

The Finnish Organic Food Chain – An Activity Theory Approach

JAAKKO TAPANI NUUTILA¹, SIRPA KURPPA²

Key words: organic, food chain, activity theory, co-creation

Abstract

This article aims to find the reasons why the Finnish organic food chain has not developed sufficiently to reach the goals the authorities have set for production volume and consumption. The reason is partly that organic products do not meet the quality needs of consumers, and that consumers have been left out of the development of the food chain and decision-making for food selection. The criteria for evaluating the stakeholders' actions and results are only quantitative and financial, instead of being qualitative and being built on accommodating to the values of the consumers. According to extensive research into consumers' opinions on organic production and food, people value safety, ecology, health, ethicality and taste. By adding those factors to the evaluation criteria the food suppliers would enlist consumers as co-creators and enable the stakeholders of organic food production to better face the challenges and meet the goals set for the organic food chain.

Introduction

The Finnish Government has set several goals for the development of the organic food system in Finland (MMM 2001, MMM 2012, MMM 2013, Aakkula et al. 2006). None of the previous goals have been reached. Several other European Union countries, such as Denmark, Austria, Germany and Sweden, have higher volumes of production and consumption in the organic food than Finland (Willer, Kilcher 2012, Willer 2012). In many countries, the food chain is driven by retail markets and the food industry. Decision-making regarding the quality of the food chain and its products is not based on consumers' values and needs. It is based only on quantitative facts such as profitability (Aakkula et al. 2006, Kuosmanen, Niemi 2009, Kottila 2010, Kottila, Rönni 2008, Kottila, Rönni 2006). In this article, the principles of co-creation theory are integrated into the activity theory frame (Engeström 1987) in the Finnish food chain concept in order to identify the weak points of the food chain and to present a solution for reaching the goals set for the development of the organic food chain in Finland.

Material and methods

This article uses Yrjö Engeström's model of Vygotsky's Activity Theory (Engeström 1987, Engeström 1995, Engeström 2008). The theory has been used successfully in many different concepts, including the organic food chain concept (Seppänen 2004). This model of the system's activity offers a tool for analysing the inter-relationships among the elements of the system like the food chain (Burnard, Younker 2008). It also gives us a tool for identifying institutional barriers and planning future activities (Yamagata-Lynch, Smaldino 2007). The theory forms a triangle (Figure 1), in which the actors and actions of the Finnish food chain might appear as follows: *Subject*: the companies and operators separately with no co-operation (Kottila, Rönni 2006), *Tools*: doing business to reach the object, and *Object*: earning money. There are also other factors: *Rules*: everyone's own rules and company culture, *Community*: there is no food-chain level co-operation, *Division of labour*: unfair competition, increased price margins (Kuosmanen, Niemi 2009) and *Outcome of the activity*: does not lead to the development of the organic food chain. Some other factors were implemented in this, Engeström's activity theory model: *The link between the food chain and the consumers is weak; the evaluation of the quality of the food chain process and food is based only on the quantitative aspects, not on consumers' needs* (Kottila 2010), and *the government's interaction with the rules of the food chain is weak*.

¹Finnish Organic Research Institute and MTT Agrifood Research Finland, www.mtt.fi, jaakko.nuutila@mtt.fi

² MTT Agrifood Research Finland, www.mtt.fi, sirpa.kurppa@mtt.fi

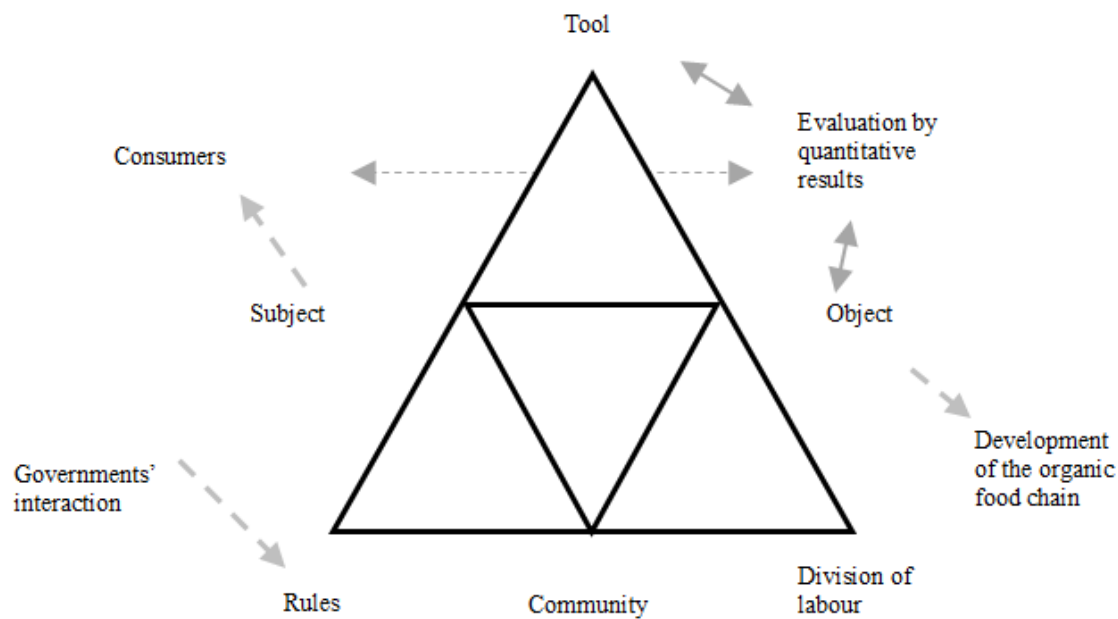


Figure 1. The situation of the Finnish food chain in Engeström's theory

Because the consumers have been left out of the food chain, the principles of co-creation theory are also used to solve the problem of the underdevelopment of the Finnish organic food chain. The main idea of co-creation theory is to get the customers (consumers) involved in the creation and development of products and services as co-creators (Gylden 2012, Zwick et al. 2008). That will ensure that the products are accepted by the user. According to many studies on consumers' willingness to use organic products, safety, ecology, health, ethicality and taste have been found to be the most important factors (Sirieix et al. 2006, De Lorenzo et al. 2010, Oughton 2009, Midmore et al. 2005, Ness et al. 2010).

Results

If the consumer's values and opinions are introduced into the activity of the food chain, the evaluation criteria for the activity and business results (object) would also be qualitative such as safety, ecology, health, ethicality and taste. That would force the food chain operators into mutual target setting and improved co-operation (subject, rules and community). The government's improved interaction to the widening price margins would reduce unfair competition. With regulations and taxation (Schou, Streibig 1999, Millock et al. 2004) the government could develop the organic food chain towards the goals it has set. Figure 2 shows the changes needed to reach the goals set by the Finnish government.

Discussion

The organic food system gives us a model for a more sustainable food system. It has several challenges to meet and to be accepted by the food chain stakeholders. Only by listening to the consumers' needs and values and taking those among the criteria for evaluating the quality of the food production process and food will the organic food chain develop to meet better the goals set for its production and consumption. The government's interaction with the food system is needed in the form of more effective taxation, subsidy policies and legislation. Those should guide us towards better sustainability.

Suggestions for tackling future challenges of organic animal husbandry

The future of organic animal husbandry is dependent on meat consumption and the co-operation of its stakeholders. The consumers' willingness to buy organic meat products is based on their own values. The food-related scandals make transparency of the meat chain important. The consumers should be better aware of the positive effects of the organic production method for the ethicality and ecology of production as well as the safety, healthiness and taste of meat products.

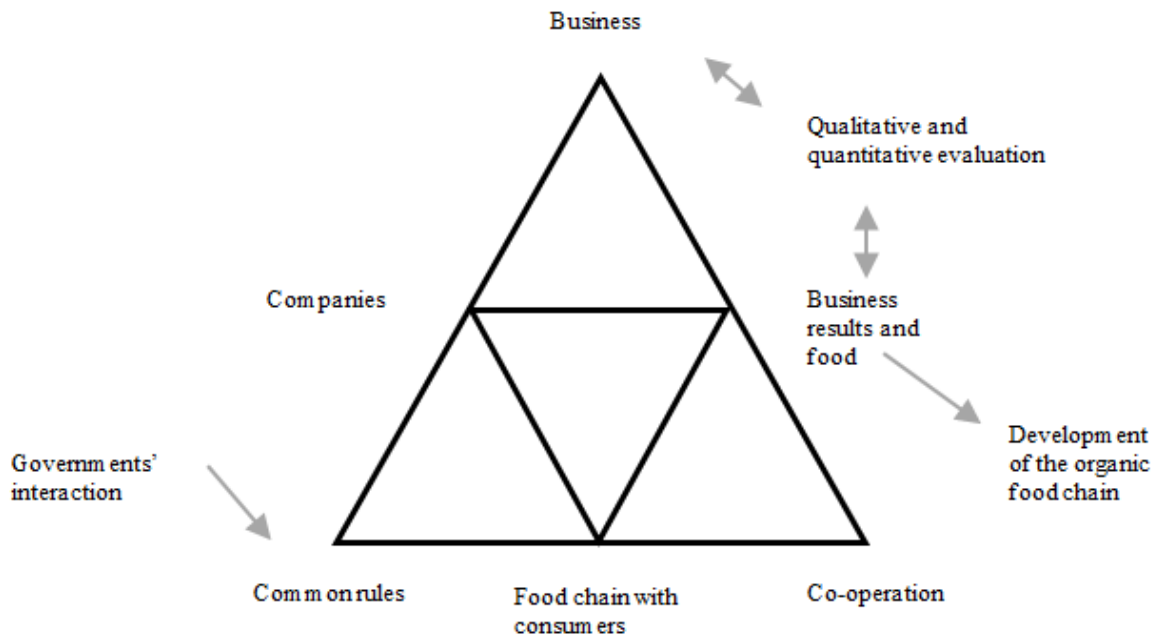


Figure 2. The changes needed to reach the goals set by the Finnish government

References

- Aakkula, J., Forsman-Hugg, S., Jakosuo, K., Kottila, M., Rönni, P. & Sarkkinen, E. 2006, "Views of consumers and other food chain actors on organic food and its production", Joint Organic Congress, Odense, Denmark, 30-31.5.2006.
- Burnard, P. & Younker, B.A. 2008, "Investigating children's musical interactions within the activities systems of group composing and arranging: An application of Engeström's Activity Theory", *International Journal of Educational Research*, vol. 47, No. 1, pp. 60-74.
- De Lorenzo, A., Noce, A., Bigioni, M., Calabrese, V., Rocca, D.G.D., Di Daniele, N., Tozzo, C. & Di Renzo, L. 2010, "The Effects of Italian Mediterranean Organic Diet (IMOD) on Health Status", *Current pharmaceutical design*, vol. 16, No. 7, pp. 814-824.
- Engeström, Y. 2008, "Enriching activity theory without shortcuts", *Interacting with Computers*, vol. 20, No. 2, pp. 256-259.
- Engeström, Y. 1995, "Objects, contradictions and collaboration in medical cognition: an activity-theoretical perspective", *Artificial Intelligence in Medicine*, vol. 7, No. 5, pp. 395-412.
- Engeström, Y. 1987, *Learning by Expanding*, Orienta-Konsultit Oy, Helsinki.
- Gylden, R. 2012, 05/29-last update, *Co-creation and rapid prototyping in service product development*. Available: https://wiki.aalto.fi/download/attachments/68001084/Gylden_ABB_Co-creation+with+Customer+and+Rapid+Prototyping+in.pdf; [2012, 07/29].
- Kottila, M. 2010, *Understanding the organic chain - The framework of the interaction between actors in organic chains in relation to the ecological modernisation of food production*, Helsinki University, Faculty of Agriculture and Forestry.
- Kottila, M. & Rönni, P. 2008, "Collaboration and trust in two organic food chains", *British Food Journal*, vol. 110, No. 4, pp. 376.
- Kottila, M. & Rönni, P. 2006, "Consumption of organic products: Challenge for performance of supply chain", *Joint Organic Congress*, 30-31.5.2006.
- Kuosmanen, T. & Niemi, J. 2009, "What explains the widening gap between the retail and producer prices of food?", *Agricultural and food science*, vol. 18 (2009), pp. 317-331.
- Midmore, P., Naspetti, S., Sherwood, A.M., Vairo, D., Wier, M. & Zanolli, R. 2005, *Consumer Attitudes to Quality and Safety of Organic and Low Input Foods: A review*, University of Wales.
- Millock, K., Nauges, C. & Sterner, T. 2004, *Environmental taxes: A comparison of French and Swedish experience from taxes on industrial air pollution*, CESifo DICE.
- MMM 2013, 16.5.2013-last update, *Lisää luomua! Hallituksen luomualan kehittämisohjelma ja luomualan kehittämisen tavoitteet vuoteen 2020* [Homepage of MMM], [Online]. Available: http://www.mmm.fi/attachments/luomu/6GeZ5BZPA/Luomualan_kehittamisohjelmaFI.pdf [2013, 11/10].

- MMM 2012, *MMM:n suuntaviivoja luomualan kehittämissuunnitelmalle "LUOMU 2020"* [Homepage of Maa- ja metsätalousministeriö], [Online]. Available: http://www.mmm.fi/attachments/luomu/678W6W0V9/luomuohjelma_FINAL_nettiin.pdf [2012, 08/23].
- MMM 2001, *Ehdotus luonnonmukaisen elintarviketuotannon kehittämisestä* [Homepage of Maa- ja metsätalousministeriö], [Online]. Available: http://wwwb.mmm.fi/julkaisut/tyoryhmanmuistiot/2001/TR2001_10.PDF; [2011, 09/09].
- Ness, M., Brennan, M., Oughton, E., Ritson, C. & Ruto, E. 2010, "Modelling consumer behavioural intentions towards food with implications for marketing quality low-input and organic food", *Food Quality & Preference*, vol. 21, No. 1, pp. 100-111.
- Oughton, E. 2009, , *Consumer expectations and attitudes* [Homepage of QualityLowInputFood, Subproject 1.], [Online]. Available: http://orgprints.org/view/projects/eu_qlif.html; [2011, 06/12].
- Schou, J.C. & Streibig, J.C. 1999, "Pesticide Taxes in Scandinavia", *Pesticide Outlook*, vol. 10, No. 6, pp. 227.
- Seppänen, L. 2004, *Learning Challenges in Organic Vegetable farming - An Activity Theoretical Study of On-Farm Practices*, University of Helsinki.
- Sirieix, L., Alessandrini, A. & Persillet, V. 2006, "Motivations and values: a means-end chain study of French consumers" in *Sociological perspectives of organic agriculture: from pioneer to policy*, eds. G. Holt & M. Reed, 15th edn, Athanæum Press, Gateshead, UK, pp. 70.
- Willer, H., & Kilcher, L. 2012, , *The World of Organic Agriculture: Part 2: Land use and crop data*. Available: <http://www.organic-world.net/fileadmin/documents/yearbook/2012/fibl-ifoam-survey-data-2010-crops.pdf> [2012, 6/7].
- Willer, H. 2012, *The European market for Organic Food*, Forschungsinstitut für biologischen Landbau (FiBL).
- Yamagata-Lynch, L.C. & Smaldino, S. 2007, "Using activity theory to evaluate and improve K-12 school and university partnerships", *Evaluation and Program Planning*, vol. 30, pp. 364.
- Zwick, D., Bonsu, S.K. & Darmody, A. 2008, "Putting consumers to Work: "Co-creation" and new marketing governmentality", *Journal of Consumer Culture*, vol. 8, pp. 163.