



Values-based Food Chains from a Transatlantic Perspective: Exploring a Middle Tier of Agri-food System Development

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Abstract. Growing demand for local and organic food sourcing in the EU and the US has inspired inquiry into mid-level food supply chains that can distribute differentiated foods at a regional level in the relational and market space between large-scale commodity markets and direct markets. Values-based food chains (VBFCs) have been identified as a particular type of mid-tier supply chain formed through creating alliances between producers and their supply chain partners to distribute significant volumes of high-quality, differentiated food products while maintaining transparent relationships and fair distribution of revenues. The values associated with VBFCs may be social, cultural, economic, environmental or quality related; they may be linked to the products, the production process, and/or the characteristics of the relationships among the supply chain participants. This introduction to the Special Issue contextualizes empirical studies from the EU and North America and compares the VBFC framework with other approaches to understanding food system change.

Introduction

Globally, small and mid-sized farms face numerous challenges. The consolidation and vertical integration of supply chains, increased concentration in agricultural input and processing sectors, and competition from global commodity markets make it increasingly challenging for small and mid-sized farms to compete (Heffernan et al., 1999; Hendrickson et al., 2001; Howard, 2009, 2016). The global proliferation and harmonization of private and public food-safety standards have further advantaged larger-scale, capital-intensive operations, given the costs associated with compliance (Busch and Bain, 2004; Burch and Lawrence, 2005). In the US such factors have contributed to a seemingly inexorable decline in the number of commercially viable small and mid-sized farms (Lev et al., 2015). Similarly, Europe has experienced a

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long post-war decline in farm incomes and rural livelihoods, due to the cost-price squeeze engendered by rising production costs and global market competition (Ploeg et al., 2000; Renting et al., 2003; Ilbery et al., 2005; Kneafsey et al., 2013).

As mainstream global agricultural trends lead to consolidation and concentration, agricultural market channels have developed along bifurcated paths. Along one path, the bulk of agricultural products are produced and traded through vertically integrated commodity markets. These commodity markets exert downward pressure on prices and reward the economies of scale typically associated with large-scale, industrialized production and distribution. Along another path, these trends have inspired a wealth of counter-initiatives and alternative agri-food marketing pathways, designed to bypass mainstream market channels. These alternative initiatives and marketing pathways aim to re-establish some degree of local control over food production, quality, prices, and access through markets linking farmers with consumers directly, or shortening food supply chains (Marsden et al., 2000; Murdoch et al., 2000; Ploeg et al., 2000; Ostrom, 2007, 2017; Mount, 2012; Renting et al., 2012; Galli and Brunori, 2013; Kneafsey et al., 2013).

Interest in, and participation by, farmers and consumers in direct markets appears stable in North America and Europe (Kneafsey et al., 2013; Low et al., 2015; Ostrom, 2017). Yet it is increasingly clear that not all producers and consumers are positioned to benefit from such markets. Direct market arrangements do not always articulate well, for example, with existing structures of regional demand, price points, or configurations of existing farm production. Growing demands to 'scale up' local food sourcing have inspired inquiry into both the logistical and production capacity of existing direct supply chains, as well as exploration of intermediated distribution channels that could expand their reach. In this context, food system scholars have become increasingly interested in the emergence of mid-level food supply chains that can distribute alternative foods at a regional level, in the relational and market space between large-scale commodity markets and direct market channels (Marsden et al., 2000; Renting et al., 2003; Diamond and Barham, 2011; Hardesty et al., 2014; Mount, 2012; Clark and Inwood, 2016).

The concept of 'agriculture of the middle' (AOTM) was originally developed by US scholars (Kirschenmann et al., 2008; Lyson et al., 2008; Stevenson et al., 2011) as a conceptual framework to explore strategic alternatives for struggling mid-scale producers. Such producers might operate at scales too large for direct markets but too small to successfully compete in conventional commodity markets. The case-study research of the United States' AOTM research network suggests that aggregating and differentiating agricultural products based on shared environmental, economic, and social values along an entire food supply chain can potentially enhance the viability of small and mid-scale farmers and other supply chain partners.¹ Specifically, such food supply chains identified within the AOTM have been termed '*values-based food chains*' (VBFCs) (Lev et al., 2015).

Simultaneously, many European scholars have been concerned with the outcomes of strengthening regional level or short food supply chains from a rural development perspective (Marsden et al., 2000; Renting et al., 2003; Ilbery and Maye, 2005; Tregear et al., 2007; Kneafsey et al., 2013). Inspired by the AOTM research network, the EU ERA-Net Core Organic project 'HealthyGrowth',² was conceived to investigate the potential to scale up the volume of foods supplied through regional organic food chains, while maintaining core environmental and social values. This international research group conducted and analysed 22 case studies of organic values-based sup-

ply chains in 11 countries within the EU and Turkey.

This issue of the *International Journal of Sociology of Agriculture and Food* draws on research emerging from the US AOTM network and the EU HealthyGrowth project. The idea for a special issue emerged from a joint session organized by US and EU researchers at the 2016 World Congress of the International Rural Sociological Association in Toronto, 'Assessing the Potential of Values Based Food Chains for Sustainable Agriculture and Rural Livelihoods'. The lively, wide-ranging discussions inspired by this working session set in motion a transatlantic dialogue. With this dialogue, we aim to advance ongoing investigations of the potential of 'values-oriented', mid-level production and distribution strategies. Contributors' articles present a range of case studies and conceptual analyses, in which they explore three key empirical questions: 1. What specific forms of VBFCs are emerging in selected national contexts, and how are they organized and governed? 2. What is the role of VBFC actors and organizations in socially constructing, mediating, communicating, and implementing core values? 3. Do the selected cases illuminate opportunities for expanding equitable and sustainable food production and distribution? We hope the insights generated by these cases will contribute to efforts of scholars and practitioners addressing critical issues in rural agricultural development.

The Conceptual Landscape of the 'Middle'

Over the past several decades, myriad alternative food initiatives have emerged at a local level, in response to the industrialization and globalization of the conventional agri-food system. 'Local food' in particular has proven to be an especially salient mobilizing frame, garnering the attention of popular media, food systems scholars, and the public. Innovative ideas, practical knowledge, and new cultural identities have spread rapidly, often in a decentralized fashion, through alternative food networks coalescing around the local food frame. Local food marketing innovations have proliferated, in an effort to keep pace with a burgeoning consumer demand for authentic connections to farmers (Lamine, 2005; Ostrom, 2007, 2017; Brown and Miller, 2008; Milestad et al., 2010a; Low and Vogel, 2011; Weiss, 2011; Low et al., 2015; Loconto et al., 2017).

However, while local food has captured the public imagination, concepts and meanings of local food or local food systems (LFSs) can be challenging to define. While the discursive notion of 'the local' has become shorthand for a whole range of assumed social and environmental values and benefits (Ostrom, 2006), several food studies scholars warn against the assumptions inherent in 'conflat[ing] social relations with spatial relations' (Hinrichs, 2000, p. 301). Hinrichs (2003, p. 37) observes, for example, that the reification of local can become 'elitist and reactionary, appealing to nativist sentiments', while DuPuis and Goodman (2005, p. 359) have critiqued an 'unreflexive localism' that fails to recognize how 'local' can be 'a site of inequality and hegemonic domination'. Bowen and De Master (2014) also argue that scholarship focusing on locality can easily overlook ways in which specific historical and territorial contexts shape food systems. Yet social movement scholars have also studied the growing public interest in local foods as a mobilizing frame for inspiring grass-roots activism and citizen engagement to carve out new cultural, institutional, and democratic spaces in the food system (Hassanein, 2003; Ostrom, 2007, 2017; Holt-Giménez, 2011; Kirwan et al., 2013).

Regardless of whether a focus on local foods generates contradictions or is viewed

as potentially transformative from a social movements perspective (Ostrom, 2007, 2017; Holt-Giménez, 2011; Nicholson, 2011), LFSs do not offer units of analysis that can be easily quantified or delineated. Even in cases where identifiable groups or organizations have attempted to define their own spatial, market, or relational boundaries around local food, the understandings underpinning these boundaries tend to be porous and contested. Within the same farmers' market organization, for example, opinions can differ markedly regarding which vendors are deemed 'local enough' to be allowed to sell at the market. And because local, and the notion of scale itself, is socially constructed within physical, relational, moral, and discursive spaces, meanings can vary vastly by product, season, geography, and the motivations and values of variously situated actors (Ostrom, 2006; Kneafsey et al., 2013, p. 23). Further, in spite of local framings, in most contexts food systems are inevitably complex hybrids of mainstream and alternative supply chains (Mount, 2012). Thus, LFSs do not assume consistent distinguishable forms even within the same context, much less when compared across different regions or countries.

In the face of the challenges and critiques of the LFS framing, some researchers have elected to focus instead on the specific marketing channels, institutions, or practices that have developed within alternative agri-food movements (Martinez et al., 2010; Low and Vogel, 2011; Brunori et al., 2012; Kneafsey et al., 2013; Lamine, 2015; Low et al., 2015; Loconto et al., 2017) or on the dynamics of food systems evolving within specified geographical boundaries. Food supply chain analysis offers one way of characterizing and categorizing marketing channels, as well as analysing social relations along specific food supply chains (Marsden et al., 2000; Renting et al., 2003).

Marsden et al. (2000) and Renting et al. (2003) have drawn a contrast between 'short food supply chains' (SFSCs) that facilitate some form of connection between producers and consumers, and 'the long, anonymous supply chains characteristic of the industrial mode of food production' (Renting et al., 2003, p. 398). According to Marsden et al. (2000, p. 426), the distinguishing criteria for a SFSC 'is not the number of times a product is handled or the distance over which it is ultimately transported' but rather that 'the product reaches the consumer embedded with information'. Renting et al. (2003, p. 399) emphasize that analysis of SFSCs goes well 'beyond a simple description of product flows' to investigate the types of relationships found in the supply chains and their role in 'constructing value and meaning' beyond the actual product.

Three forms of SFSC have been identified (Marsden et al., 2000; Renting et al., 2003; Kneafsey et al., 2013): 1. the 'face-to-face', direct farmer-to-consumer exchange; 2. the 'spatially proximate' supply chain, which may include intermediaries but is still contained within a region; and 3. the 'spatially extended' supply chain, where food is exported from the region of origin but still carries information about the producers and the place of production. The spatially proximate SFSC is comparable to the category of 'intermediated local foods' tracked by the US Department of Agriculture (Low and Vogel, 2011; Low et al., 2015). The third type of SFSC is similar to Fleury et al.'s (2016) mid-tier supply chain concept from France. For 'spatially extended' SFSCs, communication between farmers and consumers may increasingly involve product branding, labeling, and certifications (Renting et al., 2003; Ilbery et al., 2005). In Europe, these approaches include formal Protected Designation of Origin (PDO) and Protected Geographical Indication (PGI) systems (Kneafsey et al., 2013).

The concept of the agriculture of the middle aligns well with spatially extended SFSCs because of the emphasis on the quality of the relationships along the supply chain, the quality of the foods, and the efforts to communicate information about the farmer, the production practices, and the products to the end consumer (who may be in a different region). AOTM enterprises can potentially supply larger regional markets, while supporting the viability of small and mid-sized producers and other moderate-scale food business partners in the supply chain. Working collectively to aggregate products from multiple farms is another critical feature of AOTM supply chains that allows them to achieve the necessary volumes required for supplying larger regional markets, without necessitating increased scale at the level of individual farms (Schermer et al., 2011; Lev et al., 2015).

Within the AOTM, values-based food chains (VBFC) are a particular form of supply chain distinguished by transparent and long-term business relationships based on shared values such as trust, transparent decision-making, communication, and a commitment to furthering equity among all supply chain participants (Stevenson et al., 2011; Lev et al., 2015). Products are differentiated from mainstream commodities by sharing producer narratives and links to values associated with food quality, production practices, environmental stewardship, and equitable social relationships. Noe and Alrøe (2011) have elaborated the ways that the notion of food quality, for example, can be reframed and expanded by VBFCs to encompass broader goals related to place, the environment, and social equity.

The use of the terms 'agriculture of the middle' and 'values-based food supply chains' has become increasingly commonplace in US peer-reviewed journals and non-peer reviewed research. Economists have typically utilized 'value chain analysis', to explore coordination among producers, processors, and markets. This approach has been used to show how economic value is added at progressive stages of production, processing, and marketing (Diamond and Barham, 2011). Within the AOTM literature, however, the concept of 'value chains' has been expanded to include both economic and non-economic values (Stevenson and Pirog, 2008). Initially, Stevenson and Pirog (2008), Diamond and Barham (2011) and Stevenson et al. (2011) used the terminology of 'food value chains' interchangeably with 'values-based food supply chains'. Yet in recent years a growing number of authors have elected to use the 'values based' terminology exclusively (Lerman et al., 2012; Hardesty et al., 2014; King et al., 2013; Lev et al., 2015) in an effort to specify explicitly what is unique about these particular supply chains.

Initial research emerging from the AOTM research network was largely concerned with identifying and characterizing emerging VBFCs (Kirschenmann et al., 2008; Lyson et al., 2008) and examining their functioning, organization, governance, and distinctiveness. More recent work has assessed the long-term sustainability of VBFCs during growth processes and economic recession (see HealthyGrowth; Stevenson et al., 2013). Much of the previous empirical research has focused on case studies of well-known VBFCs from a business-oriented approach (Diamond and Barham, 2011; Stevenson et al., 2013; Hardesty et al., 2014). Additionally, AOTM researchers have developed a new teaching curriculum (King et al., 2013), an annotated bibliography (Lerman et al., 2012), and 'A Priority Research Agenda for an Agriculture of the Middle'. The research agenda calls for more attention to national, state and local policies that could support a vibrant middle sector in the US food system (Clancy and Lehrer, 2010).

Research by Bloom and Hinrichs (2010), Conner et al. (2011) and Feenstra et al.

(2011) documents the challenges and opportunities of utilizing VBFCs to increase regional food procurement in institutional supply chains, with Conner et al. recommending that school districts expand their use. Bloom and Hinrichs (2010), Clancy and Ruhf (2010), Stevenson and Lev (2013) and Clark and Inwood (2016) have investigated how VBFCs may strategically utilize conventional supply chain infrastructure to supply larger markets by forming 'hybrid food chains'. They found that by piggybacking on existing infrastructure, VBFCs can reduce costs, leverage efficiencies of existing distribution and processing networks, and strategically conserve capital to improve their own profitability and return gains to farmers and other partners.

While the majority of the existing studies of VBFCs focus on the structure, governance, and performance of individual supply chains from a business enterprise perspective, recent studies by Hardesty et al. (2014) and Clark and Inwood (2016) have taken an integrated approach to assessing the impacts of VBFCs for regional development. This work attempts to link the form of the chains more broadly with their outcomes for rural development and contributes to answering some of the questions about the rural development impacts of SFSCs raised by Marsden et al. (2000) and Renting et al. (2003). An integrated approach is also in keeping with the framework of 'territorial food systems' as delineated by Fleury et al. (2016, p. 3) as 'a collective dynamic that organizes local resources and integrates food supply chains within a region'. The relationship of VBFCs to place remains under-theorized, however, especially in the US context. As noted by Lev et al. (2015, p. 1419), determining effective strategies for communicating a regional identity remains an ongoing challenge for VBFCs. Beyond the location of the farms, the links within a VBFC that serve to connect production with consumption may have varying locations, thereby complicating efforts to employ straightforward signifiers of place.

Most recently, the EU HealthyGrowth project has investigated the evolution of VBFCs specifically in relation to organic foods. As transnational food conglomerates have become the dominant actors in the sourcing, processing, and marketing of organic foods (Howard, 2009), organic supply chains have evolved to effectively handle sizeable volumes. Globalization and commodification of organic products, however, have reduced the capability of supply chains to transmit information about the values or production conditions associated with specific products (Luttikholt, 2007; Jaffee and Howard, 2010; Noe and Alrøe, 2011). The 'conventionalization' (see Buck et al., 1997; Guthman, 2004) of organic food chains, characterized by larger volumes, streamlined standards, and growing market concentration, has also been associated with reduced premiums for farmers and a loss of farmer control or influence over the supply chain (Wit and Verhoog, 2007; Howard, 2009; Jaffee and Howard, 2010; Schermer et al., 2011). Streamlined national and global standards can undermine the incentives and recognition for producers whose practices exceed standards and wish to communicate that information to consumers. Moreover, the evolution of organic standards has increasingly focused on the material aspects of production systems, to the exclusion of transparent social justice standards, such as farmer or worker equity. Absent attention to social justice, organic agriculture has replicated many aspects of the neo-liberal systems that advocates originally set out to oppose (see Guthman, 2004).

In response to these trends, the International Federation of Organic Movements (IFOAM) convened a worldwide participatory stakeholder input process (Luttikholt, 2007). The resulting set of worldwide guiding principles, 'health, ecology, fairness,

and care', is designed to serve as a 'source of inspiration for the future development of organic agriculture' (Luttikholt, 2007, p. 349). This set of principles articulates well with a values-oriented approach to investigating organic VBFCs. Organic markets vary across European countries, but local market chains typically have inherent problems in moving from niche to volume markets. Securing and advancing the organic values stated in the IFOAM principles is also a challenge for mainstream large-scale market chains. In recent years, the development of new forms of organic marketing throughout Europe, based on dedicated mid-scale food distribution and retail businesses and larger producer-consumer initiatives, appears promising (Knickel et al., 2006, 2008; Megyesi et al., 2011; Schermer et al., 2011). These represent a third type of business model that tends to be overlooked in research and business strategy development: a middle tier that combines quality and volume in VBFCs. Healthy-Growth has investigated a range of mid-scale organic value chains in order to learn how they can combine production volume with values, and to use this knowledge to support the further development of organic markets, in keeping with the IFOAM guiding principles (Luttikholt, 2007).

A Framework for Practical Inquiry

Through the articles in this issue, we aim to clarify the conceptual framework of the agriculture of the middle to encompass a relational and market space that exists between 1. direct and commodity markets (intermediated markets), 2. proximate and global supply chains (geographical scale), 3. producers and consumers (intermediated relationships), 4. production and retail (mid-level processing and distribution infrastructure), and 5. the multiple institutions and business firms that form supply chains and networks of supply chains (inter-organizational).

Within this conceptual framework, we view values-based food supply chains as a particular form of food supply chain operating within the AOTM. In this analysis we employ Lev et al.'s (2015, p. 1417) definition of VBFCs as 'strategic business alliances formed between organized groups of farms and ranches and their supply chain partners to distribute significant volumes of high-quality, differentiated food products and share the rewards equitably.' The values associated with VBFCs may be social, cultural, economic, environmental or quality related; such values are associated with the products, the way they are produced, and the characteristics of the relationships that link supply chain participants.

The case studies highlighted in this Special Issue examine several emergent forms of VBFCs within middle-tier agriculture (or AOTM) in the EU and North America. These cases illustrate how emergent VBFCs are organized and governed, and they offer insights into the challenges and opportunities encountered by food chain actors as they attempt to expand values-based food production and distribution, including the challenges they face negotiating values along the supply chain. Negotiating and renegotiating definitions and conventions related to product quality, production processes, and supply chain relationships frequently drives the evolution of alternative supply chains and food networks (see Marsden et al., 2000; Barham, 2002, 2003; Sonnino and Marsden, 2005). Contributors examine how actors throughout VBFCs construct notions of quality around values related to place, production practices, and specific products. The cases also illustrate the extent to which these quality attributes and values are transmitted throughout the chain, are discernable by value chain partners and consumers, and can be created or lost by each actor involved in

a chain.

What is the role of VBSCs in sustaining the agriculture of the middle? How can values such as transparency and trust be fostered and maintained within expanding markets, such as the organic markets researched by HealthyGrowth? The cases presented in this volume create a compelling vision for how to begin to address these questions.

Preview of Studies and Their Major Themes

The articles in this Special Issue were all presented as working papers at the 2016 International Rural Sociology Association conference in Toronto. They include several studies from the European HealthyGrowth project, two studies from North America, and two studies involving cross-national comparisons.

The collection begins with an article by Clare Lamine and Egon Noe explaining the preconditions for successful values-based food chains. Lamine and Noe introduce the multi-perspectival approach, which is a central concept of the HealthyGrowth project. This approach framed the data collection and analysis for 22 HealthyGrowth case studies utilizing five analytical research perspectives: 1. a sociological perspective on organizations and governance, 2. a management perspective on business logics, 3. a theory of communication perspective on communication of values along the chain, 4. a relational perspective on the mediation of values, and 5. a resilience perspective on the chain's ability to deal with crises and changes. As a second-order analysis, Lamine and Noe synthesize the outcomes of these five different perspectives into three different themes.

The second article, by Susanne von Münchhausen, Anna Maria Häring, Gunn-Turid Kvam and Karlheinz Knickel, examines the specific challenges faced by growing small and medium-sized enterprises, especially when they aim to maintain high-quality products and processes. It draws on the HealthyGrowth case studies, with a focus on the management of individual businesses, the cooperation along supply chains, and realignment during expansion. The concept of business logic provides the analytical framework for the analysis of the cases. Central to the business logic concept is the idea that business goals, strategies, management, and management instruments require coherence. The business logic approach helps to identify the adjustments and realignment needed in times of change. Adaptations are particularly important when food production, processing, and sales aim to maintain higher product and process qualities.

While these first two contributions deal with the conceptual approaches developed by the HealthyGrowth project, in the third article Markus Schermer applies the concept of 'netchains' (Lazzarini et al., 2001) to the case of a regional VBFC in Austria. In this case, Schermer shows how growth can be managed in a way that creates and captures values. Dedicated supply chain actors work collaboratively to preserve small-scale structures and develop a novel pattern of sectoral growth. To address volume demands, they aim to multiply the number of actors in the supply network rather than relying on the expansion of individual enterprises. This initiative has grown steadily over the last decade while simultaneously supporting small-scale regional production and processing structures. Schermer uses the netchain concept to explore the organizational structure and the mechanisms of horizontal and vertical coordination of this Austrian VBFC.

Two contributions from North America follow the three introductory European

studies. Lori Stahlbrand's case study illuminates some of the limitations of VBFCs, as she argues for a greater focus on developing an 'infrastructure of the middle', echoing some of the early concerns that led to the conceptualization of the agriculture of the middle framework. Stahlbrand elaborates ways that public institutions are essential actors in providing transformative food system infrastructure. Her case suggests that such institutional supports can inspire urban food policy, civic activism, and public-private cooperation.

Jennifer Sumner's analysis examines the role of the Local Organic Food Co-ops (LOFC) network, a coalition of cooperatives that specialize in locally and sustainably produced food in Ontario, Canada. The LOFC network aims to connect values associated with place, organic production practices, and cooperative structures. Together, they form a values matrix that clearly differentiates the LOFC network from conventional market exchanges and models an engaged approach to decision-making along the food chain. Sumner presents a dual model concept of values and creates a distinction between what she terms 'life codes' and 'money codes' in agri-food systems.

The last two articles compare case studies across several countries. Marcia Ostrom, Chris Kjelsden, Susanne Kummer, Rebeka Milestadt and Markus Schermer analyse five large-scale 'box schemes', also known as farm-to-table delivery services. The authors ground their comparison and their articulation of the social and environmental values associated with these VBFCs in the Polanyian concept of 'embeddedness'. They note that in an increasingly competitive home delivery market, 'box scheme' enterprises in both Europe and the US face similar challenges. For example, fulfilling a year-round sourcing imperative requires forming stable relationships with a wide network of producers from a variety of climate zones. The authors suggest that maintaining a relationship to a place and a long-term commitment to a distinct group of farmers, while increasingly challenging under-growth, is critical to meeting the foundational environmental and social goals set out by box-scheme organizers.

The closing article by Rike Stotten, Sibylle Bui, Patrizia Pugliese, Markus Schermer and Claire Lamine examines values-based supply chains from a territorial perspective. Recently, model regions of sustainability that combine a variety of agri-environmental initiatives were created in several European countries. These 'organic regions' aim to develop as territories by employing sustainable management of local resources, based on the principles of organic farming and agroecology. The article analyses the dynamics of values-based supply chains in relation to the territorial development of such regions in Italy, France and Austria.

Discussion and Conclusions

We hope that the articles presented in this issue foster fruitful transatlantic dialogue and offer food systems analysts refined conceptual tools to examine middle-tier supply chain relationships with increased nuance and specificity. This collection of wide-ranging case studies from 11 nations adds to the growing body of empirical work around mid-tier VBFCs (see Diamond and Barham, 2011; Lerman et al., 2012; Stevenson et al., 2013; Hardesty et al., 2014; Fleury et al., 2016) and helps to illuminate organizational and relational mechanisms in play along and between the supply chains. The rich heuristic descriptions that emerged from this dialogue warrant future systematic, comparative qualitative and quantitative research and analysis.

These studies demonstrate the diversity of organizational forms that emergent

VBFCs can assume as they arise within a variety of national contexts. These range from private companies, to cooperatives, to non-profits. In some cases, decision-making authority is concentrated within a single link along the chain (i.e. a producer, processor, distributor, or retailer). In other cases, the VBFC is structured as an alliance of independent businesses or equal partners. Ownership and governance mechanisms along the supply chain influence decision-making, communication, and the implementation of values and standards throughout the chain.

Conceptually, several authors in this volume emphasized the need to expand the measures of success and the notion of 'values' in the VBFC literature beyond business concepts related to supply chain management, product flows, price premiums, or the 'marketability' of values. They observed that these approaches can fail to recognize the ways that non-monetized values such as health, quality of life, and connections to nature, place, and community are enacted relationally, rather than through market mechanisms. Accordingly, several authors in this collection investigated the strength of the non-economic dimensions of VBFCs, including social relationships and social processes. For example, Lamine and Noe established a framework for analysing the processes through which VBFC actors jointly construct and negotiate concepts of 'quality' that incorporate non-market oriented 'relational values', such as connections to nature, history, taste, and health. In another approach, Sumner employed Canadian author John McMurty's (1998) theory of 'life values' to focus on the implications of VBFCs for human and environmental health, quality of life, fairness, and an ethic of 'care', using an example from the cooperative movement. Formally established values statements and ethical principles within these cooperatives were shown to help link values-based missions to practical business structures and operations, such as voluntary, open membership and democratic decision-making procedures. Another relational pillar of the international cooperatives movement, cooperation among cooperatives, proved to be a key condition for scaling up the Local Organic Food Co-ops network (LOFC).

Also focusing on social relationships, the concept of 'netchains' in Schermer's article facilitated an analysis of interdependencies (pooled, sequential and reciprocal) along and across supply chains that catalyses the development of long-term relationships, reciprocities, and knowledge sharing. When VBFCs develop connections and interdependencies with each other within a region, this can lead to the growth of a dense network, rather than single units or individual supply chains. Such forms of growth can pose new challenges to coordinated action, reinforcing the need for transparency, inclusiveness, a shared commitment to place, and relationships characterized by trust.

Finally, the article on box schemes by Ostrom et al. engaged the rich literature on 'embeddedness theory', originated by Karl Polanyi (1944), as a way to analyse the extent to which these VBFCs are shaped by the non-monetary social and environmental values held by farmers, consumers, and box scheme organizers in the face of competitive market pressure. It also showed the complexities that can be introduced into the relationships to place and with farmers as a result of efforts to scale up the quantity and types of food distributed through these channels.

Some authors also recognized the limits of the VBFC concept and noted complicating factors associated with 'leading with values' in exploring successful middle-range enterprises. While relevant to all cases, we suggest that recognizing these limits is particularly important in contexts where government and policy support is lacking. Without such support, there is less protection from the blunt forces of

marketplace and agri-food oligopolies. This suggests the importance of policy mechanisms that can facilitate and reward values enactment and long-term, mutually reinforcing relationships within supply chains.

The extent to which the VBFCs highlighted here generated equitable and sustainable opportunities to expand values-based food production and distribution varied. Whether and how farmers and other supply chain participants received fair portions of profits and experienced decision-making agency, was uneven across these cases and suggests the need for further study. VBFC organizations are emergent and highly dynamic aspects of the middle-range agri-food sector. They have evolved in an era of rapid market growth of organic and other differentiated foods. Following key middle-tier/AOTM VBFCs over time will afford insights into how VBFC partnerships and values commitments can be maintained even if growth in market demand levels off.

In future research of middle-range agriculture and VBFCs, we suggest further systematic, comparative analyses of 1. the strength and qualities of the non-monetary aspects of food chain relationships, 2. the relationship of place to VBFC development and the way these identities may change in the face of growth, and 3. the roles played by policy and regulatory factors in facilitating the strengths of VBFC relationships in different settings. While it is imperative to empirically examine VBFC organizations, the proprietary nature of some businesses impedes critical analysis. Developing a more consistent methodology for working with a variety of participants within VBFCs and gaining their perspectives in addition to those of VBFC leaders or owners could improve understanding of VBFC impacts and outcomes for 'life values' and broader rural development objectives. Our transatlantic dialogue also suggests that a comparative analysis of effective institutional supports and policies for supporting VBFCs within mid-tier agri-food sectors would offer useful insights to scholars and practitioners addressing critical issues in agricultural development.

Notes

1. United States Department of Agriculture (USDA), National Institute of Food and Agriculture (NIFA), NC-1198 Multi-State Project, 'Renewing an Agriculture of the Middle: Value Chain Design, Policy Approaches, and Environmental and Social Impacts' (2012–2017), <<http://agofthemiddle.org>>.
2. European Union (EU), 'Coordination of European Transnational Research in Organic Food and Farming Systems', EU FP7: ERA-Net Core Organic II, 'HealthyGrowth: From Niche to Volume with Integrity and Trust' (2013–2016), <<http://projects.au.dk/healthygrowth>>.

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