

## Research Article

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# Short food supply chains – a growing movement. The case study of the Viseu Dão Lafões Region

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**Abstract:** In spite of the increasing attention being paid to short food supply chains (SFSCs), research in the area is still scarce, particularly in Portugal. Thus, based on a case study in Viseu Dão Lafões Region (VDLR), we intend to identify and discuss (emphasizing potentialities and constraints) the movement of SFSCs in the region. This case study is based on document analysis and interviews with agrifood baskets' promoters. On the one hand, the results show the wide variety of SFSCs that exist in the region and the emergence of new forms of SFSCs like the agrifood baskets. On the other hand, the empirical research also emphasizes the environmental, economic, and sociocultural benefits of SFSCs that will have a positive impact on the well-being of producers, consumers, and/or on the whole region. However, the interviews have also exposed a (certain) limitation in terms of communication and marketing that may constraint these initiatives. From a practical point of view, it became clear that producers must do their best to develop their communication and marketing strategies; from a political point of view, local authorities should provide the necessary assistance to help implement training programmes and develop suitable communication and marketing skills.

**Keywords:** short food supply chains, Viseu Dão-Lafões Region, case study, growing movement, COVID-19

## 1 Introduction

Globalization has opened the way for several food products to be made available all over the world. This opportunity represents a huge increase in the financial

return of the food industry, of food producers, and of consumers (Cappelli and Cini 2020). In 2016, for instance, the European Union (EU) imported almost 93 million tonnes of food from outside the EU and exported 91 million tonnes of food to countries that don't belong to the UE. Compared to 2012, food imports have increased by 6% in terms of volume and exports have increased 42% (EC 2017).

This evolution has clearly changed consumers' eating and buying habits, and more than often, they choose to replace local and retail markets with supermarkets and discount stores where they can purchase all the food products they need. Furthermore, the significant change in people' lifestyle, the ever-increasing working hours that keep people away from their houses, and the fact that people do not have time to do their own cooking any more (Duarte 2013) forced them to seek these larger infrastructures. It is true that we are constantly drawn to easy, junk, exotic, and hyper-transformed food influenced by the seductive messages of large supermarket chains (Pinto 2013) that fail to include small farmers.

In this context, the short food supply chains (SFSCs) can be an interesting alternative. A review of literature shows the economic, social, and environmental benefits associated with SFSCs, for producers and consumers.

For local producers, who were not able to work with the large supermarket chains for a number of reasons (e.g. low production capacity, non-competitive prices, being away from large population centres, etc.), the attention attached to SFSCs gives them the opportunity to contribute to territorial development (Mundler and Laughrea 2016) by bringing back and revaluing different indigenous varieties of vegetables or fruit (Cappelli et al. 2018) and by generating a significant economic contribution (Mundler and Laughrea 2016; Raftowicz et al. 2020). For consumers, it is an opportunity to purchase safer products of higher quality. Duarte (2013), for example, states that these products are increasingly in demand due to their taste and organoleptic attributes and consumers are more and more concerned with nutrition, health, and safety issues.

Moreover, previous crises and food insecurities were key to emphasize the importance of local markets and

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alternative food networks (Wilkinson 2011), since they may represent a response to allay the population's concerns by providing them with food products that do not have to travel long distances to be available.

As claimed by Fiore (2016), concerning direct selling in the wine sector, understanding consumer needs and expectations is achieved from this close relationship with them, which in turn can be achievable through innovative marketing tools and actions.

Despite the prevailing views showing the advantage of SFSCs over long ones, this form of sales still has its opponents and is treated rather as a supportive solution, due, for example, to its costs of transportation disproportionate to the scale of production (Raftowicz et al. 2020). Moreover, a lot of barriers emerge concerning the operationalization of SFSCs. For instance, Hyland et al. (2019), through the Short Supply Chain Knowledge and Innovation Network (SKIN) EU horizon 2020 project, revealed that a lot of difficulties are evident in terms of the regulation of farmers' activities: restrictions on what they can sell in their on-farm shops, the burden of compliance with food hygiene laws, and marketing side of their business.

Despite their potential, a review of available studies indicates a certain limitation of research studies on SFSCs (Raftowicz et al. 2020). There are particularly few empirical studies that focus on the opinions held by the different SFSCs promoters, particularly in Portugal.

Hence, taking into account this gap, based on a case study, this research aims to identify and discuss the SFSC movement in the Centre of Portugal, particularly in the Viseu Dão Lafões Region (VDLR). This case study is based on the collection and organization of information of SFSCs that allowed us to identify and build a database of SFSCs in the region. Additionally, in order to understand feelings and behaviours of promoters of SFSCs, particularly promoters of agrifood baskets, this information was complemented with 5 interviews with them.

We have selected the VDLR as the study region since it is a predominantly rural and remote region (Naldi et al. 2015). Here, agriculture is still an important activity, both economically and socially (Pato 2012).

The paper consists of five parts. After the introduction (Section 1), Section 2 covers the review of the Local Production concept, SFSCs, and other related issues. The study design is explained in Section 3, while Section 4 presents the qualitative study. In the Discussion section (Section 5), results are discussed and interpreted in accordance with previous studies. In the Conclusion (Section 6), the study's main results are presented, the limitations are pointed out, and possible areas for future research are suggested as well.

## 2 Local production and short food supply chain: A diverse movement

### 2.1 Meanings and benefits of SFSCs

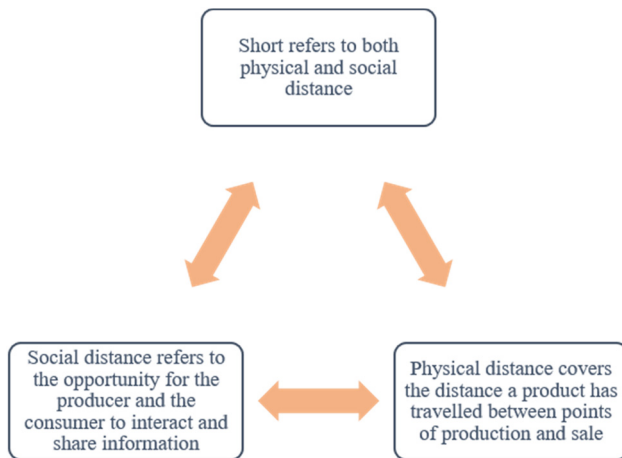
In many countries around the world, short food chains are appearing and resurging with the aim of proposing a different possibility to the mainstream food market by promoting an exchange between producers and consumers, that is as direct and local as possible (Matacena and Corvo 2019). The aforementioned SKIN EU 2020 project<sup>1</sup> aims at stimulating the creation of a collaborative innovation network in different EU agriculture sectors through the improvement of knowledge and good practices exchange among farmers, research centres, practitioners, and citizens involved in SFSCs (Hyland et al. 2019).

This new perspective has gradually increased over the present century following broader debates on 'alternative food chains' (Ilbery and Maye 2005), 'alternative food networks' (Barberaa and Joselle 2016; Goszczynski 2016; Mastronardi et al. 2019; Goszczyński and Wróblewski 2020), 'sustainable food chains' (Smith 2008; Knorr et al. 2020), or 'localized agrifood systems' (O'Neill 2014; Mantino and Vanni 2018), among other related concepts.

Even though it is difficult to exhaustively identify the phenomena that fall within the designations of all these alternative/sustainable/or localized agrifood systems, geographical proximity and/or the location are crucial features of food provision. Thus, it is understandable that a supply food chain is considered short when the geographic distance between the farm and the consumer is perceived as short and/or when the number of intermediaries between the producer and the consumer is limited (one being the ideal number) (Kebir and Torre 2013). In other words, SFSCs are defined as all processes that seek to change the location of the product in time and space, along with information shaping and optimizing these processes (Raftowicz et al. 2020), including physical and social distance (Galli and Brunori 2012; Aubry and Kebir 2013) (see Figure 1).

In this social relationship between the producer and the consumer, information exchanged includes details about the origin, production method, and sustainability of the product, and also about the identity, values, and

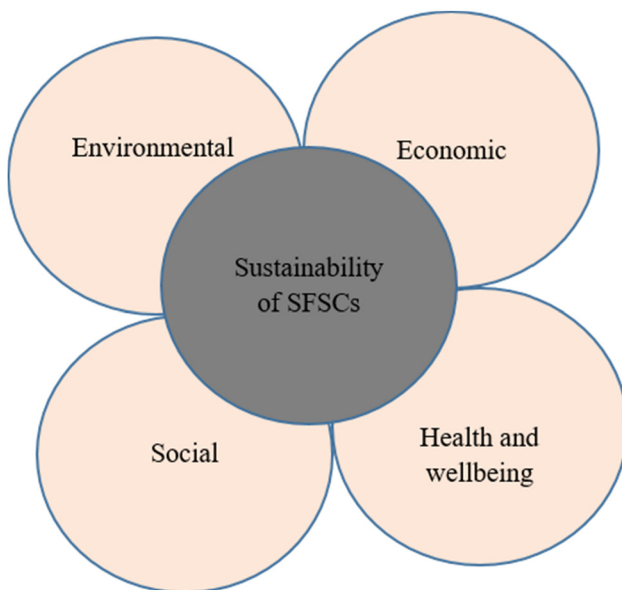
<sup>1</sup> Information concerning the project and its good practices are available on <http://www.shortfoodchain.eu/>



**Figure 1:** The meaning of “Short”. Source: Adapted from Galli and Brunori (2012).

ethics of both actors taking part in the process (Galli and Brunori 2012). Generating closer relations between producers and consumers is indeed a fundamental aspect of the potential endogenous (rural) development dynamics of SFSCs (Aubry and Kebir 2013). In other words, SFSCs can increase sustainability in all its dimensions: environmental, social, economic, and well-being, as referred in several studies (see Figure 2).

As for environmental sustainability, SFSCs are important to minimize the use of fossil fuel or packaging and to increase the adoption of pesticide-free or less intensive methods of production (Galli and Brunori 2012;



**Figure 2:** Sustainability of SFSCs. Source: Adapted from Galli and Brunori (2012).

Aubry and Kebir 2013; Tibério 2013). As for social sustainability, the relationship between producers and consumers (often direct) has reinforced the fairness and trust-based relations among the actors who are involved in these food chains (Ilbery and Maye 2005; Aubry and Kebir 2013). Moreover, as referred by Drejerska et al. (2019), using social media farmers and other promoters of SFSCs can also communicate their social responsibility.

Their contribution to the creation of jobs and income in rural areas, as many small farmers do not have easy access to large commercial channels due to the inconsistency in their supply in terms of volume and/or continuity, also emphasizes the role played by SFSCs in the economic sustainability of the region (Galli and Brunori 2012; Tibério 2013; Zirham and Palomba 2016). Testa et al. (2020), for instance, state that alternative food networks could represent a strategy to increase the profitability of many small and medium-sized farms (organic and non-organic), particularly in an increasingly global and diversified market.

Last but not the least, SFSCs have increased knowledge and concern about food among consumers and led to the adoption of healthier diets and health and well-being sustainability (Cohen et al. 2012; Galli and Brunori 2012).

## 2.2 Boundaries and forms of SFSCs

The types and boundaries of such SFSCs vary. Regulation 1305/13 of 17 December focuses on the support for rural development between 2014–2020 and reports measures for the implementation of food chain organization and, in particular, of short supply chain. It defines a supply chain as being the one that involves ‘a limited number of economic operators, committed to cooperation, local economic development, and close geographical and social relations between producers, processors and consumers’ (article 2, m).

In Portugal, for instance, the Portuguese *Ministério da Agricultura, Florestas e Desenvolvimento Rural*, through the Ordinance no. 152/2016 of 25 May, refers that there shouldn’t be more than one intermediary in this whole process. In fact, in Portugal, a short supply chain is the ‘supply circuit that do not involve more than one intermediary between the producer and the consumer’ (article 4, b).

However, shortness is in this context usually related to the ‘local’ scale (Kebir and Torre, 2013); other authors have given ideal limits. For instance, Aubry and Chiffolleau (2009) mentioned that SFSCs can be identified as ‘proximity’

or 'local' when they are limited to a reduced geographical radius (80 km).

For that reason, it is not surprising that SFSCs may vary in nature and practise and exist all over the world in a wide variety of forms, even in both non-commercial and commercial settings (Aubry and Kebir 2013). Commercial forms often include: direct selling in farmers' shops or at farmers' markets, box schemes, internet selling, consumer cooperatives, etc. (Galli and Brunori 2012; Tibério 2013). Today, authors distinguish 'old' forms of short supply chains (farmers market, on-farms selling, etc.) from others which are more innovative (box schemes, community-supported agriculture forms, pick-your-own, etc.) (Delfosse and Bernard 2007).

In Portugal, for instance, the Portuguese *Rede Rural Nacional* combines these old and new forms, identifying as SFSCs, (RRN 2020a) as follows:

- (i) producers' markets – the market is reserved for agricultural and agrifood producers; the products sold are exclusively produced in-house and have an identified origin;
- (ii) bio-producers' market – the market is reserved for agricultural and agrifood producers certified with organic production; it's a public access place where producers only sell organic products; the products sold are exclusively produced in-house and have also an identified origin;
- (iii) local products fairs – spaces where producers can sell a local product or different products that are somehow related and that are in many cases the main channel through which those products are sold;
- (iv) collective points of sale – a commercial space where agriculture or agrifood producers organize themselves to sell their products directly to consumers;
- (v) agrifood product baskets or box schemes – direct, local, and seasonal sale of diversified agrifood products (selected by the consumer), with regular delivery (weekly, biweekly, monthly, etc.) in a place previously agreed between the producer and the consumer (consumer's home, company headquarters, cooperatives, stores, etc.). In this form, the consumer has the possibility to choose the products to be included in the basket.

The development of these forms of SFSCs is challenging and improves the production and consumption system in many aspects: technically (diversification of farm production and new forms of product delivery, etc.), socio-institutionally (emergence of new actors and network structures), and territorially (scales articulation,

proximity/distance relationships, relocation processes, etc.) (Aubry et al. 2012). They enhance knowledge development both from the supply side and consumer side – communication ability, organizational skills, consumers' knowledge of food and of their region, etc. (Kebir and Torre 2013). For instance, it is now widely accepted that communication ability, particularly new information and communication technologies (ICTs), and improvements in supply logistics management have an important role in increasing the competitive potential of each form of SFSCs and in the development of entire food economic sector (Schimmenti et al. 2012).

### 3 Materials, methods, and the study region

#### 3.1 Material and methods

To carry out the empirical survey, an instrumental case study approach was adopted. As a research strategy, the case study is used in many situations to contribute to the knowledge of individual, group, organizational, social, and related phenomena (Yin 2003). Case study is the preferred research method when 'how' or 'why' questions are being asked (Yin 1984, 2014) and when the topic under study is something dynamic and not static (Chetty 1996).

The case study implies the use of diverse information sources (Chetty 1996; Yin 2014). These include direct observation, documentation, interviews, and so on (Chetty 1996). Therefore, in order to identify SFSCs in the selected region in the first stage, a document analysis was conducted. Considering that the information on SFSCs was dispersed, we started with the information concerning SFSCs included in the Portuguese *Rede Rural Nacional* (2020a) and complemented it with information found on the internet. Particularly, we consulted the web page of the municipalities of the VDLR and social networking websites of some local organizations/players (local associations, business associations, etc.). At the end of this step, we obtained a database with approximately 25 initiatives in the region (including producers markets, fairs of agrifood products, and promoters of agrifood baskets).

In a second stage, with the purpose to understand feelings and behaviours of promoters of SFSCs, particularly promoters of agrifood baskets, we developed a guideline for the semi-structured interview. It was based on the literature review conducted on SFSCs and includes

questions related to: (i) motives; (ii) distribution of agrifood baskets; (iii) activity history and production profile; (iv) places of distribution, distribution periodicity, and communication; and (v) COVID-19 and demand (see Appendix 1).

The third stage involved the application of the interview. Between 15 July and 5 August 2020, based on the information gathered on agrifood promoters' products baskets in the VDLR, five interviews were conducted. These represent all the promoters that we identified in the previous stage.

Because of the COVID-19 pandemic situation, the interviews were conducted via telephone (2) or online (3). In order to identify the main discourse of the different agrifood products basket producers (AFBPs), the interviews were identified by numbers (1–5), recorded, and transcribed.

Finally, in the fourth stage, a content analysis of the data gathered from the interviews was performed. The purpose of this content analysis is to systematically transform a large amount of text into a very organized and concise summary of key results (Erlingsson and Brysiewicz 2017).

### 3.2 The study-case

This study focuses on the VDLR, a Portuguese Region located in the Centre of Portugal (see Figure 3). This 3,483 km<sup>2</sup> area comprises fourteen municipalities: Aguiar da Beira, Carregal do Sal, Castro Daire, Mangualde, Nelas, Oliveira de Frades, Penalva do Castelo, Santa Comba Dão, São Pedro do Sul, Sátão, Tondela, Vila Nova de Paiva, Viseu, and Vouzela (Pato 2019).

Viseu Dão lafões was selected as study region because it is a predominantly rural and remote region (Naldi et al. 2015). This remote and inland region is a disadvantaged region: in 2018, it was below the national average in terms of regional development indexes structured in three dimensions: competitiveness, cohesion, and environmental quality (INE 2020).

However, the territory shows great potential in terms of: (i) edaphoclimatic conditions that allow the production of a wide variety of agricultural products that may turn into an important source of income; and (ii) endogenous and traditional food products (DRAPC 2015). Agriculture is an important activity in the region, from both economic and social perspectives (Pato 2012). Here, many traditional agrifood products (e.g. 'vinho do Dão,' 'maçã Bravo de Esmolfe,' etc.) represent important factors of



**Figure 3:** Localization of Viseu Dão lafões Region in Portugal, Source: INE (2015).

regional identity (Pato 2012) that can be used to foster the expected rural development.

## 4 Results

### 4.1 Initiatives of SFSCs in VDLR

As it is seen in Table 1, virtually all the municipalities included in the VDLR have developed some kind of initiatives related to SFSCs. Municipality markets are the initiatives with greater exposure in the region.

In fact, most of the 14 municipalities of the region have local markets (Aguiar da Beira, Carregal do Sal, Oliveira de Frades, and Vila Nova de Paiva are the exceptions). The periodicity of these markets varies: some take place on a daily basis (see in Table 1, the cases of Castro Daire and Tondela) and others happen at least once a week (see in Table 1, the cases of Nelas, Penalva do Castelo, and Sátão).

**Table 1:** Producers markets and fairs of agrifood products in the Viseu Dão Lafões Region

Modality	Municipality	Name	Promotor	Frequency/month
Producers markets	Castro Daire	Municipality Market	Municipality	Daily <sup>2</sup>
	Mangualde	Municipality Market	Municipality	5 times a week
	Nelas	'Mercadinho de produtos agrícolas'	Municipality	Once a week
	Penalva do Castelo	Municipality Market	Municipality	Once a week
	S. Comba Dão	Municipality Market	Municipality	Twice a week
	S. Pedro do Sul	Traditional and Familiar Agriculture Market	Municipality, Coopraízes (local cooperative)	Biweekly
	Sátão	Municipality Market	Municipality	Once a week
	Tondela	Producer market 'Ao sabor'	Municipality, ACERT (cultural association)	Biweekly
	Tondela	Municipality market	Municipality	Daily <sup>3</sup>
	Vila Nova de Paiva	Local Market 'Feira Terras'	Municipality	Biweekly
	Viseu	Municipality Market	Municipality	3 times a week
	Vouzela	Municipality Market	Municipality	3 times a week
	Fairs of local agrifood products	S. Pedro do Sul	Festival of chestnut and honey	Municipality, Coopraízes (producer cooperative)
Penalva do Castelo		Festival of chestnut and honey	Municipality, Parish of Pindo	November
Nelas		Dão wine fair	Municipality	September
Penalva do Castelo		Maçã 'bravo de esmolfe' fair	Municipality Parish of Penalva do Castelo	October
Oliveira de Frades		Orange fair	Municipality, Parish of Sejães, other	May, June
S. Pedro do Sul		Orange fair	Parish of Valadares	May
Sátão	'Míscaró' fair	Municipality	November	

Source: our source.

In addition to municipality markets, there are other producers' markets initiatives such as 'the traditional and familiar agriculture market' in S. Pedro do Sul and the 'Ao sabor,' producers market in Tondela. Those are initiatives that bring producers and consumers together. As it happened in the aforementioned cases, the key actors who are responsible for implementing those markets are a group composed of local stakeholders, farmers, and municipalities brought together by the idea that local producers and local food have to be given greater importance, as emphasized in other works (e.g. Šūmane 2013a; Šūmane 2013b).

The VDLR has also some notable examples of local and agrifood product fairs. The 'Maçã Bravo de Esmolfe' fair with its 24 editions and the 'Vinho do Dão' fair with 28 editions in 2019 are two of the oldest fairs of the region where people can find traditional products.

In addition to producers markets and agrifood product fairs, baskets of agrifood products are increasingly becoming a reality in the VDLR. Five initiatives involving

agrifood product baskets (see Table 2) are currently taking place in those municipalities.

In four of them, the basket is mainly composed of vegetables and fruit and in one of them it includes vegetables, fruit, wine, meat, and honey.

## 4.2 Distribution of agrifood baskets – A growing tendency

All the respondents in this analysis own a farm production. So, the distribution of agrifood baskets is a natural extension of their activity, whether for the sake of survival and profitability or simply for the sake of making the best of their production surplus.

*"For the company to be viable and to survive we had to think about the distribution part as well"* (AFBP, 3).

*"(...) it was because of the production surplus that we had. Instead of throwing it away or using it to feed the farm animals, we decided to take advantage of that production surplus (...)"* (AFBP, 5).

<sup>2</sup> Does not open on Sundays.

<sup>3</sup> Does not open on Sundays.

**Table 2:** Baskets of agrifood products

Modality	Production area	Name of the initiative	Main products
Agrifood products baskets	Viseu	Prove basket	Vegetables and fruits
	Viseu	Manuela Antunes basket	Vegetables and fruits
	Tondela	Ecoseiva basket	Vegetables and fruits
	S. Pedro do Sul	Ecós do Vale basket	Meat, vegetables, fruit, wine, honey
	S. Pedro do Sul	Lafobio basket	Vegetables and fruits

Source: our source.

It is also interesting to note that behind these reasons, there is also a strong desire to know the consumer and establish a closer relationship with him:

*“(…) there is nothing better than meeting our customers. It is not like using carriers and never getting to know our customers. And they never get to know us either. At least that way we show up and it’s a vote of confidence” (AFBP, 4).*

The agricultural products baskets offered by the five respondents came from an organic production (in four cases) or from a more ‘natural’ and more environmentally friendly production (in one case). The demand for those products has been increasing over the years because for more and more people they represent a healthier and more environmentally friendly production. The following expressions clearly illustrate this position:

*People are more aware of the problems affecting industrial meat. There are many films on the problems involving industrial meat (…); this initiative is making a difference (…)* (AFBP, 2).

*Demand has increased (…). We started with one basket and presently we deliver 25 baskets every week and there are other customers who want our products (…)* (AFBP, 5).

It is also worth noting that one of the respondents started selling his baskets of agrifood products during the period of the COVID-19 pandemic and that another respondent started to add vegetables and fruits to the basket (initially composed solely of meat) also during this pandemic period. According to these two respondents, they began this ‘new distribution’ due precisely to the growing demand felt at that time:

*Because of the quarantine, people could not leave their house. And then we talked at home, and we thought it would be a good idea to start delivering baskets (…). Then we started receiving messages from people who wanted baskets of agrifood products (AFBP, 4).*

*I’ve always had organic meat and I’ve been delivering meat for 10 years now. But in March there were many customers who*

*asked if I had anything other than meat because they wouldn’t go to the stores (AFBP, 2).*

All the respondents agree that the present COVID-19 pandemic has increased the importance and demand for local productions, particularly for agrifood baskets.

*Demand skyrocketed (…); the baskets delivery doubled. And it doesn’t increase more because I don’t have enough products right now. I am unable at this time to satisfy more customers (…)* (AFBP, 1).

*During the pandemic there was greater demand because people wanted to get the products at home and did not want to leave their house…* (AFBP, 3).

*We started delivering in the city. In the meantime, we started to receive messages from other locations (…); and now we are already covering quite a few kilometers. And so we had to start using two vans to deliver the products. One was going to one area and the other was covering another area (AFBP, 4).*

Considering the apparent growth of consumer baskets sales, which went on even after the confinement period, there is an increased recognition that the actual crisis of COVID-19 in addition with food insecurities has changed some consumers’ buying habits with regard to agrifood products: *(…) now people can go to stores again (…); but still they keep ordering from me (AFBP, 2)*. Of course, this is happening because consumers *are super-satisfied (AFBP, 4)* with organic and/or more natural agrifood products.

In fact, the consumer gets more freshness and flavour and establishes a trust-based relationship with the producer: *the consumer feels more confident. He knows he will get more freshness. It gets higher quality products. So, that’s it (AFBP, 3)*.

Additionally, and despite its reduced scale, this movement of demand for these types of products has an impact on local and traditional production:

(...) *once we saw how demand was increasing, we looked for other farmers in my village to join us in our food basket initiative. And now there are 5 of us* (AFBP, 5).

(...) *it's our duty to help local producers* (AFBP, 2).

Despite this growth in SFSCs, it should be noted that little effort has been made to improve marketing and communication. In fact, information related to local fairs, producers markets, and particularly to agrifood baskets is (quite) scarce. None of these initiatives are well-advertised. There are very few websites that used to promote the products and, where they do exist, those are often outdated. One of the respondents chose not to advertise his products and he justifies this position by saying that right now he is unable to supply the needs of more consumers, so advertising his food baskets on the internet is clearly unjustified (SFSC, 1).

Besides, word of mouth seems to be the strategy that best serves the initiative and the products they want to sell: "(...) *nothing better than word of mouth* (AFBP, 5).

## 5 Discussion

The VDLR has developed multiple SFSCs initiatives. Municipality markets are the initiatives with greater visibility in the region. These are managed by the municipality and mainly formed by small farmers and local inhabitants who seek to sell their production surplus. This sort of markets is a source of financial income for the producers and provides a face to face contact in which a consumer buys directly from the producer, which is extremely important to increase customer loyalty and confidence in local production (Galli and Brunori 2012; Reina-Usuga et al. 2020).

Local fairs have also brought along important gains, not only for producers and consumers, but also for the whole region itself. Not only do they allow producers to sell a large part of their products and increase sales volume and incomes, but they also attract visitors and tourists. This increase in visitors has boosted the development of local activities related to handicraft, gastronomy and tourism and helped promote the culture and identity of the region (Meneses et al. 2007; RRN 2020b). In fact, in SFSCs, sharing the place of production suggests sharing reputation and quality, which is twofold: the product gains reputation if the region is renowned (Sellitto et al. 2018); or the region gains prestige and notoriety when their products create reputation (Carbone 2017).

Special attention should also be given to agrifood products baskets. According to Tibério (2013), interviews allowed summarizing the following benefits for producers and/or consumers:

- **Environmental:** resulting from the adoption of an organic or more natural agriculture. Four of the producers of agrifood baskets grow their products organically, whereas in one case the products are not organically certified, but the respondent tries to deliver more 'natural' (with the use of less chemical products). At the same time, with local distribution, the needs for transport, packaging, and refrigeration tend to be lower and there is a decrease in the use of fossil fuels and in the emissions of air pollutants.
- **Economic:** by valuing local production and providing extra income for small local farmers. In this study, at least three of the respondents use the production of small local farmers (from the same parish or adjacent parishes).
- **Social-cultural:** by increasing the relationship and confidence between producers and consumers. This applies to all the agrifood baskets producers who were interviewed. On the one hand, agrifood baskets make it possible to preserve plant and animal production systems, and on the other hand, they promote the cohesion of rural communities, since the initiative unifies several local farmers who work together to produce the food baskets.
- **Health and well-being:** by contributing to the adoption of a healthier diet, since the agrifood baskets come from an organic or more 'natural' production (that is, the use of chemicals is reduced to a minimum).

However, in order to increase these benefits for producers, consumers, and for the territory as a whole, on the one hand, special attention should be given to communication and promotion used. As a matter of fact, websites, newsletters, designed packaging, and direct communication or information on the producer or the farm (pictures, news, etc.) are essential to emphasize the proximity relation (Kebir and Torre 2013). The dissemination of ICTs has remarkably changed the way producers and consumers communicate and interact. Using ICTs, consumers can visualize the products they want to buy and their characteristics and choose and order them carefully and safely. From the supply side, virtualization and internet can be a powerful approach to manage this relationship because it enables supply chains to monitor, control, plan, and optimize the business processes (Verdouw et al. 2016).



On the other hand, the empowerment and support of all stakeholders, from production to consumption, including the role of civil society organizations, public institutions, and academia, are essential (Raftowicz et al. 2020; Reina-Usuga et al. 2020). Thus, learning spaces and the adaptation of social solutions to collectively minimize difficulties and solve problems must be promoted (Sonnino et al. 2016).

## 6 Conclusion and paths for future research

Despite the increasing interest attached to local productions and SFSCs, research in the area is still scarce (Raftowicz et al. 2020), particularly in Portugal. Therefore, taking as the study region the VDLR in Portugal, an empirical research was conducted. This research makes some important contributions to the existing knowledge. First, it underlines the importance of local production and SFSCs for producers, consumers, and for the whole territory of VDLR. For consumers, this tendency has brought along some health and social benefits and has contributed to their well-being. Moreover, the current crisis caused by the COVID-19 pandemic has emphasized the importance of SFSCs since these initiatives have partially helped overcome people's fears and uncertainties in relation to products that come from outside their comfort zone (Cappelli and Cini 2020; Pato 2020). For producers, the reinforcement of this local micro-economy is also useful in a period of crisis and turbulence, since it betters their chances of employment and, therefore, improves their quality of life.

For the VDLR, the adoption of an organic or more natural agriculture has led to the preservation of the environment and of its resources, and the products obtained are instrumental in promoting a sense of rural identity.

Second, it shows that in the VDLR, some forms of SFSCs (particularly agrifood baskets initiatives) are still at an early stage of development as opposed to some other regions (Teixeira 2017). These are essentially developed, thanks to the will and energy of some local producers. However, the interviews conducted with them have also exposed a (certain) limitation in terms of communication and marketing that may constraint these initiatives.

From a practical point of view, it became clear that producers must do their best to develop their

communication and marketing strategies in order to promote these initiatives; from a political point of view, local authorities should provide the necessary assistance they need to keep on developing their action (Pato 2020). This support is fundamental to promote knowledge exchange and better training for the producers and consumers involved in SFSCs, especially in areas that require marketing, promotion, and communication skills (Kneafsey et al. 2013). Without the necessary policy support, some rural businesses will be forced to close down, thus endangering a critical component of rural life (Pato and Teixeira 2018).

Naturally, this study has its limitations. It had to deal with time constraints that made it difficult for researchers to analyse the role played by other SFSC actors, like all those who are involved in the producers markets and even other possible promoters of agrifood baskets. So, a possible path to be explored in future research studies would be to extend research to other actors who are part of different SFSC initiatives developed in the region. Another interesting line of research would be to try to understand the kind of perception consumers have of SFSCs.

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