

## THEORETICAL APPROACH WITH REGARD TO THE MAIN BENEFITS OF SHORT SUPPLY CHAINS. FOCUS ON SMALL PRODUCERS AND LOCAL COMMUNITIES

Lucian TANASĂ<sup>1</sup>, Ioan-Sebastian BRUMĂ<sup>1</sup>, Simona-Roxana ULMAN<sup>2</sup>,  
Gabriel Vasile HOHA<sup>3</sup>

<sup>1</sup>“Gh. Zane” Institute for Economic and Social Research, Romanian Academy, Iași Branch, Teodor Codrescu Street, no. 2, 700481 Iași, Romania; Email: lucian.tanasa@gmail.com, sebastianbruma1978@gmail.com

<sup>2</sup>CERNESIM Environmental Research Center, Institute of Interdisciplinary Research, “Alexandru Ioan Cuza” University of Iasi, 700505 Iasi, Romania; Email: simona.ulman@uaic.ro

<sup>3</sup>“Ion Ionescu de la Brad” Iasi University of Life Sciences, Faculty of Food and Animal Sciences, 700490 Iasi, Romania; Email: gabihoha@uaiasi.ro

**Corresponding author:** sebastianbruma1978@gmail.com

### Abstract

*Due to their characteristics, short food supply chains have an increasingly important role to play in local supply networks as a viable and sustainable alternative to conventional agri-food sector supply chains. They are considered innovative while providing many economic, social, environmental, health, and cultural benefits to small producers and, consequently, local communities. Basing on the specific scientific literature, these benefits are briefly presented in this paper. The contribution of short food supply chains to the improvement of food systems has become relevant in the context of sanitary crisis generated by COVID-19. More precisely, even if the global chains managed to overcome this unforeseen shock, the vulnerabilities appeared and were evident. Accordingly, in our opinion, the development philosophy of local agri-economy needs to change: the conventional agriculture has to coexist nearby the alternative agriculture, while not provoking damages each other. The chains interconnecting final producers and consumers have to be integrated into a socio-economic ecosystem with durable and sustainable basis, while the agri-food market needs to adapt to these new requirements.*

**Key words:** short food supply chains, local producers, agri-food sector, benefits

### INTRODUCTION

In recent years, the fact that the sustainability of conventional food chains has become increasingly questionable is highly debated across the literature. In the same time, considering the increased attractiveness of consumers for the short supply chains, as a component part of alternative systems, this type of chains could represent a viable and complementary alternative to the conventional ones. Their popularity tends to simultaneously increase in the case of consumers, producers, and political decision making factors [7]. Having a specificity of innovation, the issue of short supply chains has not been sufficiently explored from socio-economic, environmental protection, and juridical perspectives. Still, in the last years, in the research sphere, substantial efforts were made

for integrating them in the local agri-food system, while a large list of projects such as FP7 (FOODLINKS, GLAMUR, SUPURBFOOD and FOODMETRES) and Horizon 2020 (SKIN, FOX, STRENGTH2FOOD, CITIES2030) significantly contributed in this regard.

Short supply chains are connected to circularity and environmental sustainability (transport, production method, greenhouse gases emissions), health, food quality, consumers behaviour, direct relationship between producer-consumer and local economy [21], but these factors could not be generalised for all types of such chains. The economic circularity and the peculiarities related to sustainability depend into a considerable level by the place, type and attitudes of consumers and small local producers that are part of the chain.

## MATERIALS AND METHODS

In respect to the methodology, the indirect research method was used, a large variety of articles and studies from the field being investigated. The statistical data can be extracted especially from the individual case studies found in the specific literature, while the majority of their analyses used to contain qualitative data. In the last ten years, different reports and scientific articles appeared as a result of diverse projects implementation, that managed to collect and discuss important quantitative data in regard to functional short supply chains from different member states (or non-members) of European Union.

## RESULTS AND DISCUSSIONS

According to the analysed literature, it seems that, till now, the concept of short supply chains does not have an unanimously accepted definition, fact that determines different uncertainties in understanding it. For some of the authors approaching this issue, the short supply chains refer to the different ways of marketing in the case of agri-food products, able to limit the number of links in agri-food circuits and/ or the physical, geographical distance between the actual place of production and the final consumers [23]. In this respect, it must be observed that the decreasing of the number of interagents specific to this type of supply chain is not synonymous with the concept of direct delivery, case in which there is no intermediate [32, 4, 42]. Through its exclusion from the commercial chain, its role and function have to be passed on the producer, that uses different management and marketing strategies (direct sales at the farm gate, along the roads, manufacturer's shop, agri-food market, own online store, specialized online platforms, participation and sale at trade fairs and festivals etc.) or on the final consumer (travel to the farm gate, to the producer's store/ agri-food market, order online).

Regulation no. 1305/2013, focusing on the plan of rural development policy in the period between 2014-2020, explicitly emphasises the

implementation measures of organizing the food chain, with attention on the short supply one, defined as follows: a supply chain that implies a limited number of economic agents, being engaged in cooperation, local economic development and close geographical and social relationships between producers, processors and consumers [42].

Accordingly, following Michel-Villarreal et al., starting from the definition of Christopher, the short supply chains are seen as networks of actors that are connected and interdependent each other, that cooperate for controlling, managing and improving the flows of products, services, resources and information, from farm to fork, seeking a reduction in intermediaries and physical distance between producers and final consumers [9, 33]. In the same time, this concept is also used as an umbrella one [20, 29].

The attention on short supply chain increased in the European Commission legislation, considering its important role for achieving the environmental goals. This approach has a relevant effect on reinterpreting the market and the performance standards, taking into consideration the role of member states in defining the flexible rules for the local markets, but also the different interpretation of the principle of free movement of goods, in front of the size of local market [6].

The literature insists on the fact that short supply chains provide economic, social, environmental, cultural, and health benefits to local communities, such as: new opportunities of employment at the local level [35, 5, 7], encouragement of the transfer of know-how and information, agro-biodiversity conservation [12, 7], small farmers stimulation for adopting more eco-friendly production systems [38, 42], increase in the case of producers' income [34], reduction of economic uncertainties [20], contribution to the support of local economy [16, 39, 7] – sustaining the local services and suppliers through the support given to the small producers' shops and peasant agri-food markets, supporting synergies with other sectors [20], combating the phenomenon of

external migration [12] and ageing of population, preservation of cultural heritage, including the promotion of tourism [3] and local gastronomy, improving the population health through a high access to more healthy food [26, 1], improving the social interaction between the small producers and final consumers [17, 40] and cooperation between local producers [8].

Several articles and specialized studies have highlighted the multifunctional and cultural capacity of short supply chains to promote social inclusion, pro-environmental behaviours, health and well-being in urban and rural communities [36, 48, 49, 10, 41]. In the same time, urban agroecology, circular economy and urban metabolism concepts focus on rural-urban food networks, reduction of fuel consumption and carbon emissions [20], on the efficient waste and water management, and also on the establishment of different close links in producer-consumer relationship [14, 45, 47]. Local consumers are looking more and more for nutritious, fresh, tasty, and safe food [24]. The short supply chains could have a significant impact in the consumption of more healthy and sustainable food, in the decrease of food waste, but also some ethical aspects or high knowledge with regard to food and its source [41].

Considering the relationship between producers/ processors and final consumers, three ways of interaction specific to the short supply chain were identified [37, 29, 34]: direct contact („face to face”) – direct acquisition from producers, spatial proximity – local production and distribution and spatially extended – consumers detain information with regard to place and process of production.

Referring to this type of relation and basing on the three proximity dimensions, a quite different approach with regard to the definition of the short supply chains concept was proposed by Malak-Rawlikowska et al. [28], as follows: „geographical proximity”, expressing the physical logistical distance („food miles”) of the product from the place of production to the place of concrete consumption; „social proximity”, referring to

the close relationship between producer/ processor and final consumer, leading to the direct transfer of information and bidirectional trustfulness and „organisational proximity”, that is linked to the number of intermediaries implied in the food supply chain.

Moreover, the short supply chains detain an important role in guaranteeing the quality of the products directly bought from the manufacturer [22] or through the traceability guarantees. Still, the quality of the products is especially conditioned by the origin of a sustainable agriculture specific to the post-productivity [44]. These are perceived as being the most appropriate for the marketing of qualitative agri-food products, especially because their action of promoting sustainability and efficiency [2] and their influence with regard to food waste reducing, a healthier, sustainable and ethical food consumption. Moreover, it was shown that the short supply chains detain more data in respect to the bought products (source, certification, freshness, taste, etc.) [41].

However, more sceptical researchers with regard to the general optimism accompanying the short supply chains, especially from the perspective of environmental protection could be found. This category of researchers consider that these supply chains are more sustainable than the conventional ones, but this aspect is less quantifiable, more empirical research being necessary for exploring the impact of sustainability in the case of different types of short supply chains [15]. Moreover, more recent studies elaborated in the Strength2Food (Horizon 2020) project, using the Life Cycle Assessment (LCA) and evaluating the eco-efficiency indicators, demonstrated that, in average, the conventional (long) supply chains could generate less negative effects on environment than the short ones per kilo from a punctual product (with regard to energy consumption of fossil combustible, pollution, emission of greenhouse gases) [27]. The ample research was elaborated on a sample of 428 short and long food supply chains from six European countries. The results showed that the impact of the distribution process in the case of food

on environment is not determined only by the geographical distance among producer and consumer, but also depends on diverse factors, including the infrastructure of supply chain.

The rural sustainable development from the emerging states (including Romania) represents an essential condition for a durable societal development in the context in which an important percentage of total population is still rural (comparatively to developed countries) and, most frequently, much more vulnerable and less resilient. Even though the agriculture from the emerging states seems to follow a favourable trend, unfortunately, this fact does not represent the pillar of improving individual wellbeing of rural population and the eradication of poverty among them. In the mentioned context, a variety of studies from the last period focused on finding different directions of sustainable development, both in the case of agriculture and of the rural space, with its entire complexity. Developing the sustainable agriculture in the case of rural economy implies, among other elements, also the transition from the scale economy to a sustainable local one. It is also reflected in the reconfiguration of food supply chains, determined by diverse socio-economic and environmental peculiarities [13, 18, 11, 30, 19, 43, 46]. The reconfiguration of conventional agricultural system supposes the development of new specific forms totally different to mass production, especially the following: local agri-food systems, short supply chains, rural networks interconnected to the urban ones [19, 31, 37] or, newer, integrated models such as CRFS - City Region Food System [42]. In the same time, the transition to alternative production and supply with local food represents a problem of high complexity (not still totally comprehended), as the conventional production system seems to be more democratic and more accessible for the consumers with different income [25].

Unfortunately, the development of short supply chains depends on some barriers specific to the countries of Eastern Europe (including Romania): low cooperation

between producers/ processors, still extremely high percentage of farmers engaged in subsistence or semi subsistence agriculture, out of taxation system, poor specific infrastructure (low number of agri-food markets from both rural and metropolitan areas, specialty stores/ online platforms and food hubs, events and fairs with agri-food/ gastronomical profile), lower entrepreneurial spirit in the agri-food sector, poor digitalization and agri-marketing, unequal access to the small producers/ processors to the European funds ensuring food safety and security, the persistence of black market in the agri-food sector etc. (Fig. 1) [25].

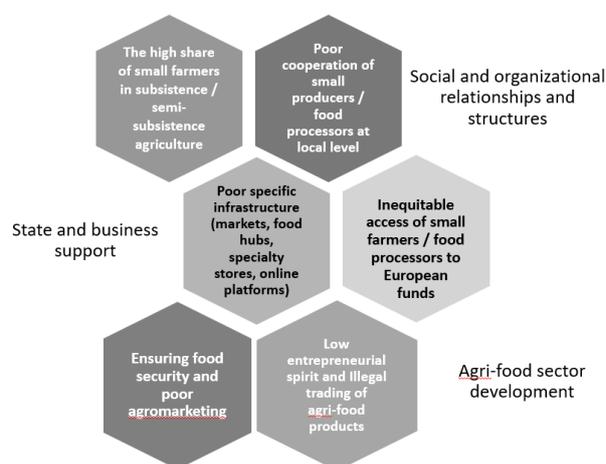


Fig. 1. Barriers in the development of short supply chains

Source: adaptation after [25].

From the perspective of small local producers/ processors, it could be observed that the benefits of short supply chains are mainly economic and social ones, but also environmental and with regard to the conservation of cultural heritage.

#### *Economic benefits*

1. Equitable access to local market for the small producers.
2. Access facilitation to a premium category of clients that are open to pay a good price ("dismantling the market").
3. Market diversification for the local producers.
4. Local producers' profit maximization – short food supply chains offer the possibility of higher profits through the avoidance of intermediaries, consequently contributing to

larger financial gains. This net profit margin, in the classic food supply chain, tends to be divided among all the actors implied in the commercial chain, only a part from the profit being addressed to the producer, the one that remains after the payment of all necessary taxes.

5.Improving the negotiation capacity of farmers in relation to the final consumer.

6.Implying stable and long commercial relationships, based on reciprocal trust.

7.Reducing the geographical distance between the place of production and the one of consumption, the products arriving on the table of final consumer. Short supply chains offer the possibility of considerable reduction in terms of time costs – from the moment of harvest, assortment, temporal storage, delivery and concrete consumption. Most frequently, the short supply chains do not need additional investments in refrigeration equipment or storage spaces nearby the utilization of food additives or preservatives.

8.Often supposing fresh products selling – short supply chains reduce the time necessary to be used by the agri-food products from the moment of harvesting or production to the one of consumption (“from farm to fork”).

9.Significant contribution for diminishing of economic uncertainties in relation to the variations in terms of quantity produced and sold in the case of farmers. Basing on the direct feedback of consumers, local producers are more able to forecast their future crops.

10.Contribution to reduction or even avoidance of some costs in the case of producers. For example, considering the specificity of short supply chains in terms of single interagent, short food supply chains significantly diminish the cost for promotion, although by it the intermediary’s partners engaged in production also benefit.

11.Reducing the costs with packaging and storage of fresh products (fruits, vegetables) or with transport (especially when the intermediary or final consumer travels to the farm gate to pick up the products).

12.Given the higher profit possible to be gained through short supply chains, they could help farmers to become more resilient

and to be able to resist in the difficult periods of economic crisis.

13.Using short supply chains, the farmers have access to innovative tools for agri-food marketing (direct delivery to the consumer’s door, food hub, food truck, mobile greengrocers, specialized stores, individual web pages and promotion platforms of local producers, social media, fairs and events with gastronomic profile – brunches, volante markets etc.).

14.Short supply chains utilise a series of extremely diversified marketing channels that address more types of consumers.

15.In the case in which the short supply chains include also an intermediary, the farmers/ processors do not invest time in the commercialization activity, focusing on the productivity one. The interagent, with the additional logistical infrastructure and experience, concentrates on the way of agri-food products from farm to fork for assuring it in the most proper conditions, guarantying the traceability of the products and as fast as possible.

16.Short supply chains implying an intermediary have the role of taking the production outcome from the small farmers/processors. They do not focus on certain established quantities, but in function of the obtained ones, of the seasonality of crops and other external factors.

17.In some geographical areas, characterized by specific socio-economic peculiarities, the short supply chains could assure the access of producers on HoReCa.

18.Other real advantage for the economic environment is constituted by the fact that the financial personal economies are invested in the local economy, facilitating, in this way, the development of a favourable local entrepreneurial context. The short supply chains determine to a certain degree the retention of financial capital at the level of local communities, consequently, increasing the local public budget.

19.Through their activities, the local producers directly and indirectly contribute to the development of other economic operators’ activities from different distinct domains.

20.Improving the value distribution across the supply chain, the farmers benefit by a higher added value.

21.Offering the possibility of strategical reorientation of small farmers.

22.Short supply chains could contribute to the increase of the European Fund level of absorption in the case of local producers (individually or associated). These detain the premises for being able to be promoted and developed aided by the financial support offered through AM-PNDR 2021-2027 (National Strategical Plan), as also happened in PNDR 2014-2020 (16.4 and 16.4a Sub-measures).

#### *Social benefits*

23.Through the support offered to small local producers with regard to the marketing of their offer, the producers directly and indirectly benefit by the partial reinvestment of the income collected by the local authorities from the merchants from the local level in local infrastructure (road networks, public transport, educational institutions, sanitary units, green spaces etc.).

24.Through the support offered for productive and marketing activities, the local producers from short supply chains encourage the retention of human capital on the local level, the seasonal migration risk of the internal and external labour force being diminished.

25.Maintaining the social relation – social interaction between producers and consumers. The short supply chains functioning on the local level offers the producers and consumers the possibility to have a more direct communication and interaction, contributing to the final consumer' loyalty and trust consolidation.

26.Increasing the belonging feeling to a community in which the healthy food represents the focus, in which the producers could be able to share their experience from the local level through the know-how transfer and information (agricultural practices, production, marketing, recipes).

27.Different types of short supply chains (CSA – Community Supported Agriculture, GYO – Grow Your Own) facilitate and encourage the collaboration between

producers and consumers, mutual aid or even risk or uncertainties sharing (solidarity, active participation).

28.Encouraging the transfer of know-how in the producer-consumer chain.

29.Contributing to the increase of local producers' self-esteem (observing that their work is appreciated), also considering their income increase.

30.Assuring to the small producers and to the finale consumers (categories usually perceived as being passive) an active role in the agri-food system.

31.Access to direct information from the final consumers – recommendations, positive/negative feedback from the customers.

32.Favouring and creating an appropriate context for association and cooperation with other local producers and launching of umbrella brands.

#### *Environmental benefits*

33.Encouraging small farmers to adopt more sustainable and eco-friendly systems of production, specific to circular economy.

34.Contributing to the improvement of traditional agriculture practices and promotion of local agricultural systems with sustainable impact on the environment.

35.Reducing the producers' transport spending, especially in the case of goods marketing activity (positive impact on biodiversity).

36.Contributing to the local agri-biodiversity protection and conservation or even improvement of productive capacity (top rating notes) of agricultural land.

37.Encouraging the utilization of recycled or biodegradable packaging in distribution process.

#### *Health related benefits*

38.Short supply chains and local producers indirectly contribute to the improvement of consumers' state of health (local products, some of them ecologically certified, are included into the category of healthy food). This aspect offers a positive image to the producers.

#### *Benefits of cultural heritage conservation*

39.Conservation and promotion of local cultural heritage (local products, traditional/

local production practices, local habits and traditions, traditional gastronomy, local varieties).

## CONCLUSIONS

On the global level, during the pandemic crisis of Covid-19, numerous initiatives for promoting the local production and development of short supply chains appeared, especially considering the higher and higher interest of consumers for them. Across the study, the necessity of initiation and improvement of local agri-food markets was emphasized, but also of promoting online shopping for improving the producer-consumer relation. In addition, the necessity of offering new storage facilities at the local level for easing the consumers' access to the food stock in case of urgency was underlined. In the actual context, especially the conventional model of agricultural production does not contribute for attaining the sustainable goals. Consequently, there is a stringent need in the case of alternative agricultural systems to be created supposing, among other issues, the focus on local/regional value chains development. The short supply chains seem to be better connected to: circularity and environmental sustainability (transport, method of production, emissions of greenhouse gases), the consumers' health and behaviour, the food quality, the direct relation between producer-consumer and local economy. Unfortunately, it is recommended the avoidance of establishing generalities on all types of short supply chains.

Therefore, although the revised literature tends to agree with the economic and social benefits of short supply chains, the impact on environment and sustainability usually implies more heterogeneous results, while health and nutrition benefits seem to be still underexploited.

The Covid-19 crisis made the 2020 year to be a special one with regard to the food sector, a trend of Romanian consumers in respect to the reconsideration of the manner in which food is purchased being remarked. This fact determined a reorientation towards a healthier

diet based on food more frequently purchased from local sources through short supply chains. The pandemic boosted the development of this type of supply chain, while the small farmers adopting digital technology tended to be more privileged compared to the competitors. Including hypermarkets/ supermarkets, a need to adapt to the local market and to reconnect consumers with local producers appeared to be present, the share of locally sourced products on the shelves of large retailers being higher and higher.

The local producers' resilience, implying hardiness, adaptability, and transformability, depends into a high proportion on the development of short supply chains and on their permanent adaptability to the requirements of local consumers. Moreover, different types of such chains (for example, the direct deliveries from producers to final consumers) have appropriately adapted to the actual context generated by Covid-19, when much restriction was imposed with regard to persons' mobility, being perceived by some of final consumers as efficient solutions of supply during the state of emergency.

Thus, the contribution of short supply chains to the resilience of food systems has become relevant in the context of Covid-19 pandemic: even though the global chains passed over this unforeseen shock, the vulnerabilities were evident (for example, the high dependency of logistical infrastructure and seasonal labour force from agriculture, among others).

In our opinion, the philosophy of local agri-economy development needs to change: conventional agriculture and the alternative one have to coexist, without negatively affecting each other. The switches able to be done have to adapt to the local reality, to the needs of local producers and to the Covid-19 crisis that increased the level of poverty and emphasized the importance of local economy and of a local, diversified and resilient food system. The chains that interconnect the producers and final consumers have to be integrated in a socio-economic ecosystem, with sustainable and durable basis, while the

local agri-food market is in need of adapting to new requirements.

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