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# System Dynamics and Innovation in Food Networks

## 2014

*Proceedings of the 8<sup>th</sup> International European Forum on System Dynamics and Innovation in Food Networks, organized by the International Center for Food Chain and Network Research, University of Bonn, Germany  
February 17-21, 2014, Innsbruck-Igls, Austria  
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INFITA (Intern. Network for IT in Agric., Food and the Environment)*

**edited by**

**U. Rickert and G. Schiefer**



## Alternative Food Systems: The Case of Agri-food SMEs

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### 1 Introduction and context

Talking about food sustainability, including environmental, social and economic issues concerns the whole product life-cycle (i.e., from the production to the consumption as well as transportation, distribution, waste and losses). Thereby, new forms of food supply chain have emerged over the last decade such as farmers markets, Community Supported Agriculture (CSA), organics and Fairtrade stores, online sales. These different marketing channels are called Alternative Food Networks (AFN's) and are considered as an alternative to conventional system (Renting et al. 2003; Ilbery and Maye 2005a; Sonnino and Marsden, 2006). It will be noted in this respect that conventional system dominated by the retail sector is characterized by products standardization, specialization and concentration of the actors, globalized procurement and buyer-driven chains (Gereffi, 1994).

Furthermore, consumers are increasingly looking for healthy and natural products and are more conscious about environmental and social issues. However, costumer's perceptions, motivations and attitudes toward local, organics and fair trade products are ambiguous. Several studies assessing consumer perceptions and attitudes about food highlight the importance of a multidimensional approach of quality (i.e., environmental, health, taste, quality (Codron et al. 2006). Other studies have showed that consumer perceptions about food miles are unclear and the distance could be perceived positively and negatively by consumers (Sirieux et al. 2008; Zapeda and Deal, 2009).

In this context, the main objective of the AFN's is rethinking the market and non-market relationships between producers and consumers (Winter, 2003; Goodman, 2003; Kirwan, 2006; Sage, 2003). They address questions about the redefinition of governance processes and social relations in the food supply chains (Watts et al. 2005).

On the other hand, SMEs (small and medium enterprises) dominate the Agri-food sector particularly in rural areas, they are considered as driving forces of economic growth, employment creation and innovation (De NoronhaVaz et al. 2004). In addition, SMEs have specific characteristics (i.e., flexible management, territorial anchorage, proximity with local actors and lack of financial resources). Thus, we discuss in this paper whether and how SMEs can (and do) play a role in improving food supply chains sustainability and in developing alternative food systems, particularly. Therefore, we propose, first, to conceptualize alternative food system, we will explore secondly the contribution of Agri-food SMEs in alternative food systems, and finally, we will discuss the theoretical framework.

### 2 Conceptualization of alternative food system

The scientific literature concerning Alternative food systems is abundant and fragmented with low theoretical and conceptual framework. Consequently, several concepts refer to these emerging systems such as Short Food Supply Chains (SFSC'S) (Marsden et al. 2000), Alternative food Networks (AFN's) (Ilbery and Maye, 2005a), Alternative food system (Goodman and Goodman, 2009), Food Miles (Smith et al., 2005). It is a generic term referring to all the new and emerging systems that embody alternatives to conventional food system (Renting et al. 2003; Ilbery and Maye 2005a; Sonnino and Marsden, 2006). In this context, the "alternativity" is considered as a redefinition of market and non-market relationships between producers and consumers (Winter, 2003; Goodman, 2003; Kirwan, 2006; Sage, 2003). Olivier and Coquart (2010) consider that "*the definition of alternativity*" depends on political, economic, geographic, social and cultural contexts that reveal it. Therefore, several approaches are mobilized to analyze these alternative food systems:

- **Alternative governance:**

According to Watts et al (2005), alternative food systems are concerned most with issues of governance and social linkages in food supply chains.

- **Social and organizational innovations:**

Short food supply chains (SFSC'S) for example are considered as social and spatial alternatives to conventional system (Watts et al 2005), Indeed, some authors regard these emerging systems as social innovations (Hillier et al, 2004; Chiffolleau and Prevost, 2012). However, the concept of social innovation is not stabilized, short food supply chains '*are new forms of coordinating relations between social actors in order to meet social expectations*' (Chiffolleau and Prevost, 2012). They can be embedded in different social and political projects (Dubuisson-Quellier and Lamine, 2008). In addition, alternative food systems can take many organizational forms and involve different actors (Whatmore and Thorne, 1997; Dubuisson-Quellier and Lamine, 2008).

- **Quality:**

Ilbery and Maye (2005a) consider that the main characteristic of the alternative food systems is the 'turn to quality'. In this sense, the quality should be regarded as food safety in addition to ethical considerations which lead to a new food economy and geographical alternative agricultural production, since quality products are often produced in areas where industrial agriculture is not developed (Murdoch et al. 2000).

- **Proximity:**

Conceptualizing local food is unclear, it depends particularly on the conceptualization of the word' local 'which is relatively complex and closely linked to consumer (Pearson et al, 2011; Khan and Prior, 2010; Blake et al. 2010). Indeed, several approaches are mobilized to define local food (Knight, 2013): First, certain definitions of local food focus on distance and geographical aspects. Then, it can be defined according to a policy approach (i.e., a community, a region, a state or a province, or country). Other authors define local food as a conjunction of several benefits and/or attributes such as convenience, health, status, nature conservation (Blake et al 2010; Selfa and Qazi, 2005). In addition, local agriculture can be conceptualized by opposition to the industrial agriculture and can be considered as a cooperative agriculture and an alternative social movement (Adams and Salois, 2010; Selfa and Qazi, 2005; Zepeda and Deal, 2009). Finally, local food can be defined with an emphasis on social relations between consumer and producer (Smithers et al. 2008).

- **Corporate social responsibility (CRS):**

Corporate social responsibility can be an analytical framework for studying alternative food systems. Indeed, ISO 26000 defines the social responsibility of an organization as: "*the responsibility for the impacts of its decisions and activities on society and the environment, through transparent and ethical behaviour that:*

- *Contributes to sustainable development , health and the welfare of society;*
- *Takes into account the expectations of stakeholders;*
- *Is in compliance with applicable law and consistent with international norms of behavior;*
- *Is integrated throughout the organization and practiced in its relationships"*



**Figure 1.** Conceptualization of alternative food system

### 3 Alternative food system: the role of SMEs

In order to discuss whether and how SMEs can (and do) play a role in improving food supply chains sustainability and developing alternative food systems particularly, the first question concerns the criteria for the classification of small enterprises. Thus, public policies promote quantitative criteria (i.e., Staff numbers, turnover), however, the most specific characteristics of SMEs are qualitative, and they are mainly due to the specificities of management: (1) Centralization of management by the owner-manager (2) Low horizontal and vertical tasks specialization (3) Decision-making is low formalized (4) structural lack of resources (Mintzberg, 1990; Marchensay, 2003)

On the other and, SMEs are embedded in a specific territory especially in the food sector as their activities are largely dependent on natural resources of this territory. In addition, they are strongly embedded in local Networks; they are also stimulated through institutional incentives that have contributed to their emergence. All these characteristics promote innovation in SMEs (Ayerbe, 2006), hence, we hypothesize that small enterprises are ideally suited to develop alternative food systems, through organizational innovations by creating new marketing channels and original cooperation strategies for example; or innovative products by positioning on niche markets such as the valorization of know-how or eco-conception.

### 4 Theoretical framework

All studies concerning alternative food systems have shown the difficulty to separate economic and social issues (Hinrichs, 2000). therefore, there are several theoretical currents to analyze these emerging systems: (1) new institutional economics which emphasizes on the contractual relationships between the different actors (e.g., agency theory, incomplete contracts theory (Hart et Moore, 1990), transaction costs theory (Coase, 1937; Williamson, 1975); (2) New economic sociology which focuses on the role of social capital in economic transactions (e.g., embeddedness theory (Granovetter, 1985); (3) Conventions theory which stresses on building standards, values and norms between actors (Gomez, 1994; Orléan, 1994; Eymard-Duvernay, 2006); (4) Evolutionary theory which analyzes the role of skills and routines in coordination between actors (Nelson and Winter, 1982).

## References

Adams, D. C., Salois, M. J. (2010). Local versus organic: A turn in consumer preferences and willingness-to-pay. *Renewable Agriculture and Food Systems*, 25(4), 331–341.

Ayerbe, C., (2006). «Innovation technologique et organisationnelle au sein de PME innovantes: Complémentarité des processus, analyse comparative des mécanismes de diffusion», *Revue Internationale de la PME*, vol. 19 n°1, p. 9-34.

Blake, M. K., Mellor, J., Crane, L. (2010). Buying local food: Shopping practices, place, and consumption networks in defining food as “local”. *Annals of the Association of American Geographers*, 100(2), 409–426.

Chiffolleau, Y., Prevost, B. (2012). Les circuits courts, des innovations sociales pour une alimentation durable dans les territoires. *Norois* [En ligne], 224 | 2012.

Coase, R. (1937). "The Nature of the Firm". *Economica* (Blackwell Publishing) 4 (16), p.386–405.

Codron, J.-M., Sirieix, L., Reardon, T., 2006. Social and environmental attributes in an emerging mass market: challenges of signalling and consumer perception, with European illustrations, *Agriculture and Human Values*, vol.23, n° 3, p. 283-297.

De NoronhaVaz, T., De Viaene, J., Wigier, M. (eds.), 2004. 'Innovation in Small firms and Dynamics of local Development', Scholar Publishing House, Warsaw. p.258.

Dubuisson-Quellier S., Lamine, C. (2008). Consumer involvement in fair trade and local food systems: delegation and empowerment regimes. *GeoJournal*, n° 73, p. 55-65.

Eymard-Duvernay, F. (2006), L'économie des conventions. Méthodes et résultats. Tome1. Débats. Paris. Éditions La Découverte. p.334.

Gereffi, G., 1994. The organization of buyer-driven global commodity chains: How US retailers shape overseas production networks. In Gereffi, G., Korzeniewicz, M., (eds), *Commodity Chains and Global Capitalism*, Westport, CT: Praeger, 95-122.

Gomez, P.Y. (1994). Qualité et théorie des conventions. *Paris Economica*. p.270.

Goodman D., Goodman M., (2009). Alternative Food Networks, in Kitchin R. and Thrift N. (eds), *International Encyclopedia of Human Geography*, Oxford, Elsevier, p. 208-220.

Goodman, D., (2003). The quality 'turn' and alternative food practices: reflections and agenda, *Journal of Rural Studies*, 19, 1-7.

Granovetter, M., (1985). Economic action and social structure: the problem of embeddedness. *American Journal of Sociology*, n° 91, 481–510.

Hart, O., Moore, J. (1990). Property Rights and the Nature of the Firm. *Journal of Political Economy*, 98, p.1119-1158.

Hillier J., Moulaert F., Nussbaumer J., (2004). Trois essais sur le rôle de l'innovation sociale dans le développement territorial, *Géographie, Économies, Société*, n° 6, p. 129-152.

Hinrichs C.-C. (2000). Embeddedness and local food systems: notes on two types of direct agricultural market. *Journal of Rural Studies*, n° 16, p. 295-303.

Ilbery, B., Maye, D. (2005a), Alternative (Shorter) Food Supply Chains and Specialist Livestock Products in the Scottish – English borders. *Environment and Planning A* 37, pp. 823–844.

Khan, F., Prior, C. (2010). Evaluating the urban consumer with regard to sourcing local food: A heart of England study. *International Journal of Consumer Studies*, 34, 161– 168.

Kirwan, J. (2006). The interpersonal world of direct marketing: examining conventions of quality at UK farmers'markets. *Journal of Rural Studies*, n° 22, p. 301-312.

Knight, A-J., (2013). Evaluating local food programs: The case of Select Nova Scotia. *Evaluation and Program Planning* 36 (2013), p. 29–39.

Marchesnay, M. (2003). « La petite entreprise : sortir de l'ignorance », *Revue Française de Gestion*, Vol. 29. n° 144, p. 107-118.

Marsden, T., J. Banks & G. Bristow (2000), Food Supply Chain Approaches: Exploring Their Role in Rural Development. *Sociologia Ruralis* 40, pp. 424–438.

Mintzberg, H., (1990). Le management : voyage au centre des organisations (traduction française), Editions d'Organisation, Paris.

Murdoch, J., Marsden, T., Banks, J., (2000). Quality, nature, and embeddedness: some theoretical considerations in the context of the food sector. *Economic Geography*, 76 (2), 107–125.

Nelson, R., Winter, S.G. (1982). An Evolutionary Theory of Economic Change. Cambridge (Mass.), Belknap Press/Harvard University Press.

Olivier, V., Coquart, D., (2010). Les AMAP: une alternative socio-économique pour des petits producteurs locaux?, *Économie rurale* [En ligne], 318-319.

Orléan, A. (1994), *L'analyse économique des conventions*. Paris, PUF «Quadrigé».

Pearson, D., Henryks, J., Trott, A., Jones, P., Parker, G., Dumaresq, D., et al. (2011). Local food: Understanding consumer motivations in innovative retail formats. *British Food Journal*, 113(7), 886–899.

Renting, H., Marsden, T., Banks, J. (2003), Understanding Alternative Food Networks: Exploring the Role of Short Food Supply Chains in Rural Development. *Environment and Planning A* 35, pp. 393–411.

Sage, C. (2003). Social embeddedness and relations of regard: alternative 'good food' networks in south-west Ireland. *Journal of Rural Studies*, n° 19, p. 47-60.

Selfa, T., Qazi, J. (2005). Place, taste, or face-to-face? Understanding producer- Consumer networks in "local" food systems in Washington State. *Agriculture and Human Values*, 22, 451–464.

Siriex, L., Grolleau, G., Burkhard, S. (2008). Do consumers care about food miles? An empirical analysis in France. *International Journal of Consumer Studies*, n°32, p.508–515.

Smith, A. et al., (2005), 'The Validity of Food Miles as an Indicator of Sustainable Development', DEFRA report.

Smithers, J., Lamarche, J., & Joseph, A. E. (2008). Unpacking the terms of engagement with local food at the farmers' market: Insights from Ontario. *Journal of Rural Studies* (24), 337–350.

Sonnino, R., Marsden, T., (2006), Beyond the Divide: Rethinking Relationships between Alternative and Conventional Food Networks in Europe. *Journal of Economic Geography* 6, pp. 181–199.

Watts, D. C. H., Ilbery, B., Maye, D., (2005). Making reconnections in agro-food geography: alternative systems of food provision. *Progress in Human Geography*, 29(1): 22-40.

Whatmore, S., Stassart, P., Renting, H. (2003). What's Alternative about Alternative Food Networks? *Environment and Planning A* 35, pp. 389–391.

Williamson, O.E. (1975). « Markets and Hierarchies », New York, the Free Press.

Winter, M., (2003). Embeddedness, the new food economy and defensive localism. *Journal of Rural Studies*, n° 19, p. 23-32.

Zepeda, L., Deal, D., (2009). Organic and local food consumer behaviour: alphabet theory.  
*International Journal of Consumer Studies*, N° 33, p. 697–705.