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EVALUATION OF SHORT FOOD SUPPLY CHAINS IN A RURAL AREA

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ABSTRACT
One of the priorities for rural development is the establishment of Short Food Supply Chains which means reducing distance between local producers and local consumers and prioritizing local markets. In our work, we aimed to mapping the place of local producers within the distribution channels and evaluating local producer groups. We studied what tender opportunities producers are utilizing that can directly or indirectly link them to the Short Food Chain Program. Our research shows that both small and large producers were involved in short-supply chain sales in the period under study, but that this form of sales is used by smaller businesses in Hungary. Young producers in particular choose the sales channel where they can sell at the highest price or where they can sell the most products. Our work also shows that catering companies base their purchasing decisions primarily on price, but that catering establishments regularly buy from local producers.

Keywords: short food supply chain, producer groups, consumer behavior study

INTRODUCTION

Local Food System is a geographically identifiable, regional environmental initiative with socioeconomic characteristics and cultural traditions that creates food self-sufficiency through the relationship between local food producers and consumers (BALÁZS, 2011). The short supply chain (SSC) expression covers a variety of sales channels. Beside the small geographical, social and cultural distance between the producer and the consumer, a common characteristic is the need for healthy food grown in an environmentally friendly way (SZABÓ, 2019). Similar to the French definition, the Hungarian position also calls for a specific distance, it is 40 km (KUJÁNI, 2018). In Hungary, the conditions of small-scale food production and sale are governed by the VM 52/2010 (IV.30) decree. In another approach, emphasis should be placed on direct sales when delimiting short food chains (JUHÁSZ, 2013).

There are three main types of individual direct sales: 'producer does not move', 'consumer does not move' and 'producer and consumer meet in the middle' (HORVÁTH, 2014). Selling directly to consumers is one of the possibilities for the producer to increase its share of consumer prices, thus excluding some of the intermediaries from distributing the products. For a successful sale, a change of attitude is indispensable: instead of the production orientation that is typical of agriculture, marketing orientation is a priority, in which producers must take into account consumer needs and adapt to (MÁCSAI, 2014).

An open economy means selling at a farm, a local shop, a village table or through pick constructs. At sales points, we mean the farmers market, producer market, festivals, fairs, and farm shops operating in settlements. The SSC can be implemented through home delivery, e.g. with a box system or with a mobile shop. In the case of short SSC, the producer sells himself or in cooperation with an intermediary (hospitality, catering, food retailing) (SZABÓ, 2019). The EU aims to the Short Supply Chain in the food sector contribute to a diverse and growing source of income for producers. Help create a closer relationship between producers and consumers by raising awareness of the importance of the agricultural sector to the sustainability of society. Increase fresh, high quality, less processed food supplies at local level to promote healthy eating without causing any additional costs for consumers (WILLIS ET AL., 2016). SSC is a supply chain formed by a limited number of economic actors committed to cooperation, local economic development and close geographic and social links between producers and consumers („Short, Supply Chain" Workshop, 2011). SSC can improve the revenue of producers and ensure the survival of many farms due to greater profit margins and the fact that the farm is less reliant on the food sector. From a cultural and social point of view, they encourage joint decision-making and more self-governance responsive to local needs, and promote and support the preservation of local traditions by linking the product to the geographical area of origin of producers and consumers (https://www.parlament.hu/irom39/12002/adatok/fejezetek/19.pdf).

Hungarian SSC program seeks to involve few operators in the system who are committed to cooperation, local economic development, close geographic and social links between producers, processors and consumers. The primary objective, however, is to increase the competitiveness of producers by improving their integration into the agri-food chain through quality systems, increasing the added value of agricultural products and promoting local markets and short supply chains, producer groups and professional organizations (Tószegi and Faggyas, 2014). In Hungary, farmers participating in short supply chains are typically the smallest (single or micro enterprises). Their self-organizing, advocacy and tender capabilities are weak. Therefore, realizing visible results with this target group can only be achieved by an efficiently separated, clearly understandable and problem-focused thematic subprogram (2014-2020 Final Evaluation Report on the Thematic Evaluation of the Rural Development Program, 2021).

In our work we have set up several hypotheses. Firstly, we assumed that the change in consumer habits greatly influences producer's supply. Second, we investigated whether producers choose the sales channel where they can sell at the highest price or where the most products can be sold. We also hypothesised that more and more local producers would be involved in the processing of the products.

MATERIALS AND METHODS

2.1. Locations of the short supply chain study

The study was carried out in a key region of Hungary, where short supply chains play a major role in the life of the businesses surveyed.

The investigations were carried out at local producers, on traditional producers' markets, at catering services and in welfare stores. From local vendors, we included fruit and vegetable producers, animal products producers, beekeepers and winemakers. Since for domestic producers farmers market sales are the most prominent in terms of sales revenue, and this is one of the most popular ways of direct sales, so the interviews were completed mainly at traditional markets, fairs and market halls. We aimed to find that in some settlements, not only did a local distribution system has been created to encourage self-sustaining, sustainable life, but also efforts were made to familiarize consumers with products thus ensuring that income thus generated remained local. They have developed a local product brand and placed great emphasis on local product development organizations. We also visited those public food service companies that buy local products for their activities: hospitals, restaurants, groceries. We have also asked shoppers in the so-called welfare stores. Here, the buyer can buy at a discount of 30% using a coupon book received from the local government. The small book can be claimed on a need only basis. The owner can use it for one year for purchases of up to 10,000 HUF per month. The shelves have two prices for each product, one is the normal commercial price, which is the same as the supermarket prices. Below this, the 30% a more favourable price is shown.

2.2. Data collection

Our research was based on questionnaires and deep interviews. Producers were questioned by means of a questionnaire, and we processed 265 evaluable questionnaires in our work. We got data from public food service companies and welfare stores through deep interviews. In order to have as many valid questionnaires as possible, 95% of them were made to fill out the forms personally. Almost all sample subjects were willing to help. In addition to the primary data, some secondary data were also taken into account in evaluating the results. The questionnaire used for sampling consisted of 26 questions, consisting mostly of open, closed and some alternative questions. In each of the questions, we also provided the opportunity for respondents to formulate their own personal comments in an informal way. We endeavoured to get answers from the most competent people.

RESULTS

3.1. Characteristics of the enterprises in the study

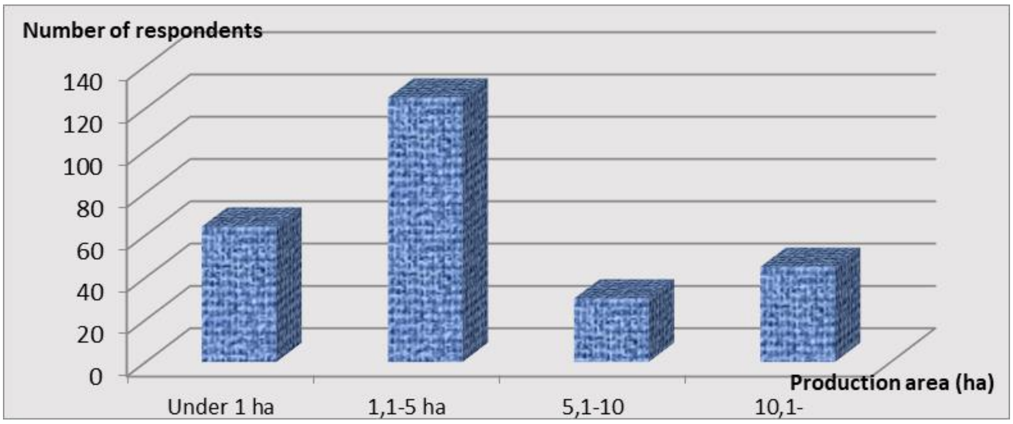

Figure 1. Production areas

24% of respondents produces on plots under one hectar, almost half of them are between 1 and 5 ha, and 28% of them above this land area (*Figure 1)*. Those with an area below 1 hectare produce vegetables and fruits for their own consumption, and the surplus is sold on the market for supplementary income. Those with a land size over 10 ha are mainly engaged in fruit, grape or arable crops production. 90% of the respondents carry out farming on their own land. Of those that are leasing their plot 66% have at least 50 hectares of land. Among the respondents, 94% of the permanent staff are from the family. Almost half of the farms work with 2 people, and 27% of the farms answered that it is the owner himself that is doing all the work. Dairies employ the most workers.

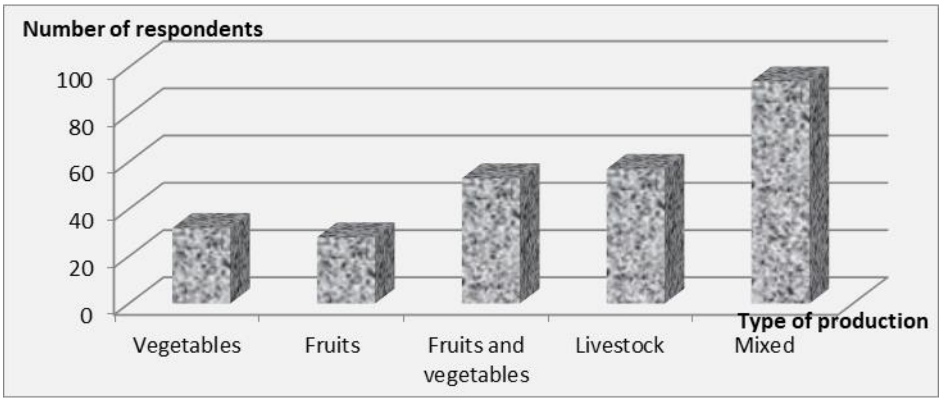

Figure 2. Production profile

43% of the surveyed producers only deal with crop production, 22% with animal husbandry and 35% in mixed farming (*Figure 2*). 43% of livestock farmers raise dairy cattle and 28% of them pigs. 41% of respondents sell processed products.

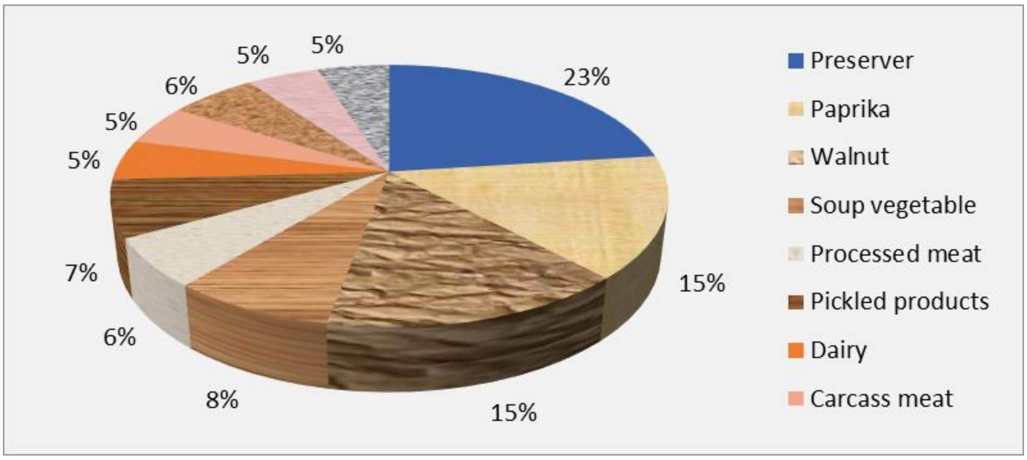

Figure 3. Food stuff produced

Figure 3 shows the proportion of processed products that are delivered to consumers in the form of direct sales. 26% of the respondents made jam from the fruit produced, mostly without preservatives. Of the processed products examined, 17% sells walnut or paprika powder. One of the new consumer trends is the pre-packaged soup vegetables, sold by 9% of the respondents. Fruit juice ratio is very low, only 6%. Some small-scale family farms produce fashionable health-conscious products such as tubers, baked yam, pumpkin balls, pumpkin salad, pumpkin chips, various sprouted seeds, whole grain spelled wheat or rye flour.

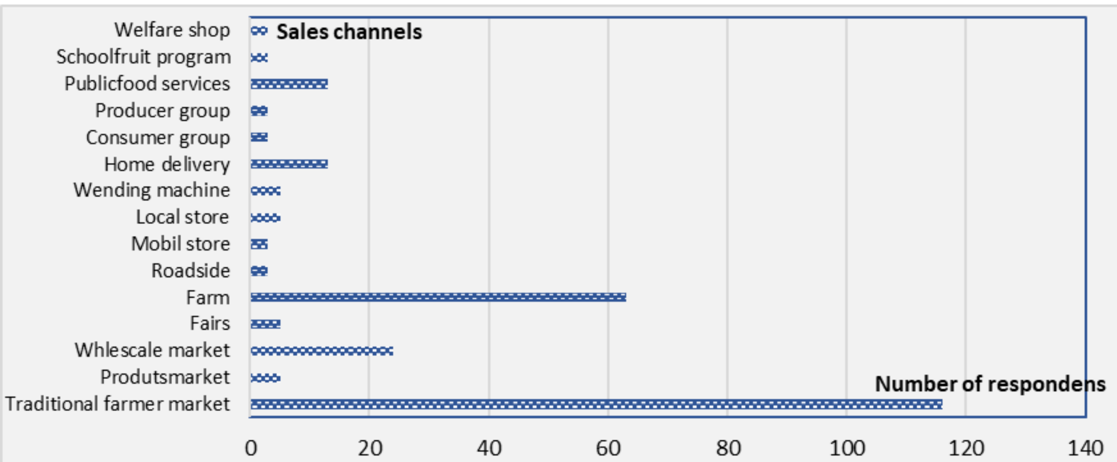

Figure 4. Sales channels utilized

For the producers, SSC offers a number of sales forms (*Figure 4*). 44% of respondents sell on traditional markets (one of the main reasons for this high value is that most of the questionnaires were filled out in traditional markets). Sales from their own farms are also very significant (24%). Largest sales occur through wholesale markets, but for this a much larger stock is needed. In case of large-scale production, sales to through producer organizations (PO) are typical. In the area under investigation selling of raw milk through vending machines is typical, 30% of the milk intended for sale is sold in this form. The automats were placed at a well-established supermarket. Farmers can sell 32% of their production through direct sales to homes, which mainly means milk, smoked meat products and pre-prepared chicken products. Sales of juice in this form are not typical.
There is also a special sales form called the box system. The buyer orders pre-arranged boxes to be delivered weekly for a given season, and the producer undertakes to produce the goods and supplies them at a fixed price directly to a home or to distribution points.

3.2. Relationship of SSC and public food services

We have reviewed several hospitals' purchasing assignments. When purchasing raw materials, price is the main determinant, so they cannot think at all on quality. Most raw materials are purchased from wholesalers with whom they already have a well-established connection. It is a great help to them to get the raw materials from one place and having it delivered, saving time and energy. One of the biggest obstacles for the purchase of raw materials is the high price. Mainly potato, apple, beetroot and pumpkin are purchased this way. An additional problem when purchasing in large batches is that the issue of storage is not resolved. These big purchasers are more willing to buy frozen raw materials for easier handling. We also studied the procurement of raw materials in kitchens catering for schools. Based on the in-depth interviews, potato, green onions, lettuces, apples, juices, pickles, peppers, pumpkin, milk and pasta are the most likely to be purchased through SSCs. Restaurants are purchasing regularly eggs, meat products, fruit, vegetables, milk, cheese, cottage cheese and honey from the local producers. Those restaurants that want to provide a long-term quality service to their guests buy regularly from a local producer, that is, they are planning for the long run. Those who buy little or no raw materials through SSCs, have either no interest in quality catering (i.e. hospital kitchens) or are struggling to survive, so their decisions are primarily determined by the price. Many have complained that producers are not always able to guarantee the same quality and quantity, and the option of home delivery is missing from their service. Based on our experience, it can also be said that purchasing decisions have a lot to do with management attitudes. Essentially, shopping decisions are based on economic and convenience motivations.

3.3. Attitudes of welfare shop buyers

The attitudes of welfare shop buyers are shown in *Figure 5*.

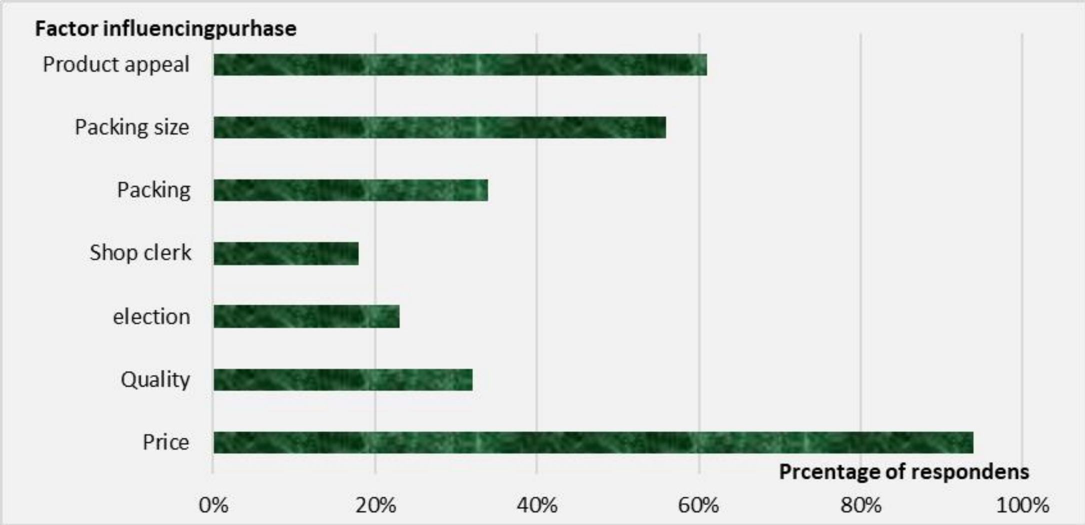

Figure 5. Opinion of welfare shop consumers

The most important aspect of this customer segment is low price. Relatively important are the packaging size and product appeal which are also closely tied to price. The quality of the product, the server's personality and low assortment does not affect this consumer segment.

DISCUSSION

Small and wholesale producers are both involved in short supply chains, however, this form of sales is mainly used by small businesses in Hungary. It can be stated that most of the products sold through these channels are of plant origin, especially horticultural products, but the marketing of processed animal products is also becoming increasingly important. Interestingly, fruit juices represent a very small proportion in the SSC. More and more farmers are processing their products thus trying to adapt to the new needs. Hungarian economic and legal changes facilitate this endeavour. Our surveys also reveal the need to broaden the use of SSC channels, which could, among other things, help increase both demand for processed products and willingness to engage in this activity.
Our research reveals that young producers primarily opt for sales channels where they can sell at the highest price or where the most products can be sold. In contrast, older producers often also show emotional investment in their marketing practices. Unfortunately, in many cases, consumers associate farm products with high prices and fluctuating quality, and they are also missing the option of home delivery.
The in-depth interviews show that public catering companies primarily choose products acquired through SSC based on price. At the same time, some caterers regularly buy from local producer as they want to establish long-term clientele through quality service.

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