

Paper prepared for the 126th EAAE Seminar

New challenges for EU agricultural sector and rural areas.

Which role for public policy?

Capri (Italy), June 27-29, 2012



The Economic Organizations of Short Supply Chains

M. Fondse¹, E. Wubben¹, H. Korstee² and S. Pascucci.¹

¹ Wageningen University/Management Studies, Wageningen, The Netherlands

² LEI, The Hague, The Netherlands

stefano.pascucci@wur.nl

The Economic Organizations of Short Supply Chains

M. Fondse¹, E. Wubben¹, H. Korstee² and S. Pascucci.¹

¹ Wageningen University/Management Studies, Wageningen, The Netherlands

² LEI, The Hague, The Netherlands

Abstract

Short food supply chains (SFSCs) are economic organizations which can contribute to rural development. We propose a first analysis of their main features and suggest a way for analysing them through the lens of organizational economics. SFSCs are based on proximity between consumers and producers, economic added-value, re-distributive principles and sustainability. They mainly rely on informal and socially-embedded governance mechanisms. We derive insights for better link SFSCs and policy design.

Keywords: Short food supply chains, economic organizations, rural development

JEL classification: Q13.

1. INTRODUCTION

The interest in food supply chains other than conventional ones has increased rapidly in recent years. New food chains have been established in which shortening the relationship between producers and consumers is a key element, especially in Europe and the United States (Moynihan and McDonagh, 2008). The change in consumer perception of food products -due to food scandals and GMO practices- on the one hand and the pressure on the income of many farmers -due to the modernisation and mechanisation of the agro-food sector- on the other, certainly contributed to this (Renting et al., 2003, Ilbery and Maye, 2005, Sonnino and Marsden, 2006).

In many cases this development is associated with an increased interest in so called 'local foods'. Some authors prefer the term alternative food supply chain to describe these chains, which reflects the aim of many of them; to provide an alternative for the globalised and industrialized food production (Renting et al., 2003). Others rather speak in terms of networks, as it will comprise of a network of social interactions between primary producers and end-consumers (Pascucci, 2010). In this paper the labels 'short' and 'chain' are used as food chains are the mechanism through which food moves from producer to consumer and the aim is to shorten this food supply chain.

A short food supply chain (SFSC) is a wide-ranging concept and varying interpretations are used; there is no consensus on a precise definition (King et al., 2010). For example, on-farm direct sales to consumers are interpreted as a type of SFSC, but also the international supply of a special regional food product is considered as a type of SFSC. Nevertheless, we could say that they all share the aim to reconfigure the relationships between primary producers and consumers. Accordingly, the following preliminary definition of short food chains (SFSC) is maintained based on the work of Marsden et al. (2000).

A SFSC is a food supply chain that short-circuits the long, anonymous supply chain characteristics of the industrial mode of food production, and has the intention to increase the generated added-value. Although SFSCs are of recent date, they have been studied widely using different perspectives. An orientating review of the relevant literature learns us that literature written

from a business point of view is less available (Venn et al., 2006). In line with Forsman and Paananen (2004), the authors contributing to this field represent disciplines such as (social) rural development (Allen et al., 2003, DuPuis and Goodman, 2005, Marsden et al., 2000, Renting et al., 2003, Sage, 2003, Van Der Ploeg et al., 2000) or geographical (political) sciences (Feagan, 2007, Goodman, 2004, Little et al., 2012, Watts et al., 2005). Moreover, many researches discuss the potentials of SFSCs, their outcomes and their eventual impact on the society, economy and environment. Instead of discussing the potentials of SFSCs, this paper focuses on the economic organizations of SFSCs.

2. DEFINING A SFSC

2.1. *Based on characteristics of SFSCs*

Short food supply chains attempt to – as already highlighted by the first word – shorten the food supply chain from producer to consumer. More specifically we are interested in answering the question, what makes a SFSC actually different from other food chains? Hence, this section is implemented to discover the determinants of the differentiating characteristics of SFSCs. In order to investigate this, different definitions provided in literature are selected and reviewed, notable both for their similarities and differences. A few remarks could be made regarding the literature.

First of all, the term SFSC is not very often used in the literature compared with other terms. Most commonly preferred is to focus on local food followed by notions of alternative food networks and systems (Allen et al., 2003, Feagan, 2007, Hinrichs, 2003, Watts et al., 2005) or what other consider as civic and demographic agriculture (DeLind, 2002, Lyson, 2000). The relevant literature focuses on the attributes of food products (frequently being geographically distinctive) as well as the mechanisms of processing and retailing (local) food, which are in our research considered as SFSCs. Hence, both definitions of local food and SFSCs are investigated presented in **Error! Reference source not found.** and **Error! Reference source not found.**. The aim is not to provide an exhaustive list, but to derive prevalent components of a SFSC and local food. Surprisingly, the term local food and terms referring to SFSCs are often studied without explicitly defining the concept, taking its meaning more or less for granted. Most of the time they are referred to as qualities which are attributed to a distinctive geographic origin (Kneafsey, 2010). If we review the selected definitions of local food and SFSCs, a lot of overlapping themes are present which affirms the correspondence between the two concepts. The themes used to define local food are not very different from those used in the definitions of SFSCs. Though, the emphasis in definitions of local food is more likely to be on geographical proximity, whereas the definitions of SFSCs more rely on social constructions. SFSCs are often considered as networks, relations between trading partners or producer and consumer and even as innovative modes of food provision.

Based on these definition, four prevalent components could be derived. First, the majority of the definitions refer to the geographical proximity. Terms as ‘rooted in particular places’, ‘re-spatialise food’ ‘commitment to nearby place’, ‘geographical distance’ are used which emphasise the importance of proximity. The second component refers to the economic added value, or in other words the ‘producer profitability’, ‘economic and rural development’, or the redistribution of value along the supply chain. Not every definition highlights the economic aspects of these chains, but it is used frequently enough to consider is as an important attribute. Third, many times social enhancements are highlighted, for example authors use phrases as ‘enhance social equity and democracy’, ‘re-socialise food’, ‘providing social care’ or ‘improving civic responsibility’. Though, according to Goodman

(2004) SFSC could also involve socially exclusive niches (Goodman, 2004). In definitions concerning SFSCs many times is referred to ‘connectedness’ between producer and consumer and community. So, significance of social attributes is demonstrated widely. Fourth, quite often definitions refer to sustainability or the environment. This could include animal welfare, agriculture landscape as well as ‘getting biodiversity from farm to plate, saving energy and reducing food miles’.

By reviewing these definitions, the ideas that the provision of local food or SFSCs is inherently good and brings about different benefits are fundamentally prevailing, but are they? By reviewing the literature, it becomes less remarkable that these ideas are prevalent, since a majority of literature stems from political-economic and social rural development disciplines (Tregear, 2011). According to these perspectives, initiatives are many times conceptualized as counter movements to threatening forces of global capitalism or considered as potential solutions for improving the situation in lagging rural areas. Furthermore, literature mainly stems from the United States of America and Western Europe. A difference between these two literature fields with regard to the perception of SFSCs is notable. In American literature, they are rather seen as potentials to resist the mainstream agribusinesses and tend to be used in a more political context (Holloway et al., 2007). In contrast, European SFSC literature concentrates its definitional discussions more on rural economy, food safety issues and society (Goodman, 2004, Sonnino and Marsden, 2006). Next to all advocates, others do show their cautions and refer for example to ‘the local trap’ (Born and Purcell, 2006); the tendency of food activists and researchers to prefer local a priori to larger scales. Also Goodman (2004) is doubtful about the positive aspects of SFSCs as already highlighted in **Error! Reference source not found.** Tregear (2011) critically reflects on the connotations of SFSCs and recognizes a tendency to conflate characteristics of SFSCs with specific desirable outcomes or certain food properties. She argues that desirable outcomes such as social justice or economic viability are not inherent to food systems operating on a local scale. Accordingly, the outcome of SFSCs depends on the orientation of the involved actors. The same applies to the opportunities for SFSCs to offer healthier and more nutritious foods. There is no a priori reason to expect it to be related to the spatial or structural characteristics of these food systems (Born and Purcell, 2006). These insights are very useful to put SFSCs into perspective.

2.2. Based on market arrangements

Next to definitions based on characteristics, definitions of SFSCs based on market arrangements are also well-recognized (Martinez et al., 2010). Within the great diversity, a broad distinction could be made between two types of market arrangements concerning SFSCs:

- Direct-to-consumer SFSCs
- Intermediate SFSCs

SFSCs including direct to consumer arrangements comprises food chain channels, such as farmers market, road stands and on-farm shops; supply chains in which the producer of the food products meets the consumer directly. Intermediate SFSCs on the other hand, involves intermediaries to supply consumers and bypasses the direct-to consumer market as well as the undifferentiated commodity markets. They could include new formed institutions such as producer’s cooperatives or consumer buying clubs, but also established retailers that have somehow become involved in selling regionally based food. This could be for the reason to respond to consumer demands, to create competitive advantage and/or to provide local producers with retail space to sell their goods (Ilbery and Maye, 2006).

3. THE ORGANIZATIONAL STRUCTURES OF SFSCS

A great variety among the organization of SFSCs exists. On the one hand, the direct to consumer SFSCs in which food is distributed from one producer to a consumer and on the other the intermediate SFSCs which include more parties to supply food. The urge of using other distribution channels and aggregate products to fulfil consumer demand is widely recognized and lead to more complex organizational structures. Hence, insights from supply chain management (SCM) and transaction cost economics (TCE) are used to provide a better understanding of the organization of SFSCs.

Theories from a supply chain managerial perspective are used to provide insight in the functioning of supply chains as a whole. TCE is used as the theories focus on organizational structure by using transactions between (chain) parties as the unit of analysis. It approaches and rationalizes the organisational structure mainly from a dyadic perspective rather than a supply chain perspective. By combing these two fields of literature the organisational structure of transactions between firms as well as at chain level is incorporated.

Literature concerning the organization of SFSCs is less prevalent, however the importance of working together to make the supply of local food a success reveals. Hence, the key element for SFSCs is the creation of new collaborative supply chains to market differentiated products (USDA, 2012). This is for example underpinned by the value chain approach argued by Stevenson and Pirog (2008) and Bloom and Hinrichs (2011) as well as King et al. (2010) which concludes that SFSCs consistently involve important durable trading partner relationships. For that reason, this part of the literature study starts with discussing theories concerning supply chain collaboration (section 3.1.), followed by the governance structure (section 3.2) and coordination mechanisms (section 3.3).

3.1. Supply chain collaboration

Supply chain collaboration is considered as chain members which are actively working together to create competitive advantage and satisfy customers' needs (Matopoulos et al., 2007, Mentzer et al., 2000). It goes beyond purely transactions and is seen as a significant process that holds the opportunity for value creation (Cao and Zhang, 2011, Fu and Piplani, 2004). Theories from this supply chain discipline help to provide insights in the process of collaboration in SFSCs.

Hanf and Dautzenberg (2006) and Matopoulos et al. (2007) made a conceptual framework which comprises the theoretical aspects of supply chain management. They consider a supply chain as the collaboration between involved firms represented by a collaboration strategy, as the overall strategy establishes the structure of the chain management. From these frameworks, two dimensions determinant for the collaboration strategy could be derived. First, a collaboration strategy facilitates the alignment of involved parties and agreement on the objectives of cooperation. By establishing a collaborative strategy it is important that partners are motivated to collaborate and act in a manner consistent with the mutual strategic objectives rather than own goals (Simatupang and Sridharan, 2004). Second, the collaboration strategy incorporates the management of the interdependencies. The actions of involved parties should be aligned, or in other words coordinated. Hence, to achieve collaboration along a supply chain, the cooperation between parties as well as the coordination are important elements.

Concerning the collaborative strategy of a food chain, the focal company reserves a major role. The focal firm is generally seen as being responsible for the specific food item and the other firms

usually are dependent. Though, mutual dependencies exist and supplying organizations could also obtain some power from the focal company (Belaya and Hanf, 2008). As the focal firm is the leading firm, it should manage the entire chain, which consist of a collective strategy that addresses both strategies to cooperate and coordinate. In most cases, the focal firm could be seen as the chain initiator. Certainly in SFSCs the initiator is equivalent to the focal firm (Baltussen et al., 2008). In most cases the SFSC initiative is in hands of a primary producer (supplier), distributing organization or buying party, which makes the chain either push or pull driven. Furthermore, a SFSC could be initiated by a (non-) governmental organization. However, research shows that these kinds of initiatives face difficulties to ensure subsistence on the long run. These initiatives rather formulate a strategy serving a societal function by for example focussing on the intake of healthy food or education on food provision. In that case firms must be convinced of the added value of the initiative, which is not always self-evident (Voort et al., 2011). The chain initiator plays thus an important role in the formulation of a collective strategy, which derives both cooperation and coordination.

Cooperation refers to the partnering strategy (Hanf and Dautzenberg, 2006), the design and government of activities (Matopoulos et al., 2007) and the alignment of interest (Gulati et al., 2005). These are all expressions to describe the arrangements among exchanges between firms. Different factors could be an incentive to cooperate with other chain members. This could refer to satisfying the end-consumer or optimize operational processes, improve innovation, reduce risks etc. Sharing costs and benefits is probably one of the crucial factors to guide companies to close cooperation (Matopoulos et al., 2007). Partners should share the gain as well as the pain (Cao and Zhang, 2011, Mentzer et al., 2000).

The extent to which parties are cooperating or in other words the 'depth' of cooperation could be explained by determining the orientation of cooperation. Mentzer et al. (2000) suggest that this orientation exists on a continuum varying from strategic to operational cooperation. Operational cooperation comprises the optimization of operational efficiency and effectiveness. It involves a short term relationship, which obtains to enhance e.g. delivery time, stock level, and quality customer service level. Strategic cooperation in contrast is an on-going, long term inter-firm relationship. It aims at increasing customer value and enhances the competitive position of firms. In comparison with operational cooperation, this form of cooperation is more complex to implement and requires more organizational resources.

Operational cooperation could be effective to accomplish short term goals. However, in case of establishing a new product or supply chain, only an operational orientation is not sufficient. Research based on Dutch case studies points out that in case only operational relations between producers and purchasers are established, the risk others will enter the market and copy the product is rather high. Especially in case there aren't a lot of chain parties and the product is not very differentiated (Baltussen et al., 2008). By creating a strategic relationship between chain parties the involved food products are more difficult to reproduce by others, and thus ahead of the competition. Since the implementation of a strategic partnership is rather time consuming.

Notwithstanding the orientation of cooperation, it is important that firms are motivated to cooperate and act in a manner consistent with the mutual objectives rather than own goals (Simatupang and Sridharan, 2004). If problems in cooperation arise, most of the time this is caused by optimizing individual benefits instead of striving for collectively beneficial outcomes (Gulati et al., 2005 in Hanf and Dautzenberg, 2007). Hence, Gulati et al. (2005) consider problems in cooperation – alignment of interests- as problems of motivation. So, to align the interests, govern activities, design a

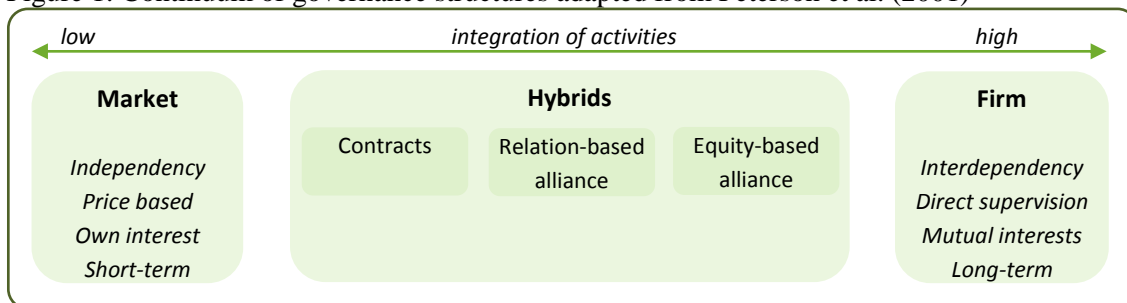
partnering strategy beneficial for both involved parties, clear governance structures are necessary (Hanf and Dautzenberg, 2006). Hence, the cooperation between parties (alignment of interest) could be further explained by using insights of the governance structures, which are discussed in the next section.

3.2 Governance structure

A governance structure (GS) refers to the way in which transactions are carried out and administrated. A GS provides efficiency (i.e. minimize transaction costs) of transactions by incorporating the attributes of the transaction and environment in which the transaction is carried out. Hence, some governance structures are more efficient than others (Menard 2004). Derived from TCE, all governance structures vary between two extremes, a continuum between market on the one side and a firm on the other depending on the level of integration of activities, as shown in

Figure 1.

Figure 1: Continuum of governance structures adapted from Peterson et al. (2001)



On one end of the continuum, transactions are organized using the market. There is no alignment between parties except the price and both parties are not required to make specific investments and long-run relations are not ensured. The other end of the continuum involves transactions which are organized by vertical integration of activities of both firms; two parties in a transaction becoming one party. Formed by mutual interest, shared goals, reciprocity and pooled resources, activities of both actors could be totally integrated. Next two these two structures, alternative governance structures -known as hybrids- are formulated (Slangen et al, 2008). Hybrids can neither rely on direct supervision nor on prices, therefore specific governance structures for cooperating and coordinating transactions are necessary. Especially in the agro-food sector hybrids are prominent, many transactions are governed by tailored structures and coordination mechanisms.

Hybrids could refer to many governance structures, varying from joint-ventures, cooperatives, sport leagues, franchisors to collaborative trade market etc. As Baker (2008) in Menard (2010) cites, 'firms have invented far more ways to work together than organizational economics has so far expressed'. As governance structures take into account the attributes of transactions and the environment, they vary heavily in their nature. Peterson et al. (2001) provide an understandable differentiation of hybrid structures taken into account the identity of involved parties and intensity of cooperation. They made the following distinction among hybrid structures

Contracts

Contracts are a well-known governance structures for conducting an exchange. Transactions are performed using a bilateral contract in which the conditions of the transactions are specified. The price

is leading and broadly accepted performance standards provide the base. Compared with the spot-market structure, parties have to invest more time to transact as more factors count than price setting and a yes or no decision (Peterson et al., 2001). Coordination increases and parties could rely on for example directives and safeguards or a third party in case one party failed to meet the requirements. Contracting governance structures based on durable relationships often coordinate more efficient than spot markets while avoiding integration of activities and its bureaucratic burden of more integrated governance structures (Ménard, 2004).

Relation-based alliance

A relation-based alliance could be seen as ‘an exchange relationship in which involved parties share risks and benefits emanating from mutually identified objectives’ (Peterson et al., 2001). The main differences compared to contracts are that more than two parties could be involved and transactions are more complex. Parties are pooling part their resources, agree to work closely and must find means to solve internal differences and concerns, while they both remain separate entities. For the sake of clarity, these alliances could use and they do many times in practice, contracts as part of their relationship. These contracts could be seen as self-enforcing and mainly based on reputation as the identity of parties, informal agreements, rules, norms and incentives are crucial (Slangen et al., 2008). The existence of a contract in an exchange relationship does not necessarily mean that the GS is covered by the contract portion of the continuum; it could be seen as part of the alliances’ basis.

Equity-based alliances

This third type of hybrids is most discussed in literature and embraces cooperatives, joint-ventures and other more formal governance structures which involve some shared equity capital between parties. These governance structures rely on decentralized decisions, contracts and formulized procedures. A distinguishing feature of this organizational structure compared to a relation-based alliance is the presence of a formal organisation that has an identity distinct from the exchange actors and that is designed to be their joint agent in the conduct of the coordination activity (Peterson et al., 2001, Slangen et al., 2008). An equity commitment is made which makes defining of control rights and responsibilities more clear and coordination is arranged by a formal organisation structure. The ability to undo the cooperation is very little, as substantial investments in the new independent identity are made.

In the European agro-food industry, relation-based alliances and equity-based alliances among farmers and participants have become increasingly important (Ménard and Klein, 2004). According to Ménard and Klein (2004) they ‘represent a balance between the benefits of centralized coordination and control and the incentive and informational advantages of decentralized decision-making’. Alliances are also seen as networks as they represent ‘arrangements involving a set of recurrent contractual ties among entities’ (Ménard, 2004). While network members pool significant resources, they often rely on relational contracts, rather than formal written agreements, though they do establish some formal mechanism for coordinating (Ménard and Klein, 2004).

The continuum shows us a classification among different governance structures to align interests of involved parties. The GS is a source of value as it governs transactions efficiently by taken into account the attribution of the transactions, identity of involved parties and their mutual relation. In the context of SFSCs, food is transacted and the relationship and identity of involved parties differ among cases. These involved parties could be both firms, but also involve consumers in case of direct to consumer supply chains. However, the literature related to governance structure does not include the involvement of consumers in their theories.

To indicate the governance structure especially used by direct to consumer SFSCs, authors try to conceptualize the interaction between producers and consumers and refer for instance to local partnerships (Lamine, 2005) or food community networks (FNC) (Pascucci, 2010). Notable in case the bilateral interaction between farmers and consumer shows an increase in mutual dependence and decision right sharing. This could entail different forms, for instance private companies involving consumers as individuals, cooperative farms or schemes run by social insertion organisations for unemployed and low qualified people (Lamine, 2005), or more concrete, Community Supported Agriculture (CSA), farmer markets, box schemes or consumer buying groups (cooperatives) etc. are part of these 'different' governance structures.

The fundament of these producer-consumer governance structures is that consumers and producer strongly integrate or align their goals by the sharing and pooling part resources. Consumers invest time, information and financial resources and obtain guarantees of freshness and origin and perhaps a more qualitative nature concerning production practices. Producers are more certain of a stable income and reduce some of their costs (e.g. labour or certification) (Pascucci, 2010, Lamine, 2005). Applying the classification above, we could consider these governance structures also as a relation-based alliance or equity-based alliance. The mutuality in interests and sharing risks and benefits represents namely the base of a relation-based alliance. And in case a formal entity is formed and involved parties share also equity capital, for example by establishing a consumer cooperative, we could refer to an equity-based governance structure.

To distinguish different governance structures used in direct to consumer SFSCs and intermediate ones, we should distinguish between levels of consumer participation, corresponding to the level of integration of activities. Are they really involved in a firm's business or just a consumer which purchases directly from the producer? CSA, a farmer market as well as an on-farm shop are for example using direct marketing, though they differ in the degree of consumer participation. Considering them all as applying the same governance structure would be too restrictive. CSA is a partnership between farmers and consumers working together through membership. Consumer could be part of the farm and therefore maintain a relation-based alliance or an equity-based alliance. Meanwhile in farmer markets or shopping at an on-farm shop consumers are more likely to be not involved in a farm's business, hence rather a spot-market (supply and demand governs the transactions) represents the governance structure. So, to investigate the governance structure used within a SFSC, a distinction should be made whether the involved parties are firms and/or consumers and to what extent they are participating in one's business.

So far, different governance structures indicate how involved parties are related to each other and transactions are carried out. In case of SFSCs the involved parties could be both firms and consumers. To distinguish the governance structure among direct to consumer supply chains, the level of consumer participation should be taken into account. The continuum of governance structures shows us five different structures. Depending on the level of activities; the market, contract, relation-based alliance, equity-based alliance or an integrated firm could represent governance structures of SFSCs.

Furthermore, parties involved in a transaction will always follow a mechanism to coordinate transactions, of which the importance is already discussed before. On the base of the collaboration strategy lies the cooperation as well as coordination. The focus on the alignment of actions of involved parties and maintenance of relationships could not be excluded. This brings us to the next section which discusses different coordination mechanisms.

3.3 Coordination mechanisms

Coordination refers to alignment of actions (Gulati, 2005), maintenance of relationships (Matopoulos, 2007) or supply chain management (Hanf and Dautzenberg, 2006). All phrases which refer to the incorporation of each other's actions and hence the predictability of others' actions. Good coordination is necessary to deal with uncertainty about the behaviour of involved parties and the decision rules and to enable mutual adjustment on an on-going basis.

To provide more insights in the nature of coordination, one could refer to coordination mechanisms which reflect the mechanisms used to govern transactions. The coordination mechanisms closely relate to a governance structure as the nature of coordinating transactions characterizes the type of governance structure (Slangen et al., 2008). Figure 2 presents four groups of coordination mechanisms which are discussed below.

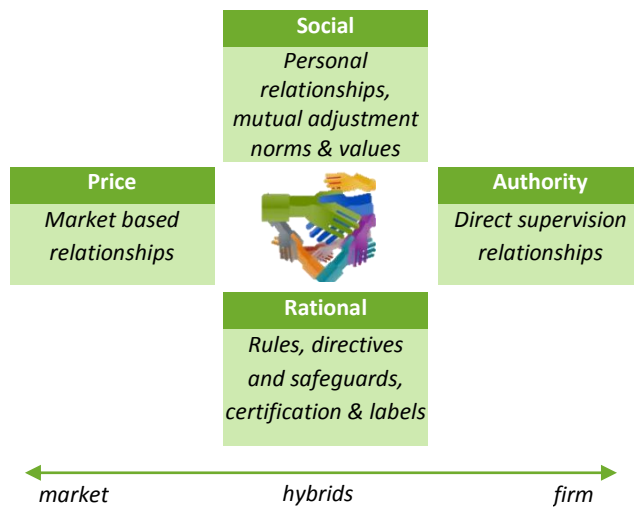


Figure 2: Four coordination mechanisms adapted from Borgen and Hegrenes (2005)

Price

The price as a coordination mechanism corresponds in the ideal-typical situation to the market as governance structure. Derived from the principles of Adam Smith, the market is coordinated by only the supply and demand of products and therefore the price is the most important coordination mechanism (Peterson et al., 2001). Also, the price could also be an additional coordination mechanism. In that case the price provides coordination by functioning as a compensation or motivation for the transaction. For most governance structures price is not sufficient to coordinate the transaction and hence other coordination mechanisms are used (Slangen et al., 2008).

Authority

On the other end of the continuum, the firm, transactions are more likely to be coordinated by direct supervision and authority; or in other words the visible hand (Peterson et al., 2001). This kind of coordination is most of the time used in case a legal entity is formed which has the control (e.g. equity-based alliances and firms). This formal entity (higher in hierarchy) is responsible for the work of other firms (lower in hierarchy) and for coordinating the transaction by defining a plan according to which the firms should act. This is often associated with economies of scale, transaction specific investments and the protection of knowledge (Borgen and Hegrenes, 2005).

Rational

Alternative to price and authority, parties could coordinate their transactions using rational oriented mechanisms which are understood as rules, directives and safeguards. These mechanisms can

be used to secure expected quality of products or secure equal tasks (Borgen and Hegrenes, 2005, Slangen et al., 2008). It is used in governance structures based on an instrumental motive, driven by self-interest and distrust. Hence, specified contracts are strongly coordinated by rules, directives and safeguards in which price plays a subordinate role.

Social

In addition to the more formal mechanisms of coordination (e.g. rational and authority oriented), a number of informal elements could increase the predictability of other's behaviour and how the other should behave and thus enable coordination. Personal relationships, mutual adjustment, common values and norms function as coordination mechanisms. The social embeddedness is used as a guide to coordinate. In governance structures using social coordination mechanisms, informal agreements, reputation and repeated transactions are determinant rather than legal enforceability. Relational-based alliances emphasis from origin more on social mechanisms, a third party judge is practical not across in most of the agreements neither a formal joint management structure. The coordinating mechanism is based on mutual control arising from mutual interest (Peterson et al., 2001).

The four groups of coordination mechanisms are distinguished but they don't exclude each other and could be simultaneously applied in a governance structure. There is no one-to-one correspondence between coordination mechanisms and governance structure. Which coordination mechanisms are prevalent in SFSCs has not been studied in depth. However, Abatekassa and Peterson (2011) indicate the importance of social aspects and state that SFSCs are mainly based on existing relationships and linkages between the supply chain actors. Their results indicate that local food supply to retail outlets depends not only on the traditional supplier selection criteria such as price, volume and quality, but also on factors such as trust, reliability and information sharing. Hence, the social relationship between firms is also determinant and functions as a coordination mechanism. This is also in line with research focussed on farmer markets which shows that price is not a determining factor in consumers' decision to participate (Pascucci et al., 2011), rather the direct interaction with producers, or the specific quality features of the foods coordinate transaction.

The social oriented coordination could on itself be an important mechanism to coordinate, but also lower the importance of other coordination mechanisms. Research points out that in case there is a great deal trust between consumers and the selling entity, there is less of a need to specify the origin of products (which farmer produced the item) or to create a unique third-party certification scheme (USDA, 2012). Hence, the personal relationship between parties decreases the need to use rational oriented coordination mechanisms to take into account each other's behaviour. Furthermore, King et al. (2010) concludes that close relationships give producers in the intermediated supply chains some flexibility in setting prices independent of commodity market prices. In such relationships the trading partners are willing to forego short run price opportunities offered by other firms. So, the social orientation is preferred above the price coordination mechanism.

On the other hand, research shows us that social mechanisms do play a role, but subordinate to the market-based relationships. If intermediate SFSCs become more successful, in terms of volume and sales, businesses tend to rely more on rational mechanisms instead of social mechanisms (Bloom and Hinrichs, 2011 and Stevenson and Pirog, 2008). So, depending on the transaction, involved parties and their mutual relationship, some coordination mechanisms tend to be more effective and efficient than others.

4. DISCUSSION AND CONCLUSIONS

The literature concerning SFSCs is inherently associated with local food. Due to small number of research areas that contribute to the literature, many authors consider SFSCs opening up potential for rural development. They are claimed to form a countermovement to avoid the threatening forces of global industrialized food chains. After a review of several definitions of local food and terms related to a SFSC, four prevalent disciplines are derived. Accordingly, SFSCs refer to (i) proximity between producers and consumers, mainly (but not only) related to a specific geographic area, which might contain both producers and consumers; (ii) added value for producers or local economy, (iii) connectedness and re-distributive effects between producers and consumer and community; (iv) lastly SFSCs could enhance sustainability. However the economic viability of SFSCs regarding farms is still difficult to assess and differs among cases. For example farm size, location, farm engagement in other entrepreneurial activities and the used market arrangements determine the extent to which SFSCs contribute to the total revenues of farms.

From a social perspective the interaction between consumers and SFSC farms could be assessed on a producer-consumer level and community-network level. Using the perspective of producer and consumer interaction, the territory and identify preservation of food products is very important to differentiate the involved food products. Concerning SFSCs, producer and consumer could interact in different ways (i.e. face to face, proximate and extended) depending on the level of spatial extension SFSCs. From a community network level, the prevailing literature focuses on the engagement in the society of involved SFSC parties. For example by using the concept of social capital, community building efforts of involved parties could contribute to the SFSCs businesses.

In this paper we have highlighted how tackling SFSCs from an organizational economics perspective can be relevant for designing better policy interventions to support their contribution in the rural development processes. SFSCs should be seen as a way of organizing food transactions where consumers and producers can rely on more informal and social-based governance mechanisms. SFSCs are economic organizations which can provide value-added to their participants in a way this is more shared and re-distributed than so-called mainstream supply chains. However in our view SFSCs are not necessarily alternative to mainstream food supply chains but present many features that can make them complementary.

This paper constitutes only a first attempt to further model and analyse these economic organizations, and to assess the impact of different public interventions on their performances, both in the short and long run.

ACKNOWLEDGEMENTS

This paper is based on Mjriam Fondse MSc thesis research project. She benefitted from the supervision of dr. Emiel Wubben (Wageningen University), dr. Harry Korstee (LEI) and co-supervision of dr. Stefano Pascucci (Wageningen University).

REFERENCES

- Abatekassa, G. and Peterson, H. C. (2011). Access For Local Food Through The Conventional Food Supply Chain. *International Food And Agribusiness Management Review* 14:63-82.
- Allen, P., Fitzsimmons, M., Goodman, M. and Warner, K. (2003). Shifting Plates In The Agrifood Landscape: The Tectonics Of Alternative Agrifood Initiatives In California. *Journal of Rural Studies* 19:61-75.

- Baltussen, W. H. M., Oosterkamp, E. B., Van Mil, E. M. and Hagelaar, G. (2008). *Kansen En Belemmeringen In Duurzame Ketenvorming: Primair Bedrijf In Ketens?*. Den Haag, Lei.
- Belaya, V. and Hanf, J. H. (2008). The “Dark” And The “Bright” Sides Of Power In Supply Chain Networks. 48th Annual Conference German Association Of Agricultural Economists. Bonn, Germany.
- Bloom, J. D. and Hinrichs, C. C. (2011). Moving Local Food Through Conventional Food System Infrastructure: Value Chain Framework Comparisons And Insights. *Renewable Agriculture And Food Systems* 26: 13-23.
- Borgen, S. O. and Hegrenes, A. (2005). How Can Transaction Costs Economics Add To The Understanding Of New Contractual Formats In The Norwegian Agri-Food System? Working Paper No 2005-7. Oslo: Centre For Food Policy, Norwegian Economics Agricultural Economic Research Institute.
- Born, B. and Purcell, M. (2006). Avoiding The Local Trap. *Journal Of Planning Education And Research* 26: 195-207.
- Cao, M. and Zhang, Q. (2011). Supply Chain Collaboration: Impact On Collaborative Advantage And Firm Performance. *Journal Of Operations Management* 29:163-180.
- Delind, L. B. 2002. Place, Work, And Civic Agriculture: Common Fields For Cultivation. *Agriculture And Human Values* 19:217-224.
- Dupuis, E. M. and Goodman, D. (2005). Should We Go “Home” To Eat?: Toward A Reflexive Politics Of Localism. *Journal Of Rural Studies* 21:359-371.
- Feagan, R. (2007). The Place Of Food: Mapping Out The ‘Local’ In Local Food Systems. *Progress In Human Geography* 31: 23-42.
- Forsman, S. and Paananen, J. (2004). Value Creation In Local Food Supply Chains: Market Opportunities And Challenges. 14th Annual Iama World Food & Agribusiness Symposium Papers And Presentations, www.ifama.org/events/conferences/2004/cmsdocs/forsman1038.pdf.
- Fu, Y. and Piplani, R. (2004). Supply-Side Collaboration And Its Value In Supply Chains. *European Journal Of Operational Research* 152:281-288.
- Goodman, D. (2004). Rural Europe Redux? Reflections On Alternative Agro-Food Networks And Paradigm Change. *Sociologia Ruralis* 44:3-16.
- Gulati, R., Lawrence, P. R. and Puranam, P. (2005). Adaptation In Vertical Relationships: Beyond Incentive Conflict. *Strategic Management Journal* 26:415-440.
- Hanf, J. and Dautzenberg, K. (2006). A Theoretical Framework Of Chain Management. *Journal On Chain And Network Science* 6:79-94.
- Hinrichs, C. C. (2003). The Practice And Politics Of Food System Localization. *Journal Of Rural Studies* 19:33-45.
- Holloway, L., Kneafsey, M., Venn, L., Cox, R., Dowler, E. and Tuomainen, H. (2007). Possible Food Economies: A Methodological Framework For Exploring Food Production–Consumption Relationships. *Sociologia Ruralis* 47:1-19.
- Ilbery, B. and Maye, D. (2005). Food Supply Chains And Sustainability: Evidence From Specialist Food Producers In The Scottish/English Borders. *Land Use Policy* 22:331-344.
- Ilbery, B. and Maye, D. (2006). Retailing Local Food In The Scottish–English Borders: A Supply Chain Perspective. *Geoforum*, 37:352-367.
- King, R. P., Hand, M. S., Digiacomio, G., Clancy, K., Gomez, M. I., Hardesty, S. D., Lev, L. and Mclaughlin, E. W. (2010). Comparing The Structure, Size, And Performance Of Local And Mainstream Food Supply Chains. Economic. USDA Research Report No. Err-99.
- Kneafsey, M. (2010). The Region In Food—Important Or Irrelevant?. *Cambridge Journal Of Regions, Economy And Society* 3:177-190.
- Kremer, P. and Deliberty, T. L. (2011). Local Food Practices And Growing Potential: Mapping The Case Of Philadelphia. *Applied Geography* 31:1252-1261.
- Lamine, C. (2005). Settling Shared Uncertainties: Local Partnerships Between Producers And Consumers. *Sociologia Ruralis* 45:324-345.
- Little, J., Ilbery, B., Watts, D., Gilg, A. and Simpson, S. (2012). Regionalization And The Rescaling Of Agro-Food Governance: Case Study Evidence From Two English Regions. *Political Geography* 31:83-93.
- Lyson, T. A. (2000). Moving Toward Civic Agriculture. *Choices* (A Publication Of The American Agricultural Economics Association) 3:42-45.
- Marsden, T., Banks, J. and Bristow, G. (2000). Food Supply Chain Approaches: Exploring Their Role In Rural Development. *Sociologia Ruralis* 40:424-438.
- Martinez, S., Hand, M., Da Pra, M., Pollack, S., Ralston, K., Smith, T., Vogel, S., Clark, S., Lohr, L., Low, S. and Newman, C. (2010). Local Food Systems: Concepts, Impacts, And Issues. USDA Economic Research Report Number 97.

- Matopoulos, A., Vlachopoulou, M., Manthou, V. and Manos, B. (2007). A Conceptual Framework For Supply Chain Collaboration: Empirical Evidence From The Agri-Food Industry. *Supply Chain Management: An International Journal* 12: 177 - 186.
- Ménard, C. (2004). The Economics Of Hybrid Organizations. *Journal Of Institutional And Theoretical Economics* 160:345-376.
- Ménard, C. and Klein, P. G. (2004). Organizational Issues In The Agrifood Sector: Toward A Comparative Approach. *American Journal Of Agricultural Economics* 86:750-755.
- Mentzer, J. T., Min, S. and Zacharia, Z. G. (2000). The Nature Of Interfirm Partnering In Supply Chain Management. *Journal Of Retailing* 76:549-568.
- Moynihan, C. and Mcdonagh, P. (2008). Alternative Food Networks: What's Alternative? Australia And New-Zealand Marketing Academy Conference 2008 New South Wales, Australia.
- Pascucci, S. (2010). Governance Structure, Perception And Innovation In Credence Food Transactions: The Role Of Community Networks. *International Journal On Food System Dynamics* 1:224-236.
- Peterson, H. C., Wysocki, A. and Harsh, S. B. (2001). Strategic Choice Along The Vertical Coordination Continuum. *The International Food And Agribusiness Management Review* 4:149-166.
- Renting, H., Marsden, T. K. and Banks, J. (2003). Understanding Alternative Food Networks: Exploring The Role Of Short Food Supply Chains In Rural Development. *Environment And Planning A* 35:393-411.
- Sage, C. (2003). Social Embeddedness And Relations Of Regard:: Alternative 'Good Food' Networks In South-West Ireland. *Journal Of Rural Studies* 19:47-60.
- Simatupang, T. and Sridharan, R. (2004). A Benchmarking Scheme For Supply Chain Collaboration. *Benchmarking: An International Journal* 11:9 - 30.
- Slangen, L. H. G., Loucks, L. A. and Slangen, A. H. L. (2008). *Institutional Economics And Economic Organisation Theory : An Integrated Approach*. Wageningen: Wageningen Academic Publishers.
- Sonnino, R. and Marsden, T. (2006). Beyond The Divide: Rethinking Relationships Between Alternative And Conventional Food Networks In Europe. *Journal Of Economic Geography* 6:181-199.
- Stevenson, G. W. and Pirog, R. (2008). Values-Based Supply Chains: Strategies For Agrifood Enterprises-Of-The-Middle. In: Lyson, T. A., Stevenson, G. W. & Welsh, R. (Eds.) *Food And The Mid-Level Farm*. Cambridge: Mit Press.
- Tregear, A. (2011). Progressing Knowledge In Alternative And Local Food Networks: Critical Reflections And A Research Agenda. *Journal Of Rural Studies* 27:419-430.
- Van Der Ploeg, J. D., Renting, H., Brunori, G., Knickel, K., Mannion, J., Marsden, T., De Roest, K., Sevilla-Guzmán, E. and Ventura, F. (2000). Rural Development: From Practices And Policies Towards Theory. *Sociologia Ruralis* 40:391-408.
- Venn, L., Kneafsey, M., Holloway, L., Cox, R., Dowler, E. and Tuomainen, H. (2006). Researching European 'Alternative' Food Networks: Some Methodological Considerations. *Area* 38:248-258.
- Voort, M. P. J. V. D., Dijk, S. M. V. and Roest, A. E. (2011). *Het Opzetten Van Korte Ketens Met Streekproducten*. Lelystad: Ppo - Agv.
- Watts, D. C. H., Ilbery, B. and Maye, D. (2005). Making Reconnections In Agro-Food Geography: Alternative Systems Of Food Provision. *Progress In Human Geography* 29:22-40.
- Whatmore, S., Stassart, P. and Renting, H. (2003). What's Alternative About Alternative Food Networks? *Environment And Planning A* 35:389-391.

Annex 1 Selected definition of local food found in literature

Definition of local food	Author
<ul style="list-style-type: none"> Reducing the geographical distance between producers and consumers, but also embracing other sustainability criteria that include health, fair trading relations, producer profitability, environmental benefits, access and social inclusivity, animal welfare and cultural conditions 	<p><i>Sustain, UK Alliance for Better Food and Farming (Ilbery and Maye, 2006)</i></p>
<ul style="list-style-type: none"> Refers to ‘good food’ which constitutes a dialectical alternative; food which is authentic, derivative of a place or person(s), produced with regard to principles of sustainability, naturalness, animal welfare and associated with particular spaces (regions, localities and fields where animals graze, vegetables are grown, or materials transformed) 	<p><i>Sage (2003)</i></p>
<ul style="list-style-type: none"> Food grown or processed locally and purchased by restaurants from the local market or primarily through local producers 	<p><i>Sharma et al., 2009)</i></p>
<ul style="list-style-type: none"> Food produced and consumed by exploiting the raw material and production inputs within the region, promoting the economic development and employment of this particular area. The particular area may be a municipality, province, or economic area 	<p><i>Finnish Rural Policy Committee '02 in (Forsman and Paananen, 2004)</i></p>
<ul style="list-style-type: none"> Foods which offer a closer ‘connection’ with the point of production and an opportunity to support the local economy 	<p><i>Guptil and Wilksoms (2003)</i></p>
<ul style="list-style-type: none"> A banner under which people attempt to counteract trends of economic concentration, social disempowerment, and environmental degradation in the food and agricultural landscape 	<p><i>Hinrichs (2003)</i></p>
<ul style="list-style-type: none"> Is produced locally/regionally, contributes to the local/regional rural development strategy, sold to the consumer through the shortest chain that is possible (directly or via one intermediary), sold at a speciality shop or open-market on a local contract , but could not be sold to a retail central buying department, targeted at consumers with one or more specific selling points such as taste, freshness, high quality, cultural motivation, local tradition, local speciality, animal welfare, environmental value and is distributed as close as possible with a maximum radius of 30 miles 	<p><i>Opinion of the European Union Committee of the Regions on ‘Local food systems’ (2011)</i></p>
<ul style="list-style-type: none"> Any agricultural food product that is raised, produced, and distributed in the locality or region in which the final product is marketed, so that the total distance the product is transported is less than 400 miles from the origin of the product or the State in which the product is produced. 	<p><i>US - Federal rural development loan program (King et al., 2010)</i></p>

Annex 1: Selected definitions of a SFSC found in literature

Definition of a SFSC	Author
<ul style="list-style-type: none"> ▪ Rooted in particular places, aim to be economically viable for farmers and consumers, use ecologically sound production and distribution practises, and enhance social equity and democracy for all members of the community 	<i>Feenstra (1997)</i>
<ul style="list-style-type: none"> ▪ Emphasis upon the type of relationship between the producer and the consumer in these supply chains, and the role of this relationship in constructing value and meaning, rather than solely the type of product itself 	<i>Marsden et al. (2000)</i>
<ul style="list-style-type: none"> ▪ Emphasis on ‘their capacity to re-socialise or re-spatialise food, thereby allowing the consumer to make new value judgments about the relative desirability of foods on the basis of their own knowledge, experience, or perceived imagery’ 	<i>Renting et al. (2004)</i>
<ul style="list-style-type: none"> ▪ A more sustainable option—a means of getting biodiversity from farm to plate, of saving energy and reducing food miles, of providing social care and improving civic responsibility, and of retaining economic value in a local economy 	<i>Ilbery et al. (2005)</i>
<ul style="list-style-type: none"> ▪ Reduce the number of intermediaries and spatial distance between producers and consumers and often described as strategies to promote rural development by redistributing value along the food supply chain 	<i>Bloom and Hinrichs (2011)</i>
<ul style="list-style-type: none"> ▪ Natural and social networks formed through common knowledge and understanding of particular places, embedded in their localities 	<i>Kremer and DeLiberty (2011)</i>
<ul style="list-style-type: none"> ▪ The set of trading partner relationships and transactions that delivers a local food product from producers to consumers which conveys information about the product that enables consumers to recognize it as a local food product and strives to establish a bond between the producer and the consumer, even when separated by intermediary segments in the supply chain 	<i>King et al. (2010)</i>
<ul style="list-style-type: none"> ▪ Constitution that redistribute value through the network against the logic of bulk commodity production; that reconvene `trust` between food producers and consumers; and that articulate new forms of political association and market governance 	<i>Whatmore et al. (2003)</i>
<ul style="list-style-type: none"> ▪ Systems that entail market relations in the delivery of food from producer to consumer based on familiarity with and commitment to nearby place, community and environment 	<i>Hinrichs (2000)</i>
<ul style="list-style-type: none"> ▪ New models that engage public concerns about community, social justice, health issues such as nutrition and food safety, and environmental sustainability 	<i>EU – Facilitating Alternative Agro-Food Networks program (2010)</i>
<ul style="list-style-type: none"> ▪ Innovative modes of food provisioning which represent socially exclusive niches rather than the future of European rural economy and society 	<i>Goodman (2004)</i>