



The Emergence and Development of Organic Agriculture in a Rural Region of Switzerland

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Abstract – With the emergence of organic agriculture, in which demand can be the same from place to place, the dynamic of local systems can be very different and influence the growth of organic production. In local systems of knowledge, which include the market and the social surroundings, the complex social interactions between farmers, extension officers, researchers, retailers, and consumers can create synergies or blockages for the emergence of organic agriculture in the network of actors surrounding farmers. This study identifies and analyzes the stakeholder network of the organic sector in the Canton of Grisons, a mountainous region of Switzerland. Social networks analysis (SNA) is used to investigate the causes of a significantly high rate of organic agriculture in this region (54% in January 2013). SNA is a method that facilitates the identification of dynamics between stakeholders and reveals the most influential actors in the emergence of a network that positively supports the development of organic agriculture.

INTRODUCTION

Organic agriculture in Switzerland

Organic agriculture in Switzerland started as early as the nineteen-thirties with pioneers giving courses and developing individual ecological cultivation practices (Aeberhard and Rist, 2009). In the seventies, organic agriculture was still being diminished for its lack of scientific fundament; but in 1974, the Research Institute for Organic Agriculture (FiBL) was funded on a private basis. In 1980, guidelines and a common label (the bud, registered as a trademark) were created, followed by the establishment of the Association of Swiss Organic Farmers (Bio Suisse) and market development by the two leading retailers. Thereafter, the adoption of organic guidelines by farmers increased regularly as they became more motivated by financial incentives in the form of federal direct payments. The proportion of organic farms reached a rate of 11.3% in the country in 2012 (organic agricultural area 11.6%).

Factors influencing the adoption of organic farming

The early development of the organic sector in Switzerland has been explained particularly by the development of market demand. Indeed, the development of a niche for organic products in the market during the nineties accompanied an increase in the adoption rate. Beside economic incentives, farmers' motivations and interactions in the institutional net-

works supporting them were mentioned by several authors as important factors in the development of organic production. Moschitz and Stolze (2009) found that the network configuration of agricultural institutions was influenced by political environment and the resources allocated, and that the position and influence of the agricultural ministry and the organic farmers' organization in the network was crucial.

Padel (2001) used the adoption model to explain the diffusion of organic innovation. Organic farming is first adopted by groups of innovators, who are adventurous and not risk-averse, then by early adopters, and finally by the majority, which needs additional motivations such as the influence of their neighbors or market incentives. Personal motivations of farmers to convert to organic agriculture were studied in Switzerland in a survey by Ferjani et al. (2010). The farmers' main reasons for changing to organic were "ecological conviction," followed by "animal well-being," and "personal conception of the domain".

Case study: canton of Grisons

In Switzerland, a particular case was noted in the canton of Grisons, an eastern mountainous region, which has been counting a rate of organic farms around 55% since 2005. This canton with the largest surface in Switzerland counts 22% of all Swiss organic farmers. Other mountain regions show much lower rates: the cantons of Wallis and Uri count 9.6 and 9.4% of organic farms, respectively (Bio Suisse, 2013).

RESEARCH QUESTIONS

The main research question of this study addresses the configuration of the local system surrounding farmers and how it made it possible to reach such a high rate of organic farming in the precise region of the Canton of Grisons. We are particularly interested to know if this achievement can be traced to particular people or organizations that were especially successful in triggering innovation and change.

METHOD

To get an image of the relationships between actors in the study region over time, we used the method of social network analysis (SNA) (Scott, 2004). The first step consists of the identification of an open-ended list of actors from the agricultural sector in the region, through documents research and semi-

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guided interviews with experts. A questionnaire, sent to the list of actors, aims first at collecting relational data for the SNA. The collection of relational data concerned the exchange of information between actors, their collaboration and the financial exchanges. Each time, actors had to answer questions about these relations during three time frames corresponding to key periods of the organic agriculture development in the area. In addition, they also had to select the most influential actors in the three time frames, which allowed the computing of the reputational score of each actor and understanding who played a major role during those time frames. Furthermore, the computation of relational data will provide centrality scores of actors (the number of connections of an actor) and density of networks, which is the proportion of links present in the network (Scott, 2004).

In the second part of the questionnaire, qualitative questions aim to characterize actors and their motivations for organic farming. This data will help us understand the diffusion of organic agriculture and the interactions between actors. The in-depth analysis of this set of data will be conducted in the second part of our study.

FIRST RESULTS

So far, the analysis of the qualitative answers shows that the Cantonal Office for Agriculture and the public extension service played an important role in the beginning of the diffusion of organic agriculture in the Canton of Grisons (1991–1992). Both of them had the commitment of individual actors, essential for the success of the initiative. These key-innovative agents recognized that producing organically could be an advantage of location, because many farmers were cultivating close to nature already before getting certified with the organic “bud” of Bio Suisse. The cheese dairies were crucial players as well. Because some of them decided to process organic milk only, the corresponding valleys converted to organic farming. There were also pioneers of organic farming in the canton of Grisons who loved the idea of organic farming and tried to make the philosophy understandable to other farmers. They acted as social vectors in motivating their peers.

The economic success of the organic initiative was, according to the respondents of the questionnaire, mainly due to the interest and action of one of the two large Swiss retailers, as Coop collaborated directly with the producers and processors and ensured profitable sale channels for organic food as early as in the nineties.

Interestingly, several actors quoted the same three factors as being essential for the triggering of the organic movement in the canton of Grisons:

1. Farmers were already producing in an ecological way so organic standards did not represent a big change.
2. The extension service reacted quickly and gave tailored advice.
3. Farmers in the region are said to be open-minded and market-oriented and seized the market opening offered by Coop.

Naturally, the pioneers and early adopters also faced difficulties. Not everyone in the canton was in favor of organic agriculture and not all producers were as economically successful as expected. The agricultural school started specific training of organic farmers only recently and the local farmers' association avoided collaboration with the organic farmers' association “Bio Grischun” for many years.

The quantitative social network analysis will represent the above-described observations into networks with quantifiable measures and show the different synergies and blockages among actors in a visual form. Furthermore, it should show which actors were or are in a central position within the network of organic agriculture in the Canton of Grisons and how they exchanged information with other actors. Financial flows will be analysed and the degree of influence of different actors over time will be identified in a second step.

OUTLOOK

In conclusion, three major drivers seem important for the development of organic produce supply. First, a market opening for the produce is essential for its outflow, as happened in Grisons with the initiative of Coop. Second, financial incentives help to motivate farmers to convert their techniques, as it was also promoted by direct payments in Switzerland. The third essential factor that contributed to the strong development of organic agriculture in the canton was the dynamic local system of knowledge and committed central actors surrounding farmers.

The actors are well aware of the two first factors as they responded that their aim is not to increase organic farming infinitely but rather to increase the added-value generated within the canton. Extension officers try to give incentives to convert to organic farming to farmers only as long as demand is rising and sales channels available for organic products.

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