ROCZNIKI NAUKOWE STOWARZYSZENIA EKONOMISTÓW ROLNICTWA i AGROBIZNESU
doi: 10.5604/01.3001.0012.7741 **Roczniki Naukowe SERiA • 2018 • XX (6)**

received: 01.10.2018 acceptance: 03.12.2018 published: 10.12.2018

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A PROBLEM-BASED APPROACH OF COMMUNITY SUPPORTED AGRICULTURE WITHIN SHORT FOOD SUPPLY CHAINS BASED ON A WESTERN TRANSDANUBIAN SURVEY[1]

PODEJŚCIE PROBLEMOWE DO ROLNICTWA WSPIERANEGO PRZEZ SPOŁECZNOŚĆ W ZAKRESIE KRÓTKICH ŁAŃCUCHÓW ŻYWNOŚCIOWYCH NA PODSTAWIE BADAŃ W ZACHODNIM KRAJU ZADUNAJSKIM

Key words: short food supply chain, community supported agriculture, problems, objectives

Słowa kluczowe: krótkie łańcuchy dostaw żywności, rolnictwo wspierane przez społeczność, problemy, cele

JEL codes: Q13

Abstract. In recent years, there has been an increasing interest in community supported agriculture, as part of the field of short food supply chains. A considerable amount of literature has been published on SFSCs which mainly deal with the benefits and detriments of these kinds of cooperations. Being regarded as the focal point of this current scrutiny, the study has been created to determine major problems existing on both ends of the food chain spectrum with close connection to the community supported agriculture on producer, consumer and partly on intermediary levels. These problem/target groups were created after an analysis of SFSCs by involvement of several farmer's organization and consumers in the Western Transdanubia region. As result of the survey the most influential factor was determined, namely the insufficient nature of the market power of CSA organizations. Therefore, the solution of the basic problem could be a long-term, strategic objective that is the enhancement of the market power of community supported agriculture as vital element of short food supply chains.

Introduction

The European agriculture policy used interpretation based on production to improve "industrial" agriculture in order to eliminate food shortages after the Second World War, which made the boost of agricultural performance necessary. They used the development of industrial agriculture; mechanization, pesticides and fertilizers to implement this goal, but this caused problems after a short amount of time, as it overloaded and polluted the environment [Kajner 2007]. Changing the structure of food trade changed consumer habits too. This process brought about numerous problems that often failed to be reflected in the price of goods [Gombkötő 2017].

For example, small scale agricultural production and consumption supporting the local products are getting overshadowed worldwide. The often unequal power relations between smaller and bigger players of the global food supply chain generate significant tensions all across the world. At a local level, it means that the quantity and the demand for personnel are decreasing, so is the diversity of products, which causes the step-by-step disappearance of local characteristics, the traditional knowledge (that is necessary for production) and trust. Short food supply chains (SFSCs) offer a solution to these problems. They reduce the physical distance between producers and customers and – unlike long supply chains – they often incorporate personal connections as a guarantee for quality, trust and organic qualification in the system. They provide opportunities for small farmers to produce and sell local, high-quality goods directly; and they provide consumers easy access to delicious, mostly ecologically-produced local goods [Réthy, Dezsény 2013].

1 The publication is supported by the EFOP-3.6.3-VEKOP-16-2017-00008 project. The project is co-financed by the European Union and the European Social Found.

In this study, the hypothesis which will be tested is that (within the SFSC system) community supported agriculture (CSA) has probably several market problems yet. The most expected problem effect relates to the insufficient role of CSA organizations in agricultural markets.

Many definitions exist concerning SFSCs and most of them examine the phenomena from different aspects. SFSC is a new or improved (with maximum one intermediary) sales method in the cooperation of agricultural producers, that is becoming a regular sales form of the members in the course of time [Reszkető 2015]. According to Zsófia Benedek [2014] this term covers a broad range of marketing/supply channels. Generally, small geographical, social, cultural distance between producers and consumers is of typical nature, which often requires environmentally friendly production methods as an important aspect. Terry Marsden et al. [2000] emphasize the type of relationship between the producer and the consumer in these supply chains, pronouncing the role of this relationship in constructing value and meaning, rather than just the product itself. Henk Renting et al. [2003] also hold that the SFSC concept covers the interrelations between actors who are directly involved in the production, processing, distribution, and consumption of new food products. Furthermore, the Joint Research Centre of the European Commission created a common definition of SFSCs, based on several and partly above mentioned seminal studies in the topic: "The foods involved are identified by, and traceable to a farmer. The number of intermediaries between farmer and consumer should be 'minimal' or ideally nil" [Santini, y Paloma 2013].

The local food system is based on: more transparent and traceable food chains, wider range of producers – reduced intermediaries, "closer" relationship between producers and consumers; increased flexibility and adaptability to market changes (the adaptation capability to new situations and consumer needs is high). SFSCs can act as a driver of change and a method to increase sustainability, trust, equality and growth in agricultural, food, business, social, health and rural policy areas. A SFSC can also be a vital element in building healthy local economies [Galli, Brunori 2013].

As part of SFSC system, the idea of community supported agriculture was first formulated in Japan in the 1960s, as a solution to the growing industrialization of agriculture and food supply chains. Producers involved in the system could be sure that their products are sold at a good price, while consumers could trust the quality of the goods purchased [Hayes, Milánkovics 2001]. CSA is an alternative food-producing network, a model of agricultural production and product distribution which is based on the community with common interest of small farmers and consumers undertaking the risks of the production together. By sharing profits the aim is to produce high-quality (mostly ecological) food for a local community in a risk-sharing membership/marketing structure. These systems provide livelihood and plan ahead for hundreds of small farmers with the opportunity of direct sales, in a macroeconomic environment that is unfavorable for small family businesses [Sokszinu Videk 2013]. The industrialization of agriculture and the structural transformation of the sector made the life of agricultural workers hard or even impossible. CSA could be a solution for their yet unsolved problems in today's environment, as they provide significant social, economic and environmental advantages for both rural and urban communities [Murdoch et al. 2002]. The alternative sales methods of SFSCs could address the problems of small-scale organic farmers who are struggling to access the market, as it puts emphasis on local food products, environmentally-friendly production methods and sustainable farming instead of global processes. In addition to traditional producing activities, other opportunities for additional income can be incorporated into the system [Horváth 2012]. CSA can also play a prominent role in preserving agricultural diversity and locally adapted knowledge and methods, for example by recycling and restoring landscape varieties. The environmental sustainability of CSA is promoted by more environmentally friendly production methods, the decreasing quantity of packaging material and the shorter transport distances [Réthy, Dezsény 2013]. CSA is primarily targeting people who are wealthier than average, are more responsive to healthy nutrition and are environmentally sensitive. A similar dynamic development is yet to happen in Hungary, but it could be reasonable to promote the concept that has been backed by

governmental attitudes: the formation and support of CSA organizations is part of the 2014-2020 Rural Development Program (in Short Supply Chain Thematic Subprogram) [Reszkető 2015].

There is a growing demand for shortening the global food supply chain in more and more social groups in Hungary. The first CSA initiative was launched in 1999 under the name of "Open Garden" based on Anglo-Saxon example [Vadovics, Hayes 2007]. The initiative was launched to promote sustainable food systems and to find alternative distribution channels. The currently operating Hungarian CSA systems were mostly influenced by the French AMAP movement (Alliance for Peasant Farming). The Association of Conscious Customers has played an indisputable role in the promotion of the French example: they organized several lectures, workshops and other events on the subject. These events helped CSA to gain media attention. The number of community supported (shared) farms and subscription (box) systems is around 24 nowadays, but many new CSA systems are about to form. Within the Western Transdanubia region the Vegetable Community of Dunasziget is the prominent participant. The number of buying groups was 12 in 2017, almost exclusively in big(er) cities and in the agglomeration of Budapest, although in the examined region, such a community in Mosonmagyaróvár, called Szigetközi Szatyor Közösség (Wisket Community of Szigetköz) exist [Tudatos... 2018].

Material and methods

The aim of the paper was to identify limiting factors that could be crucial for the development of regional SFSCs and CSA. As part of a larger-scale survey, a problem group analysis in connection with this issue was carried out by the colleagues of Széchenyi István University, Faculty of Agricultural and Food Sciences. During the empirical research a range of problems was considered, as result, the core problem was determined. In addition causes and effects of forthcoming, listed problems were analyzed, which we depicted with a problem group structure. The problem groups show the negative aspects of the current situation, while the analysis of objectives point out to the positive aspects of the desirable future situation. The process includes the redrafting of problems in the form of goals, so the objective groups basically mirror image problem groups. The cause and effect relation is replaced with the relation between assets and outcomes.

The focus of the survey and the subsequent study was conducted on the evaluation of the situation of regional CSA, the viability and validity of SFSC-based farms. The analysis of the Western Transdanubia region (Győr-Moson-Sopron, Zala and Vas county) was conducted at the year of 2016 with the involvement of the CSA organizations of the region (Wisket Community of Szigetköz, Pannon Local Product Nonprofit Ltd. and Zala Thermal Valley Association) with almost 40 farmers and numerous consumers connected to these organizations. Raising questions concerning the representative nature of this current survey it is complicated if not impossible to provide precise data with reference to the number of participants. It is estimated that farmers operated in CSA system total up to about 100 whereas consumers depending on such producers reach the number of 400-500. The consumers were asked to fill out an online survey, while questionnaires were completed on the producer side by personal inquiries. The intermediary level (as an optional part of the system) were assessed based on existing regulatory framework and available statistical data. While processing the results, the number of evaluable surveys for customers is $n = 103$, for producers it is $n = 32$.

Results

In the last phase of the survey questions were asked about the possible problems occurring while purchasing local products. The results showed a significant spread between the answers. The opinion of consumers ranges significantly from the approach to different problems. Viewing the average of the answers of respondents, the average rate of factors does not exceed the medium level (3), this means that customers do not experience any of the factors – farms are

hard to access, the purchase of local products is time consuming, limited variety of products, high prices, lack of information – most often when they purchase local products. Respondents think that lower level of enjoyment and unfavorable packaging are the least significant problems. With the scrutiny and evaluation of the problems carried out during the analysis of the present survey the factor with the biggest impact was determined, i.e. the core problem: the market power of CSA organizations is insufficient. It is believed, that changing the attitude of stakeholders is inevitable to solve this problem. Following the analysis of problems, issues concerning the different stakeholders (consumers, intermediator organizations and producers) have been outlined (fig. 1).

Consumer level	– Unknown CSA forms/concept – Low food-processing level – Insufficient role of CSA on the market – Lack of motivational environment (media, friends, medical recommendation) – Low publicity level of local products (poor demand) – Irregular product supply (seasonality) – Unfavourable packaging
Intermediary level	– Inelaborate legal background of CSA – Closed communities, limited membership capacity – Lack of SFSC organizations
Producer level	– Prevalence of elderly producers, generational change – Low ratio of animal products within local products – Heterogeneous (not optimal) farm size – Few organic products, producers are not motivated (toward them) – Ambiguous future prospects – Small ratio of CSA forms in selling – Low prices due to demand situations – Reduced marketing tools

Figure 1. Problem group structure
Source: own elaboration

Studying the problem groups, the answer to our core problem could be the appointment of a long-term, strategic goal: to increase the market power of CSA organizations. To achieve this, it is crucial to increase the motivational level of stakeholders. The answers and solution proposals to the problems of the different levels of stakeholders can be seen in figure 2 concerning objective groups. The methods and tools can be applied to achieve the desired effects depending on the nature of the problem (general or specific) and the financial opportunities or restrictive conditions.

Applicable tools on consumer level:

– shops, involvement of educational and research institutions, dissemination of results;
– state grants for food-processing investments;
– to develop and implement sources of support for organizing and making CSA forms more popular;
– to increase motivation level: open gardens, family programmes, "farmer-wellness", workshops, involve different institutions, disseminate results;
– to design "local product trademarks" for certain product lines, introduce quality assurance systems, develop regulatory systems (legislative frameworks);
– to ensure adequate product supply and packaging: ensure the requirements of storage, processing and packaging, investment grants.

Tools for intermediary organizations:

– to provide adequate, supportive legislation;
– to disseminate knowledge, promote CSA organizations, expand capacity and product scope;

Consumer level	– Increase publicity and popularity of CSA forms – Increased food-processing level – Strenghtening of market power of CSA forms – Increasing of motivation level – Increasing value and demand on local products – Adequate product supply (food-processing level)
Intermediary level	– Adequate legal framework of CSA – Expansion of size and capacity of CSA forms – Stimulation and strengthening SFSCs
Producer level	– Management of generational change (takeover) – Increasing animal products ratio in product structure – Adequate (optimal) farm size – Strenghtening the role of organic farming (motivation) – Shaping of positive future prospects – Acknowledgement of CSA forms (popularization) – Higher pricing local products

Figure 2. Objective group structure
Source: own elaboration

– to utilize support possibilities of the Rural Development Programme (2014-2020).

Tools available for producers:

– to integrate the topic into public and higher education, promote a multilevel background support for generational change;
– to facilitate conditions for small livestock farming and supply, create an infrastructure background (subsidies), raise and/or diversify livestock;
– to support policy, favourable credit structures, adequate land policy and operational control frameworks;
– to boost the involvement of professional organizations, consultancy and further training (promotion of organic farming);
– to simplify small-scale taxation and administrative simplification, reduce taxes and contributions to create a positive vision;
– to increase the motivation of producers through professional forums, workshops and appropriate support policies;
– to increase the degree of processing (added value) to increase the price level of local products, increase the product range, use efficient markers;
– to provide vocational training and further training in marketing (strategy).

Conclusions

Taking the economic considerations into account, we attach decisive importance to the role of the state in the promotion of community supported agriculture; at least in the first phase. That is why it is considered to be highly useful both for producers and consumers that the Short Supply Chain Thematic Subprogram is included in the Rural Development Program. The exploration of systemic problems of community agriculture is essential to support the spread of CSA, to eliminate the factors that limit its effectiveness and to inspect ways to increase the number of stakeholders. This study offers some important insights into this field of problems. The tested hypothesis, namely the probable market problems of CSA gained verification. Among them, the most significant problem was actually related to the insufficient role of CSA organizations in agricultural markets.

The core problem raised in the analysis of the examined region, namely the boost of the market power of these type of SFSCs at the top of the objectives, is possible to be solved using the tools proposed together with their allocation to a coherent strategic system.

Bibliography

Benedek Zsófia 2014. *The impacts of short food supply chains. A review of the international literature supplemented by Hungarian experience.*Budapest: MTA Centre for Economic and Regional Studies.

Galli Francesca, Gianluca Brunori (eds.). 2013. *Short Food Supply Chains as drivers of sustainable development. Evidence Document*. Document developed in the framework of the FP7 project Foodlinks (GA No. 265287). Laboratorio di studi rurali Sismondi.

Gombkötő Nóra**.** 2017. *Effect of international trade relations on agri-food trade.* Review on Agriculture and Rural Development 6: 136-142.

Horváth Gergő. 2012. *Közösségi Mezőgazdálkodás – Legyél a részese!* (Community Supported Agriculture – Be part of it!). Budapest: Tudatos Vásárlók Egyesülete, https://tudatosvasarlo.hu/sites/tudatosvasarlo.hu/files/kozossegi_mezogazdalkodas_legy_a_reszese_0.pdf, access: 01.10.2018.

Kajner Péter (ed.). 2007. *Gazda(g)ságunk újrafelfedezése. Fenntartható vidéki gazdaságfejlesztés elméletben és gyakorlatban.* (Rediscovering our economy/richness. Sustainable rural economic development in theory and in practice). Budapest: L'Harmattan Kiadó. 64.

Marsden Terry, Jo Banks, Gillian Bristow. 2000. Food Supply chain approaches: Exploring their role in rural development. *Sociologia Ruralis* 40 (4): 424-438.

Murdoch Jonathan, Natasha Wilson, Nicholas Parrott. 2002. Spatializing Quality: Regional Protection and the Alternative Geography of Food. *European Urban and Regional Studies* 9 (3): 241-261.

Matthew Hayes, Kinga Milánkovics. 2001. *Community Supported Agriculture (CSA): a farmers' manual: how to start up and run a CSA*. Gödöllő: Nyitott Kert Alapítvány.

Renting Henk, Terry Marsden, Jo Banks. 2003. Understanding alternative food networks: Exploring the role of short food supply chains in rural development. *Environment and Planning* A (35): 393-411.

Reszkető Tímea (ed.). 2015. *Vidékfejlesztési program kézikönyv* (Rural development program handbook). Budapest: Nemzeti Agrárgazdasági Kamara.

Réthy Katalin, Dezsény Zoltán. 2013. *Közösség által támogatott mezőgazdaság* (Community Supported Agriculture). Budapest: Ökológiai Mezőgazdasági Kutatóintézet (Research Institute of Organic Agriculture) Közhasznú Nonprofit Kft. (ÖMKi).

Vadovics Edina, Matthew Hayes. 2007. Nyitott Kert – egy helyi bioélelmiszer-hálózat Magyarországon (Open Garden – a local organic food network in Hungary). Ökológia, Gazdálkodás, Társadalom *(ÖKO)* 15 (1-4): 104-124.

Santini Fabien, Sergio Gomez y Paloma (eds.). 2013. Short food supply chains and local food systems in the EU. A State of play of their socio-economic characteristics. European Commission Joint Research Centre, Scientific and Policy Reports, Luxembourg: Publications Office of the European Union.

Sokszinu Videk. 2013. *Hazánkban is terjed a közösségi mezőgazdálkodás* (Community agriculture is also spreading in our country), http://www.sokszinuvidek.hu/index.php/eletmod/2106-Haz%C3%A1nkban-is-terjed-a-k%C3%B6z%C3%B6ss%C3%A9gi-mez%C5%91gazd%C3%A1lkod%C3%A1s, access: 02.10.2018.

Tudatos Vásárlók Egyesülete adatbázisa (Association of Conscious Consumers data base). 2018. *Bemutatkozik a Tudatos Vásárlók Egyesülete* (Introducing the Association of Conscious Consumers). http://tudatosvasarlo.hu/tve, access: 02.10.2018.

Streszczenie

Celem badania było określenie głównych problemów występujących na końcach łańcucha dostaw żywności w powiązaniu, z wspieranym przez społeczność, rolnictwem na poziomach producenta, konsumenta i częściowo pośrednika. W ostatnich latach wzrosło zainteresowanie rolnictwem wspieranym przez społeczność w ramach krótkich łańcuchów dostaw żywności (SFSC). Powstały liczne badania na temat SFSC, które dotyczą głównie korzyści i determinant tego rodzaju współpracy. Badane grupy zostały wyłonione po analizie SFSC przy zaangażowaniu kilku organizacji rolników i konsumentów w regionie Zachodniego Kraju Zadunajskiego na Węgrzech. W wyniku badań stwierdzono, że pozycja rynkowa organizacji społecznych wspierających rolnictwo była niewystarczająca, co najsilniej wpływało na rozwój SFSC. Stwierdzono, że rozwiązaniem tego problemu w perspektywie długofalowej może być wzmocnienie siły rynkowej rolnictwa wspieranego przez społeczność, jako ważnego elementu krótkich łańcuchów dostaw żywności.

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