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Abstract: Short food supply chains (SFSCs) are associated with a range of contested, place-based attributes which contrast with the characteristics of complex, global and corporate chains. This article avoids such oppositional binaries by focusing on SFSCs serving two European cities, namely Oslo (Norway) and Bristol (UK). It reviews cities as a particular kind of market within which to secure custom, by presenting qualitative data from a study of SFSCs in these two cities to examine marketing barriers and opportunities encountered. Distinctive urban contexts, such as the density of consumers and presence of food-related infrastructures, can influence the marketing strategies and sales channels chosen by food enterprises. Difficulties are faced by both food producers and the sales channels through which they come to market, especially in relation to financial viability, price competition and efficiency. Our analysis, as well as highlighting connections and divergences between Oslo and Bristol, emphasises the role of these cities in providing diverse food market niches. Alongside global chains, functioning SFSCs help to reflect the history of Oslo and Bristol as trading cities with diverse populations and reveal enterprise adaptability and innovation as market demand shifts.

Keywords: Oslo, Bristol, city, urban food marketing, short food supply chains

Sammendrag: Korte leveringskjeder for mat er assosiert med en rekke omdiskuterte, stedsbaserte egenskaper som står i kontrast til karakteristikkene ved komplekse, globale bedriftskjeder. Denne artikkelen unngår slike todelte motstillinger ved å fokusere på korte leveringskjeder for mat i to europeiske byer, nemlig Oslo (Norge) og Bristol (Storbritannia). Den studerer byer som en bestemt type marked for salg av lokalmat, ved å presentere kvalitative data fra en studie av markedsføringsbarrierer og -muligheter i korte leveringskjeder for mat i disse to byene. Spesielle urbane kontekster, som for eksempel forbrukertetthet og matrelatert infrastruktur, kan påvirke matvareforetakenes valg av markedsføringsstrategier og salgskanaler. Både matprodusenter og salgskanaler for lokalmat opplever utfordringer, spesielt når det gjelder økonomisk levedyktighet, priskonkurranse og effektivitet. I tillegg til å fremheve sammenhenger og forskjeller mellom Oslo og Bristol, understreker studien hvilken rolle disse byene har i å tilby ulike matmarkedsnisjer. Stilt ved siden av globale verdikjeder kan korte leveringskjeder for mat reflektere Oslo og Bristols historie som handelsbyer med en sammensatt befolkning, og påvise hvordan bedrifter tilpasser og utvikler seg når marked og etterspørsel endres.

Keywords: Oslo, Bristol, by, markedsføring av mat i by, korte leveringskjeder for mat

Highlights:

- Businesses marketing local food via SFSCs in Oslo (Norway) and Bristol (UK) are presented
- Barriers and opportunities in marketing in each city are compared via qualitative analysis
- Some SFSC challenges are typical for small enterprises, yet both cities offer dense, diverse, vibrant market niches which local enterprises successfully exploit

1. Introduction

For as long as they have existed, towns and cities have been centres for trade. The formation of cities around transport arteries (such as rivers and sea inlets such as fjords) has been a factor in the location of markets. Borough Market in London is attributed with origins that predate the Romans (Steel, 2009:108). Cities were important food markets in pre-industrial Europe (van den Heuvel, 2016), while industrialisation offered the prospect of long-term agricultural surpluses, which enabled further urbanisation (Mazoyer & Roudart, 2006:331). The importance of urban settlements as provisioning

centres remains: United Nations estimates foresee urbanisation rates by continent between 56% and 87% (United Nations Population Division, 2014). Meanwhile, the development of short supply chains continues to be a driver for food security, not least in the so-called 'global south'. In some African cities, recent urbanisation has been rapid, and the agricultural skills of rural migrants are turned towards informal and subsistence agriculture to bolster household food security (Bousbaine et al., 2020:20; Chagomoka et al., 2017). Urban centres are accessible locations with established infrastructures for food producers and traders to exploit growing and diverse customer markets.

Short food supply chains (SFSCs) '*are characterised by shorter links between producers and consumers so that food relations are re-socialised and re-spatialised*' (Blay-Palmer et al., 2018). Re-spatialisation can be understood as reducing the distance between the point of production and the location of consumer markets, and in the context of provisioning for cities this may indicate a closer interdependence with an adjacent rural region. Indeed, in southern and central Norway there is a notable proximity between the main centres of population and agricultural land (Aune-Lundberg, 2017). SFSCs are explicitly associated with economic operators who are committed to co-operation, local economic development, and close geographical and social relations between producers, processors and consumers. The spatial limits of SFSCs promote the retention of value in the region of production, regarded as a rural development opportunity (for example under European Commission Regulation 1305/2013 in support for rural development by the European Agricultural Fund for Rural Development (EAFRD)). Such social attributes of SFSCs, whether tied to rural development or urban provisioning, are reflected in and supported by innovative business models, which can be used to strengthen local food systems (Kneafsey et al., 2013).

Municipal authorities are among a range of organisations which facilitate and regulate food exchange in cities. Typical roles include providing space for street markets or market halls, policing food quality and hygiene, weights and measures. As planning authorities, local councils also regulate land use, including the designation of agricultural land on the urban fringe. Many cities have been at the forefront of developing multi-functional food policies which combine health, sustainability, cultural diversity, land use and regional economic growth objectives. Horizontal networks of city authorities have been established to provide mutual support and illustrate place-specific good practice, such as the Milan Urban Food Policy Pact, and the International Public Markets Conference.

Two cities feature in this study, namely the Norwegian capital Oslo (population approx. 700,000) and Bristol (approx. 475,000), the largest city in south-western England. Both have international trading histories as ports. More recently, they have become recognised as laboratories and innovators in terms of sustainable food policy-making and 'shop-windows' for the excellence of regional produce.

The importance of cities as markets for food has been bolstered by urban food policy-making at the city level. In Bristol, city council efforts have included the Bristol Food Policy Council, the Better Food Plan, food-related funding via the European Green Capital 2015 award and, most recently, *Going For Gold*, all of which were informed by grassroots consultations. Such engagements have been supportive of SFSCs chains, facilitated networking between diverse groups and directly funded urban food initiatives which create public benefits (Reed & Keech, 2017). Oslo also has a strategy for urban agriculture (Oslo City Council, 2019) and allocates modest levels of investment towards local food initiatives. Norway has also developed a national strategy, bringing together several ministries, including health, local government, agriculture, climate change and education, within the *National Strategy for Urban Agriculture – Cultivate Cities and Towns (Norwegian Ministries, 2021)*. The document's main aim is to facilitate urban agriculture, seen as a contribution to sustainable development, enhancing knowledge of sustainable food production, and adding value through business development.

The cities are included in the Anglo-Norwegian research project 'UrbanFarms'. This project, funded by the Norwegian Research Council, explores how cities offer value-added marketing opportunities to farmers. The project distinguishes cities as distinctive market places with the potential to support business incomes of enterprises which produce, market and/or cook using regionally produced food. The binational focus of 'UrbanFarms' complicates the idea of clear functional or organisational distinctions between urban or peri-urban agricultural characteristics (discussed in section 2, below). For example, while

producers interviewed in the project run commercial enterprises, some of them work part-time on the farm, complementing their income with paid work off the farm. Some enterprises are organised according to characteristics associated with alternative food networks, for example applying Community Supported Agriculture business models that allow consumers a direct hand in production and a voice in governance. Furthermore, this article examines not just farms, but other SFSC actors, including wholesalers, retailers, caterers and public bodies that support SFSCs. Consequently, informants in the study differ according to national contexts, motivations, distance from the urban marketplace, supply chain networking potentials and oppositional/alternative configurations to mainstream food chains. In short, the article examines distinctive market opportunities and challenges in Oslo and Bristol, and how these are exploited or navigated by SFSC actors located in or near each city. They are united not by proximity to the city, but in targeting opportunities offered by city custom.

Qualitative interviews with farmers, retailers, gastronomy businesses, public authorities and NGOs of different kinds and with different motivations, offer data which are discussed in relation to the following research questions:

- (i) What opportunities and barriers exist for SFSC enterprises in and around Oslo and Bristol to market their products?
- (ii) What distinctive urban contexts can be drawn from our analysis of SFSC producers targeting cities?

The article proceeds as follows. In section 2, urban food business opportunities are further examined in a review of literature linking SFSC and cities. This reveals a normative and values-laden view of a divided field – food grown in cities has largely social functions, whilst extra-urban food marketed in cities converts production and business ethics into price premia. The article proceeds via a thematic data analysis in section 3, which includes a methods description and a fuller outline of the ‘UrbanFarms’ project. In section 4, the discussion empirically presents marketing barriers/opportunities and the commonalities and distinctions between Oslo and Bristol. Section 5 discusses urban specificities in relation to our data, with concluding remarks following in section 6.

2. Short food supply chains and the urban arena

The aim of rethinking the performance and configuration of the food chain in the light of (and in opposition to) dominant global chains is now very familiar (Fuller et al., 2016; Goodman, DuPuis, & Goodman, 2012; Tregear, 2011). As the global population shifts towards being majority urban, much consideration is being devoted to how farming and food supply should adapt. Urban agriculture appears to reduce the physical distance between production and market locations, and holds potentially beneficial outcomes for the urban form (e.g., via green infrastructure contributions) and psycho-social benefits for those involved (Howarth et al., 2020). In practice, urban agriculture has been small-scale, carried out with modest physical infrastructure and economic capital, supplemented by high levels of social and cultural capital and a cadre of small peri-urban farms selling directly into cities.

Continuing agricultural industrialisation and urbanisation processes (Goodman et al., 2012:20) have tended to separate rural and urban spaces functionally, for example, between rural environmental/provisioning and urban cultural/commercial spheres. Studies have highlighted opportunities for SFSCs to reconnect consumers and producers across such spatial divides to support rural development (Galli et al., 2003). Indeed, cities can contribute to quality of life in rural areas (Tacoli, 2003), while rural areas offer multifunctional benefits to city-dwellers (Harrison & Heley, 2015). With such considerations in mind, a proliferation of urban food strategies has emerged (Ilieva, 2017) from various sub-national institutions. These have tried, on the one hand, to advance the sustainability performance of regional food systems through environmental improvements promised by SFSCs through producer-consumer connections (Reina-Usuga et al., 2022), and on the other hand, expand socially inclusive food and health programmes for their citizens through the promotion of urban production and solidarity provisioning (Morgan, 2015). SFSCs are positioned as contributors within a relational rural-urban

sustainability agenda geared towards realising what Moragues-Faus (2020) calls distributive food systems, in which the benefits are accrued equally by citizens.

Some scholars have highlighted the spatial divergence of urban and rural agriculture in explicitly functional terms, arguing that peri-urban agriculture is a residual form of commercial agriculture on the urban fringe, while urban agriculture is principally a social occupation (Opitz et al., 2015). Simon-Rojo et al. (2015) have distinguished ideal types of profit and non-profit agriculture in or near cities. In food studies, the rural sphere is the place to study production within more and less sustainable paradigms (Lang & Heasman, 2015), while the urban sphere is studied for its consumption structures and cultural dynamics (Keech & Redepenning, 2020; Parham, 2014).

This article does not quantify (e.g., in distance) the idea of local food; our interest is in urban markets. Indeed, *'what 'local' actually means has long been debated..., with the consensus that the term is contested and defies definition'*. (O'Neill, 2014). Yet, there are distinctions in Anglo-Norwegian perceptions of what, roughly, constitutes local, in respect of proximity to urban market. In the UK, a diversity of understandings frames the application of the notion of local food. For example, the 2014–2107 Local Food Strategy for Bath and North East Somerset (which neighbours Bristol) describes *'food that is produced, processed, distributed, traded and sold within a 30 mile (48km) radius'* of its administrative borders (BANES, 2014:8). Similarly, 30 miles is the extent from which most farmers' markets accept producers if registered with the British National Farm Retail and Markets Association. In addition, a distinction has been made between local (proximate) and locality foods (associated with a particular place) (Tregear, Arfini, Belletti, & Marescotti, 2007). Two interviewed farms lie 80km away from Oslo. This distance is temporally extended by Norway's hilly terrain resulting in circuitous routes winding through sparsely populated areas. In the UK, this would not constitute an urban or even peri-urban farm. In Norway, it is not unusual for producers to seek urban markets which take several hours to reach. Stiftelsen Norsk Mat (a foundation appointed by the Ministry of Agriculture and Food in 2007, with the aim to develop and professionalise local food producers) defines local food as: *Food and beverage products with a local identity, distinctive origin or special qualities related to production method, tradition or product history*⁵. This conforms with locality understandings, and makes no mention of distance; here local food is defined around product qualities, not all of which are geographical. Detailed complexities of how this affects product origin labels are traced elsewhere (e.g., Maye et al., 2016; Tregear et al., 2007).

One method to complement such socio-spatial distinctions with technical innovations has been through finer-grained examinations of urban food business (to which we aim to contribute here). For example, Pölling et al. (2017) offer a comparative analysis of urban farm business models in Spain, Italy and Germany. This notes the pull of urban areas in offering opportunities that are more diverse than the focus on economies of scale that, the authors argue, dominate rural agriculture. They indicate *'traditional farms adjusting to urban conditions with city-oriented strategies and business models'* (p. 168), implicitly accepting that these farms are not necessarily within city bounds but drawn into their orbit. The study provides a useful comparison of how some business models of urban farming have become focused on niche markets beyond global markets, with high-value production and the provision of services linked to agriculture, as farms adapt to profits from the opportunities provided by cities. One example is that urban-geared food businesses focus (like most farms) on cost reduction as a strategy for producing high added-value (and often regionally unique) crops that are perishable, and thus benefit from proximity to the consumer. The authors emphasise that:

...a huge variety of business cases exist within urban and peri-urban settings throughout Europe [... and...] urban farming adjusts to specific urban conditions in manifold ways... Urban farming has to specialise, differentiate or diversify – or to combine these alignments. (Polling et al., 2017:178)

The relationship to the city is not just the urban core, but the agglomeration of urbanity that reaches into rural areas. This blurs the role of customers making them collaborators with farmers, with whom they can personally engage. Enterprise strategy is thereby expanded to be about connection and translation, not

⁵ <https://stiftelsenorskmat.no/no/aktuelt/salget-av-lokalmat-oeker>

solely land management. It is this focus on the city as a distinctive market opportunity exploiting SFSCs that frames this article.

3. Data sources and research rationale – methods

As described, data has been generated as part of the bilateral project ‘UrbanFarms’. This is a research-practice collaboration co-ordinated by the Norwegian Institute of Bioeconomy Research (NIBIO), involving the Norwegian Centre for Organic Agriculture (NORSØK), Organic Norway, and the Norwegian Farmers’ Union. The UK partners are the Countryside and Community Research Institute at the University of Gloucestershire, and the civil-society alliance Bristol Food Network.

The aim of the project is to help professional farmers in cities and peri-urban areas to make use of the vicinity of the city to increase added value from their production in an economically, socially and environmentally sustainable way. Collaboration with UK colleagues facilitated co-learning and highlighted national commonalities and divergences in the efforts to support SFSCs in and around the case study cities.

Our data collection took the form of 34 semi-structured interviews carried out in the autumn of 2021, summarised in table 1, below. To select participants for our study, we initially contacted stakeholders in Oslo and Bristol with professional experience of local food production and marketing to get an overview of different actors relevant to include (snowball technique). After generating a list of potential interviewees from both cities, representatives of three predefined categories were selected: producers, sales channels, organisations/authorities.

Tab 1. Overview of the research sample in Oslo and Bristol.

Oslo interviews (n=16)	Bristol interviews (n=18)
5 producers (incl. 4 UrbanFarm partners)	6 producers
6 retail enterprises	5 retail enterprises
5 local food network representatives, including 2 from public authorities	7 local food network representatives, including 1 from a public authority

An interview guide helped researchers organise their questions into three broad clusters. The first cluster inquired about the present structure, operation and main marketing channels of the enterprise. The second cluster sought to reveal the motivations of the enterprise as a specialist in SFSC and/or distinctive local products. The third cluster invited interviewees to share thoughts on barriers and opportunities in relation to their business objectives. As the study was carried out during the COVID-19 pandemic we also included questions to explore the interviewees experience with selling local food during lockdown. This interview guide was selected over fixed questioning, because we hoped to optimise the opportunity for free interviewee engagement beyond the strict boundary of the questions, thereby allowing the interviewees to elaborate their own contexts. Norwegian interviews' were carried out via on-line conversations by the two NIBIO authors, one of the producers also replied in writing (due to poor internet connections). UK interviews were carried out predominantly in-person by members of the UK team and one of the Norwegian team, who was located with CCRI for three months.

Interviews were either transcribed manually or automatically using Otter AI and then ‘cleaned’, that is re-read and corrected manually. Thereafter, the authors undertook thematic coding of the transcripts, collectively agreeing a subsequent ‘codebook’ (list of themed terms) which was used to structure thematic analysis using NVivo 11 software to enable higher-order clustering.

The UK researchers do not speak Norwegian. Consequently, the Oslo transcripts were used to inform an English language data report by the Norwegian team, which used translated quotations, some of which appear here.

4. Research findings


In this section, sales channels used by the enterprises in both cities are briefly described. Thereafter, marketing barriers and opportunities are presented and compared.

Sales channels

In the UK, in mid- and large-scale supply chains aimed at multiple retailers (supermarkets) and other corporate customers such as national food service firms, farmer sales channels are usually confined to two formats. These are direct supply contracts with supermarkets, or sales to wholesalers who then consolidate product ranges from multiple producers for onward sale. In Norway, most farmers are members of large farmer co-operatives with food specialisms, such as vegetables or dairy products. These large co-operatives collectively negotiate sales with the main supermarket companies on behalf of their members, effectively acting as wholesalers (and in some cases carry out secondary processing), offering them a high degree of power in commercial negotiations. Nevertheless, Norwegian farmers face high labour and production costs linked to short seasons and environmental conditions, as well as downward market pressure from imports (Vik, 2020). In general, smaller-scale producers face commercial challenges when operating within large-scale market channels, which are linked to the need for consistent supply quantity and quality and commonly seek alternative channels to develop sales (Anna Milford et al., 2021).

Eight separate sales channels were identified within the cohort of interviewees in this study. These were broadly divided into those involving a higher or lower degree of interaction between farmers and consumers in terms of personal contact and knowledge transfer (table 2, below). SFSCs commonly include direct, producer-led approaches to marketing lacking any intermediaries. It must be stressed that producers often exploit more than one of these channels at the same time, and that such sales channels do not characterise all SFSCs, but are channels used by enterprises within this study.

Tab 2. Sales channels in Oslo and Bristol. Source: own elaboration

<div>More direct farmer-consumer interaction</div> <div></div> <div>Less direct farmer-consumer interaction</div>	Community Supported Agriculture	Produce grown and consumed by CSA members
	Farm retail	Direct sales to customers who visit the farm, including pick-your-own
	Farmers' market	Producer sells food at fixed-location, regular, regulated market place
	Food festivals	Farmer (or representative) sells produce at one-off or infrequent urban cultural event
	Reko rings	(Norway only) Social media subscription groups, famer delivers to urban location
	Internet retail	Retailer consolidates produce from a range of producers and sells to a range of customers – this may involve direct farmer-customer on-line agreement for instance, via a platform for which the farmer pays a fee, or in the form of a subscription scheme or consumer cooperative
	Direct sales to independent shops and restaurants	Farmer sells directly to an independent shop and restaurants, usually linked to demand fluctuations
	Direct sales to wholesaler	Farmer sells directly to a wholesaler for onward sale

Farmers' Markets usually restrict the distance from which produce is sourced, and expect food to be sold by producers. In Oslo, weekend farmers' markets take place throughout most of the year (except July and January-March) and are notably not in fixed locations, a deliberate strategy to expand their customer base. By contrast, in Bristol, fixed sites are the norm. Bristol was the location of the second farmers' market to be established in Britain (after Bath) in 1998. Today, one market is managed by the city council and a second was started in 2006 by a residents' network whose members connected farmers markets with sustainability benefits. While such benefits have been critiqued, earlier studies have examined the urban place-making and knowledge exchange possibilities of farmers' markets (Hunt, 2007; Milestad et al., 2010; Oñederra-Aramendi et al., 2018).

REKO-Rings are a Nordic particularity. They are farmer-led buying groups and use social media to recruit and communicate with customers to arrange deliveries in agreed locations – commonly car parks. The acronym abbreviates *Rejäl Konsumtion* (fair consumption) as the model helps smaller-scale producers optimise retail price capture. Originating in Finland in 2013, the first Norwegian REKO-ring followed in 2017, with nine now operating in Oslo. REKO-rings entail lower-start-up costs and barriers than farmers' markets and involve advance payment before delivery within a limited period. While direct contact between consumer and producer is a shared feature of both farmers' markets and REKO-rings, the latter is more time-efficient for both parties.

CSAs are another producer model encountered. While formats vary (Henderson & Van En, 2007; Soil Association, 2012), in general CSAs share enterprise risk between consumers and producers. Consumers might pay in advance for food, for example through a membership fee (which may also involve enterprise governance responsibilities), and participate in labour in some cases. CSAs and some buying groups are not straightforward transactional business models, but can be a form of 'prosumption' (Podda, Loconto, Arcidiacono & Maestripieri, 2021), where consumers co-produce the food they eat and leave the distinction between producer and consumer unclear. Yet other CSAs are similar to food subscription box schemes with little direct participation of consumers in production.

Subscription box schemes in Norway include those run by their customers. In one case, organic produce is ordered from a range of peri-urban farmers, collected and distributed to a central distribution point in Oslo. In Bristol, a number of subscription box schemes compete to offer food from regional and national producers. Such schemes do not involve any participation of consumers other than as weekly subscribers (local ones do). Although most of the food is produced by British farmers, schemes including enterprises among our interviewees, commonly import exotics, such as lemons.

Retailer-based sales channels reveal a variety of innovative approaches for SFSCs to access urban markets, especially where internet ordering is used creatively. Several different digital platforms for online purchases of local food exist, and new variants are regularly introduced. While on-line retailing removes personal contact with producers or sales staff, platforms provide significant information about food origin and production methods, illustrating these with photos and stories. They enhance knowledge and create a mental link between consumers and producers. One online enterprise in Bristol lists local producers alongside other independent retailers in the city, from which they collect, enabling on-line consumers to access an expanded range of products. In Oslo, an on-line marketplace consolidates purchases from local producers made by commercial restaurants and caterers, and arranges efficient urban delivery.

Bristol has a large number of independent food shops sourcing food from SFSCs. Compared to Bristol, Oslo lacks this diversity of physical outlets. A representative from one such independent shop cites this as a gap in a grocery market dominated by large retailers.

Finally, a sales option for urban and peri-urban farmers is to sell through wholesalers. A wholesaler buys food from many different producers and can reduce the workload with direct deliveries from producer to customer. But this also constitutes an extra stage in the supply chain which needs to be financed adding downward price pressure on the producer, which s/he may try and recover through increased supply quantity, if possible (Goodman et al., 2012). Acknowledging that research carried out coincided with the pandemic, the effect this had on the use of SFSC sales channels is noteworthy. Some producers

interviewed found that their sales increased to fill gaps left by the closure of restaurants during COVID-19, once they had reorganised their supply chains. In Oslo, this affected a digital sales platform that offers local produce primarily to commercial kitchens.

[The pandemic] strangled sales quite efficiently. We lost 90% of our customers from one day to the next. It was demanding but perhaps more demanding for the producers. Many have built up around commercial kitchens ... They were sitting there with large amounts of produce that they didn't manage to sell.

Despite the challenges, some Oslo producers adapted:

We have been talking about offering subscription sales since we started. Corona meant that now we just had to try it. It made us creative and that's good.

In Bristol, two networks proved helpful to local producers during COVID-19. Firstly, Bristol Food Producers shared information among producers and sales channels to reorganise the supply chain, redirecting those supplying restaurants towards home delivery opportunities. The Bristol Food Union temporarily emerged to support restaurants, raising money to engage caterers in cooking and home delivery for vulnerable people, and identifying workers in times of constrained mobility and illness.

Barriers and opportunities

Local food enterprises in Oslo and Bristol face several challenges and opportunities which affect growth plans and profitability. These are discussed below, and initially summarised in Table 3. In several cases, data reflect multiple or inconsistent perceptions, rather than indicating a clear picture.

Tab 3. Barriers and opportunities for SFSCs marketing in Oslo and Bristol. Source: own elaboration

Barriers	Opportunities
Small-scale producers struggle to co-ordinate multiple supply chain functions	Local producers cater for consumers interested in ethical aspects and other food qualities
Dispersed access to SFSC products can make sourcing complex	Purchasing locally gives more transparency
Direct producer contact remains inefficient	Direct producer contact is import for marketing 'story' and to build customer loyalty
Competition exists between producers and between local sales channels	Collaboration implies growth opportunities, including digital solutions
Inadequate levels of sales for some producers and sales channels	There is demand but there is need for better targeted sales channels
Lack of land for cultivation	Short distance to dense consumer markets
Several SFSC support organisations – conventional networks are less interested in local/urban	Policy interest in urban food systems is consistent and some initiatives trying to co-ordinate

A characteristic of SFSC-aligned enterprises is their ability to carve out quality-based niches (Marsden & Smith, 2005), based on limited volumes of production. Usually, such enterprises perform most business tasks themselves, from cultivation to marketing, since investment in machinery or hiring professional specialists may not be affordable. This makes multiple supply chain demands on producers, which is replicated in sales channels such as farmers markets and REKO where a direct sales presence by the producer is necessary. Urban retailers of SFSC products have improved producer efficiency through digitalised ordering and logistical consolidation, which removes producers from later stages of the chain.

Similarly, because the quality niche in SFSCs is locality, enterprises market a variety of different products (rather than narrowly specialising), and the different handling processes involved may add to workloads. If, additionally, local producers adhere to ethical practices, for instance organic production, emphasising animal welfare, or privileging local resources in their production, then input costs per unit produced may rise. Selling the food is time-consuming in itself, as it involves direct encounters via different sales channels with a variety of consumers.

Urban farmers are often involved with social entrepreneurship. One of the interviewed farms has a workforce of people with learning disabilities, which creates a need to carefully balance its social and commercial priorities:

We've found with restaurants and cafes, the people-focused way that we work can create issues. We're tied into an agreement we have to fulfil on a regular basis, or certain quantities. It's interesting how that can conflict with the people care that we do. So, our shop or farmers' market outlet are the things that work best for us. (Local producer, Bristol)

This balancing act is notable in this quotation, forming part of the enterprise income strategy and a marketing story in the farm shop. For sales channels purchasing directly from local producers, a high degree of co-ordination of purchases will be needed from a large number of small-scale businesses, instead of making a single order with a wholesaler, as described in this quote from an independent shop in Oslo:

We have more than 50 suppliers, so there is quite a lot of coordination, many to keep dialogue with. It is really both a strength and a weakness, because it is a lot of work. (Independent food shop, Oslo)

In some cases, the value of specialist local product qualities has to compete with imports costing much less and with no additional logistical costs on the part of the restaurant or shop other than routinely visiting the wholesale market. For individual consumers, purchasing locally may also require more effort since they might need to seek out speciality stores, make arrangements to collect from REKO ring delivery points, or sign up for a subscription scheme. The price for SFSC products is also usually higher than supermarket prices. One of the interviewed CSAs described how some of their members dealt with the situation:

[Some members] find it's a little bit more hardcore than they thought... They might be transitioning from going to the supermarket and getting all their veg there. And then they can't quite deal with the fact that they have to pick up veg every week and they can't pick what they like necessarily, and some people just find it too much hard work. (CSA, Bristol)

In both Oslo and Bristol interviewees cite the lack of consumer demand as a main barrier to growth of their market share. A farmer in Oslo comments:

People have to eat, so the market is there. But whether they are interested in eating what we cultivate, one can wonder about that. It isn't necessarily so that we can grow as much as we want and the market will be there. There is too much competition with the conventional [outlets], so it's limited, I think.

On the other hand, interviewees describe a segment of consumers who are more concerned with ethical aspects of food production than price and convenience. These requirements can be met by small-scale farmers and producers, and because the personal contact in the sales situation is direct, the value chain seems more transparent, giving assurance to the consumer that they are getting what they want. One online sales channel in Oslo described how it meets these consumer needs through direct communication:

In the existing [conventional] food system, we don't know why there is a price difference in the store, we don't know if the producer is well-paid, how big the farm is, whether the crops are harvested by hand or machine. All these factors are not known to customers. But since we work directly with the producers, we can provide such information.

There are also indications that the market segment of consumers purchasing local food could grow as more producers enter the market. A farmers' market organiser in Oslo reflects:

There is room for more producers. We could have had many more markets in Oslo if there was capacity with the producers. There is a much larger customer base if we had the capacity to put up more market places and had producers for it.

In Norway, low availability of producers in the region who are prepared to try farmers' markets, and the high relative cost of produce makes routine farmers' markets purchases unaffordable. In food markets, such as REKO-rings, where multiple farmers offer similar products, there can be price competition, and a particular challenge arises when people who primarily produce local food as a hobby and can sell their products at low prices outcompete those who are trying to make a living. Solving this challenge could involve avoiding co-locating multiple producers with the same product type at the same outlet, a policy followed by the organisers of Bristol's farmers' markets.

Similarly, an increase in the diversity of local food sales channels may not indicate a higher total number of customers overall. For instance, a food producer in Oslo described how small independent shops lost customers when the REKO-rings emerged in different parts of the city in 2019.

When REKO appeared, it did quite a lot to the small shops in Oslo, because people started to leave them. (...) It is difficult to justify a small shop that sells the products and tries to make a little profit, when right next to it a farmer sells his products himself.

Oslo farmers' market organisers point out that there can be competition among sales channels not only for customers, but also for producers of local food:

There are very many different initiatives regarding local food, and some will be indirect competitors, and some will be almost direct competitors. Not necessarily for customers, but just as much for producers.

On the other hand, a variety of different sales channels are necessary in response to varying customer needs. One online sales channel in Oslo specialises in sales to restaurants, sourcing from local producers. This is a business model that Bristol seems yet to develop.

Collaboration and better coordination among the different actors in the market might help solve inter-producer competition problems and perhaps increase the total market share, as pointed out by an on-line retailer in Oslo.

I think it's about working together. We do not solve this problem alone, it is not a new player who comes in and solves all the problems for local food. I really believe in talking to each other, and in Oslo we have tried to encourage dialogue.

Echoing this, a retailer in Bristol believes in:

...more organisation and more collaboration. We need to bring them all (producers) together.

Even with increasing digitalisation and associated new opportunities for online solutions, there is need for a coordinated strategy, as pointed out by two Oslo producers. The first highlights fundamental challenges linked to the proliferation of on-line platforms; the second introduces the need to think about a collective contribution to market diversity:

It is important to have systems that work, and that is probably part of the failure. There are no good platforms to group your sales. You have [...] so many platforms. Digitisation is very good and important [...] but no one has looked at it holistically.

Regarding delivery and sales, we have not cooperated so much, we have tried to cooperate, but people are also a little afraid [...] that their market will be taken, it is a small market. It is important to turn it around to think that you are stronger together and must create diversity together.

Finally, the need for collaboration also applies to organisations working to augment local food systems. In Bristol such organisations are numerous and have a track-record of achievements, but interviews reveal that they are not always well coordinated. Support from organisations is important since farmers selling SFPC products are often not prioritised by large agricultural support organisations, and small, urban/peri-urban farmers may not qualify for agricultural subsidy (Curry et al., 2014). Smaller-scale direct marketing may need to be considered more positively by policy-makers, according to one Oslo food network:

The direct sales, REKO, farmers' markets, should be encouraged by the agricultural sector in a different way. The way it is now, it's just nonsense, and I'm not making that up. Just ask the producers to what degree this is profitable and what hourly wage they have. The agricultural sector must support direct sales in a different way than they are doing today.

In summary, data suggest that producers and other enterprises involved in SFSC marketing in Oslo and Bristol highlight a wide range of sales channels opportunities and high degrees of innovation. The diversity of the city as a dense and varied customer market is being exploited by interviewees and the picture of a dynamic, experimental and adaptable cohort of enterprises emerges. This is also evident in how enterprises adapted to COVID-19 restrictions. However, producer collaboration and enhanced efficiency/professionalisation (Espelt, 2020) remains a common challenge for SFSC actors, whether urban or rural (Paciarotti & Torregiani, 2021) and despite persistent perceptions of social and environmental benefits of SFSCs among consumers (Vittersø et al., 2019).

5. Discussion: The city as a market for local products

In this section, distinctive urban dimensions are highlighted in relation to the sales channels described in section 4, above. Do these align well within the infrastructural advantages of cities set out by Pölling et al. (2017) or are there other factors at play for the cohort of interviewees involved in SFSCs? Our marketing-based assessment highlights three distinctive urban dimensions, namely land, diversity of outlets and consumers, and logistics.

Land

Poor access to land limits urban farming possibilities and constrains the scale of urban-based supply. This necessarily imbues urban food markets with relational territorial agency. Interview data have highlighted demand for SFSC products, which suppliers make efforts to meet through diverse market channels. In 2011, a Bristol report outlined opportunities to convert 800 ha (ca. 7% of the city's area) and including some public land including parks, towards vegetable production (Carey, 2011). Such ideas remain largely aspirational in Bristol's current food policy iteration following Going For Gold success, although a handful of urban farming enterprises are located on public land. Realising this goal more widely will require planners in the UK – where urban food provisioning space is normally limited to allotment gardens, the produce from which may not be sold – to think creatively. A few councils have published planning notes to encourage urban developers to increase food production space in new housing and industrial projects (e.g., Brighton and Hove City Council, 2021), but this remains rare.

If participatory business models such as CSAs are to expand, the cultivation of urban and peri-urban land could complement regional SFSCs, even if this involves temporary and opportunistic use prior to eventual development (Mettepenningen et al., 2014). Urban land has higher development value potential compared to food production, which is an important asset consideration for municipalities with stretched resources.

While land is a constraint in Bristol, in Oslo, the municipality maps existing or potential agricultural land and it is possible to rent publicly owned farmland, attend courses in urban agriculture, and join incubator programmes for small-scale vegetable production. Yet urban land remains limited in its ability to supply *'the local urban area with agricultural products, and urbanites [to] take part in farming operations'* (Vejre et al., 2015). Promoting farming in and nearer to cities is a way to protect agricultural green belt land, and new entry schemes for commercial farmers have been piloted to control urban sprawl (Arcuri et al., 2021).

The lack of land as an urban agricultural resource, in other words, forces urban markets to look beyond the city boundary towards commercial production locations in peri-urban or rural areas. This demand reach, which has been examined through urban food markets and SFSC business models, bridges the definitional conundrum of O'Neill (2014).

Diversity of outlets and consumers

The diversity of urban outlets gives consumers a range of alternatives for purchasing SFSC products. The advantage over non-urban settings: more customers committed to supporting SFSCs and buying a diversity of local products. Consequently, the urban concentration of diverse customer markets offers a greater variety of opportunities to buy local food and connect directly with producers. Meanwhile, the higher populations and customer demand of cities, which SFSCs cannot meet alone, allows them to operate alongside price-focused business models, such as supermarkets. In this respect, the idea that SFSCs are alternative, gives way to the notion of a diverse urban food market which positions them as relational to dominant global markets. In other words, urban decision-makers may find it possible to make room for diverse food market profiles.

In this respect, another Oslo-Bristol distinction appears among those organisations which support SFSC. In Oslo, influential networks appear as focused on commercial opportunity, while Bristol networks highlight sustainability and food security. For example, Hanen promotes tourism and local food, while Kompetansenettverket for lokalmat and Stiftelsen Norsk Mat are initiatives of the Norwegian agricultural ministry that promotes added value creation and food safety among SFSC producers.

Food festivals (like farmers markets) have been associated with opportunities for rural economic development, as well as urban civic pride (Hollows, Jones, Taylor, & Dowthwaite, 2014) and city tourism (Getz et al., 2014). In Oslo, two large food festivals exist. Matstreif, established in 2005, is organized by Innovation Norway for the Norwegian Ministry of Agriculture and Food. It aims to be the most important meeting place for producers of local food and drink. Mat*larm was established in 2020 by Hanen to connect producers with restaurants, and is especially aimed at producers who lost hotel, restaurant and catering customers as a result of the Covid-19 pandemic. In Bristol, a range of festivals have previously showcased organic produce, combined street food stalls and displays by chefs with music performance, and celebrated the city's ethnic diversity, including the Hong Kong Food Festival in May 2022.

Ultimately, cities are exposed, through global distribution networks, to global markets, which introduce food that might be associated with different labour costs and regulatory burdens in the country of production.

Urban logistics

Cities offer markets with a high density of customers. Interviewees have highlighted this in relation to urban deliveries, especially when using electric bicycles. Clearly, bicycle delivery limits both the quantity of food that can be transported and the distance travelled. Yet in two Bristol cases, on-line retail orders are collected from a range of urban food suppliers (such as butchers, greengrocers and organic specialists) and delivered by bike to customers within around 3 miles/5km of the city centre. This transport innovation represents an attractive story in Bristol, where citizens perceive optimal sustainability performance in low food miles associated with SFSCs, and lower carbon deliveries. In general, the environmental advantage of shorter distances was less often mentioned in Oslo. A recent study (Ørving & Owen Phillips, 2022) on distribution of local food in Oslo detects extensive use of private cars to transport and pick up goods to from outlets, little formal coordination and cooperation across small-scale manufacturers.

Growing interest in SFSCs, combined with the difficulties faced by small-scale producers who fall outside the trading circumstances required by the dominant food distribution system, creates a need for solutions that can contribute to an efficient and climate-friendly SFSCs. This is a particular challenge in Oslo (and Norway generally), where producers live substantial distances from urban markets, as suggested by an Oslo producer:

I think it is almost on the edge to call it local when we sell to Oslo. [...] My big dream would be to have a farm located 10 or 20 minutes from the center of Oslo, then it is local. It's an hour's drive now.

Retailers interviewed in both cities constitute one group talking seriously about low food miles. The term was coined by Tim Lang in 1992 (Lang, 2006) to help consumers consider where their food came from, and used to highlight the energy needed to produce and distribute food in global supply chains (Jones,

2001). Subsequently, food miles have been critiqued as providing a limited assessment of food chain performance (Born & Purcell, 2006; Majewski et al., 2020) or a parochial view of food security (Müller, 2007). These arguments need no rehearsal here. In Oslo, retailer assertions about local food *‘being a counterweight to how a [long-distance] food system works’* were certainly encountered. In Bristol food miles persist as a clear concept which consumers grasp, as suggested by this retailer:

I think food miles is very easy for people to conceptualise, it's very nearby therefore it must be having a positive impact, that's the perception.

6. Conclusions

The benefits of linking rural producers and urban consumers has been well-studied (e.g., Blay-Palmer et al., 2018; Dimitri et al., 2016) and is associated with a sense of responsibility or ‘conventions of regard’ (Kirwan, 2006) on the side of consumers. Such motivations are empirically echoed here.

In addition, Bristol-Oslo research links the development of urban-focused SFSC markets with sub-national (municipal) food strategies and networks which act as intermediaries/facilitators between practice and policy. As suggested, in Oslo this strategic focus leans towards commerce, while in Bristol, public health and social inclusion are prominent. It is not possible to conclude from data presented here that urban market opportunities and public strategies are causally linked. Yet it seems likely that, in Oslo and Bristol, enterprise innovation has responded to, and informed, a diverse cultural acceptance of food as an important urban topic that is publicly and repeatedly debated. These debates, when applied in market situations, draw attention to how SFSCs function and which infrastructural prerequisites are needed to optimise their efficient operation.

Data have outlined challenges faced by SFSC actors, both those based in the city or those outside seeking urban custom. Key challenges remain linked to the need for producer co-operation, or the increased cost and effort associated with ethical business models. Local food qualities, for all the critical attention they have gained, retain a simple and coherent message in the minds of urban customers. Future urban food research might consider whether perceptions of SFSCs, (which symbolise geographical qualities or environmental proxies), also contribute to a perception of urban food diversity.

With this in mind, analysis has also highlighted the need to move beyond debates about the affordability of SFSC products, and into reflections that they must appear as part of the urban offer. Oslo-Bristol details highlight nimble and innovative supply arrangements, although each innovation reveals that the pool of pro-local consumers is limited and fickle, shifting its custom towards each innovation as it arises. Revisiting Marsden and Smith (2005) it is suggested, finally, that actors in the Oslo-Bristol SFSC could more usefully be regarded not as niche enterprises, but enterprises occupying several niches. Cities have an historical and successful continuing role in providing these niches for SFSCs, and stimulating innovation in their development.

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Academic references

- [1] Aune-Lundberg, L. (2017). Jordbruksareal rundt norske tettsteder. *NIBIO POP* 14(3), 1–4.
- [2] Blay-Palmer, A., Santini, G., Dubbeling, M., Renting, H., Taguchi, M. & Giordano, T. (2018). Validating the City Region Food System Approach: Enacting Inclusive, Transformational City Region Food Systems. *Sustainability*, 10(5), 1680. DOI: 10.3390/su10051680.

- [3] Born, B. & Purcell, M. (2006). Avoiding the Local Trap: Scale and Food Systems in Planning Research. *Journal of Planning Education and Research*, 26(2), 195–207. DOI: 10.1177/0739456X06291389.
- [4] Bousbaine, A., Blaise Nguendo-Yongsi, H. & Bryant, C. (2020). Urban Agriculture in and Around Cities in Developed and Developing Countries: A Conceptualisation of Urban Agriculture Dynamics and Challenges. In A. Thornton, ed., *Urban Food Democracy in North and South*. Cham: Palgrave Macmillan.
- [5] Carey, J. (2011). *Who Feeds Bristol? Towards a resilient food plan* [research report]. Bristol City Council.
- [6] Chagomoka, T., Drescher, A., Glaser, R., Marschner, B., Schlesinger, J. & Nyandoro, G. (2017). Contribution of urban and periurban agriculture to household food and nutrition security along the urban–rural continuum in Ouagadougou, Burkina Faso. *Renewable Agriculture and Food Systems*, 32(1), 5–20. DOI: 10.1017/S1742170515000484.
- [7] Curry, N., Reed, M., Keech, D., Maye, D. & Kirwan, J. (2014). Urban agriculture and the policies of the European Union: the need for renewal. *Spanish Journal of Rural Development*, 1, 91–106. DOI: 10.5261/2014.ESP1.08.
- [8] Dimitri, C., Oberholtzer, L. & Pressman, A. (2016). Urban agriculture: connecting producers with consumers. *British Food Journal*, 118(3), 603–617. DOI: 10.1108/BFJ-06-2015-0200.
- [9] Espelt, R. (2020). Agroecology prosumption: The role of CSA networks. *Journal of Rural Studies*, 79, 269–275. DOI: 10.1016/j.jrurstud.2020.08.032.
- [10] Fuller, D., Jonas, A. E. G. & Lee, R. (2016). *Interrogating Alterity – Alternative Economic and Political Spaces*. Abingdon: Routledge.
- [11] Getz, D., Robinson, R., Andersson, T. & Vujicic, S. (2014). *Foodies and Food Tourism*. Oxford: Godfellow.
- [12] Goodman, D., DuPuis, E. M. & Goodman, M. (2012). *Alternative Food Networks – Knowledge, practice and politics*. Abingdon: Routledge.
- [13] Harrison, J. & Heley, J. (2015). Governing beyond the metropolis: Placing the rural in city-region development. *Urban Studies*, 52(6), 1113–1133. DOI: 10.1177/0042098014532853.
- [14] Henderson, E. & Van En, R. (2007). *Sharing the Harvest – A Citizen's Guide to Community Supported Agriculture*. White River Junction: Chelsea Green.
- [15] Hollows, J., Jones, S., Taylor, B. & Dowthwaite, K. (2014). Making sense of urban food festivals: cultural regeneration, disorder and hospitable cities. *Journal of Policy Research in Tourism, Leisure and Events*, 6(1), 1–14. DOI: 10.1080/19407963.2013.774406.
- [16] Howarth, M., Brett, A., Hardman, M. & Maden, M. (2020). What is the evidence for the impact of gardens and gardening on health and well-being: a scoping review and evidence-based logic model to guide healthcare strategy decision making on the use of gardening approaches as a social prescription. *BMJ Open*, 10. DOI: 10.1136/bmjopen-2020-036923.
- [17] Hunt, A. R. (2007). Consumer interactions and influences on farmers' market vendors. *Renewable Agriculture and Food Systems*, 22(1), 54–66. DOI: 10.1017/S1742170507001597.
- [18] Ilieva, R. T. (2017). Urban Food Systems Strategies: A Promising Tool for Implementing the SDGs in Practice. *Sustainability*, 9(10), 1707. DOI: 10.3390/su9101707.
- [19] Keech, D. & Redepenning, M. (2020). Culturalisation and urban horticulture in two World Heritage cities. *Food Culture and Society*. DOI: 10.1080/15528014.2020.1740142.
- [20] Kirwan, J. (2006). The interpersonal world of direct marketing: Examining conventions of quality at UK farmers' markets. *Journal of Rural Studies*, 22(3), 301–312. DOI: 10.1016/j.jrurstud.2005.09.001.

- [21] Kneafsey, M., Venn, L., Schmutz, U., Balasz, B., Trenchard, L., Eyden-Wood, T., Bos, E., Sutton, G. & Blackett M. (2013). *Short Food Supply Chains and Local Food Systems in the EU. A State of Play of Their Socio-Economic Characteristics*. Luxembourg: Publication Office of the EU. DOI: 10.2791/88784.
- [22] Lang, T. & Heasman, M. (2015). *Food Wars: The Global Battle for Mouths, Minds and Markets*. London: Routledge.
- [23] Majewski, E., Komerska, A., Kwiatkowski, J., Malak-Rawlikowska, A., Wąs, A., Sulewski, P., Gołaś, M., Pogodzińska, K., Lecoeur, J-L., Tocco, B., Török, Á., Donati, M., Vittersø, G. (2020). Are Short Food Supply Chains More Environmentally Sustainable than Long Chains? A Life Cycle Assessment (LCA) of the Eco-Efficiency of Food Chains in Selected EU Countries. *Energies*, 13(18), 4853. DOI: 10.3390/en13184853.
- [24] Marsden, T. & Smith, E. (2005). Ecological entrepreneurship: sustainable development in local communities through quality food production and local branding. *Geoforum*, 36(4), 440–451. DOI: 10.1016/j.geoforum.2004.07.008.
- [25] Maye, D., Kirwan, J., Schmitt, E., Keech, D. & Barjolle, D. (2016). PDO as a Mechanism for Reterritorialisation and Agri-Food Governance: A Comparative Analysis of Cheese Products in the UK and Switzerland. *Agriculture*, 6(4), 54. DOI: 10.3390/agriculture6040054.
- [26] Mazoyer, M. & Roudart, L. (2006). *A History of World Agriculture: from the Neolithic to the current crisis*. London: Earthscan.
- [27] Mettepenningen, E., Koopmans, M. & Van Huylenbroek, G. (2014). Exploring the growth potential of (peri-)urban short food chain initiatives: a case study of Ghent. *Spanish Journal of Rural Development*, 5(spec. issue 1), 79–90. DOI: 10.5261/2014.ESP1.07.
- [28] Milestad, R., Westberg, L., Geber, U. & Björklund, J. (2010). Enhancing Adaptive Capacity in Food Systems. Learning at Farmers' Markets in Sweden. *Ecology and Society*, 15(3), 29. DOI: 10.5751/ES-03543-150329.
- [29] Moragues-Faus, A. (2020). Distributive food systems to build just and liveable futures. *Agriculture and Human Values*, 37(3), 583–584. DOI: 10.1007/s10460-020-10087-9.
- [30] Morgan, K. (2015). Nourishing the city: The rise of the urban food question in the Global North. *Urban Studies*, 52(8), 1379–1394. DOI: 10.1177/0042098014534902.
- [31] Müller, B. (2007). Food Miles or Poverty Eradication? The moral duty to eat African strawberries at Christmas [unpublished paper]. Oxford Institute for Energy Studies. Retrieved from <https://a9w7k6q9.stackpathcdn.com/wpcms/wp-content/uploads/2011/01/Oct2007-Moralstrawberries-BenitoMuller.pdf>. Last accessed: 15th November 2022.
- [32] O'Neill, K. J. (2014). Situating the 'alternative' within the 'conventional' – local food experiences from the East Riding of Yorkshire, UK. *Journal of Rural Studies*, 35, 112–122. DOI: 10.1016/j.jrurstud.2014.04.008.
- [33] Oñederra-Aramendi, A., Begiristain-Zubillaga, M. & Malagón-Zaldúa, E. (2018). Who is feeding embeddedness in farmers' markets? A cluster study of farmers' markets in Gipuzkoa. *Journal of Rural Studies*, 61, 22–33. DOI: 10.1016/j.jrurstud.2018.05.008.
- [34] Opitz, I., Berges, R., Piore, A. & Krikser, T. (2015). Contributing to food security in urban areas: differences between urban agriculture and peri-urban agriculture in the Global North. *Agriculture and Human Values*, 33(2), 341–358. DOI: 10.1007/s10460-015-9610-2.
- [35] Ørving, T. & Owen Phillips, R. (2022). *Short-haul food -How to achieve an efficient and climate friendly distribution of food from small scale producers in Viken?* [Research report]. Oslo: Norwegian Centre for Transport Research.
- [36] Paciarotti, C. & Torregiani, F. (2021). The logistics of the short food supply chain: A literature review. *Sustainable Production and Consumption*, 26, 428–442. DOI: 10.1016/j.spc.2020.10.002.

- [37] Parham, S. (2014). *Food and Urbanism: The Convivial City and a Sustainable Future*. London: Bloomsbury.
- [38] Podda, A., Loconto, A. M., Arcidiacono, D. & Maestripieri, L. (2021). Exploring prosumption: Reconfiguring labor through rural-urban food networks? *Journal of Rural Studies*, 82, 442–446. DOI: 10.1016/j.jrurstud.2020.12.005.
- [39] Pölling, B., Prados, M.-J., Torquati, B. M., Giacchè, G., Recasens, X., Paffarini, C., Alfranca, O. & Lorleberg, W. (2017). Business models in urban farming: A comparative analysis of case studies from Spain, Italy and Germany. *Moravian Geographical Reports*, 25(3), 166–180. DOI: 10.1515/mgr-2017-0015.
- [40] Reed, M. & Keech, D. (2017). The ‘Hungry Gap’: Twitter, local press reporting and urban agriculture activism. *Renewable Agriculture and Food Systems*, 33(6), 558–568. DOI: 10.1017/S1742170517000448.
- [41] Reina-Usuga, L., Parra-López, C. & de Haro-Giménez, T. (2022). Urban food policies and their influence on the development of Territorial Short Food Supply Chains: The case of cities in Colombia and Spain. *Land Use Policy*, 112, 105825. DOI: 10.1016/j.landusepol.2021.105825.
- [42] Renting, H., Marsden, T. K. & Banks, J. (2003). Understanding Alternative Food Networks: Exploring the Role of Short Food Supply Chains in Rural Development. *Environment and Planning A: Economy and Space*, 35(3), 393–411. DOI: 10.1068/a3510.
- [43] Simon-Rojo, M., Recasens, X., Callau, S., Duží, B., Eiter, S., Hernández Jiménez, V., Kettle, P., Lavisio, R., Lohrberg, F., Pickard, D., Scazzosi, L. (2015). *From Urban Food Gardening to Urban Farming*. Berlin: Jovis.
- [44] Steel, C. (2009). *Hungry City: How Food Shapes Our Lives*. London: Vintage.
- [45] Tacoli, C. (2003). The links between urban and rural development. *Environment and Urbanization*, 15(1), 3–12. DOI: 10.1177/095624780301500111.
- [46] Tregear, A. (2011). Progressing knowledge in alternative and local food networks: Critical reflections and a research agenda. *Journal of Rural Studies*, 27(4), 419–430. DOI: 10.1016/j.jrurstud.2011.06.003.
- [47] Tregear, A., Arfini, F., Belletti, G. & Marescotti, A. (2007). Regional foods and rural development: The role of product qualification. *Journal of Rural Studies* 23(1), 12–22. DOI: 10.1016/j.jrurstud.2006.09.010.
- [48] van den Heuvel, D. (2016). Food, markets and people: Selling perishables in urban markets in pre-industrial Holland and England. In Calaresu, M. & van den Heuvel, D., eds., *Food Hawkers: Selling in the Streets from Antiquity to the Present*. London: Routledge.
- [49] Vejre, H., Eiter, S., Hernández Jiménez, V., Lohrberg, F., Loupa-Ramos, I., Recasens, X., Pickard, D., Scazzosi, L. & Simon-Rojo, M. (2015). Can Agriculture Be Urban? In Lohrberg, F., Lička, L., Scazzosi, L. & Timpe, A., eds., *Urban Agriculture Europe* (pp. 18–21). Berlin: Jovis.
- [50] Vik, J. (2020). The agricultural policy trilemma: On the wicked nature of agricultural policy making. *Land Use Policy*, 99, 105059. DOI: 10.1016/j.landusepol.2020.105059.
- [51] Vittersø, G., Torjusen, H., Laitala, K., Tocco, B., Biasini, B., Csillag, P., Dubois de Labarre, M., Lecoœur, J.-L., Maj, A., Majewski, E., Malak-Rawlikowska, A., Menozzi, D., Török, Á. & Wavresky, P. (2019). Short Food Supply Chains and Their Contributions to Sustainability: Participants’ Views and Perceptions from 12 European Cases. *Sustainability*, 11(17), 4800. DOI: 10.3390/su11174800.

- [52] Arcuri, S., Galli, F., Rovai, M., Belletti, G., Marescotti, A., Lazzaroni, M. & Casini, M. (2021). *EC Horizon project ROBUST (Grant agreement 727988): WP3 Living Lab Report – Lucca Living Lab*.
- [53] *Local Food Strategy 2014–2017*. Bath: Bath and North East Somerset Council.
- [54] Brighton and Hove City Council (2021). *Urban Design Framework – Supplementary Planning Document 17*. Hove: Brighton and Hove City Council.
- [55] Galli, F. & Brunori, G. (2013). *Short food supply chains as drivers of sustainable development. Document developed in the framework of the FP7 project FOODLINKS*. Retrieved from http://www.foodlinkscommunity.net/fileadmin/documents_organicresearch/foodlinks/CoPs/evidence-document-sfsc-cop.pdf. Last accessed: 15th November 2022.
- [56] Jones, A. (2001). *Eating Oil: Food Supply in a Changing Climate*.
- [57] Lang, T. (2006). Locale / globale (food miles). *Slow Food*, 94–97.
- [58] Norwegian Ministries (2021). *National Strategy for Urban Agriculture – Cultivate Cities and Towns*. (M-0755 E).
- [59] Soil Association (2012). *A Share in the Harvest – an action manual for community supported agriculture*.
- [60] Soil Association (2012). *A Share in the Harvest – an action manual for community supported agriculture*.
- [61] United Nations Population Division (2014). *World Urbanization Prospects: The 2014 Revision*.