear how generally accessible boxes are across different income classes. Second, in relation to the environmental dimensions of the box schemes, while most of the box schemes have taken some first steps, most were still trying to figure out practical ways to implement environmental standards and fossil fuel reductions throughout the entire supply chain. Finally, more research with consumer subscribers could be used to determine whether and what types of long-term bonds are being formed with the box scheme organizations and their associated farmers and places of production.

While box schemes cannot be compared with the reciprocal and personalized

commitments idealized in a model like CSA (Cone and Kakaliouras, 1995; Hinrichs, 2000; Lamine, 2005; Ostrom, 2007), they certainly appear to offer a mechanism for attracting consumers who are motivated by non-economic values. In keeping with Block's reasoning (1990, pp. 53–54), an emphasis by box schemes on product quality, customer service, and reliability, as well as the formation of long-term relationships with farmers, distributors, and consumers based on trust, would be evidence of lower marketness. Moreover, these market mechanisms bypass established supermarket chains and global food conglomerates, allowing producers and consumers to participate on their own terms. They also offer practical mechanisms for participants to act on their values. Thus box schemes offer a unique example of values-oriented, mid-scale organic food chains, embodying a complex mixture of market and nonmarket behaviours, yet clearly embedded in webs of social and environmental relationships (Block, 1990; Jaffee, 2007). It will be important to continue tracking organic box schemes in the future, especially if growth in organic demand slows or market competition intensifies from corporate-driven delivery services, to assess the longterm resilience of this model and the strength of the new social and environmental relationships it has engendered.

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