Sense and Nonsense of Localized Food Systems

– A case study of food manufacturing in Leipzig

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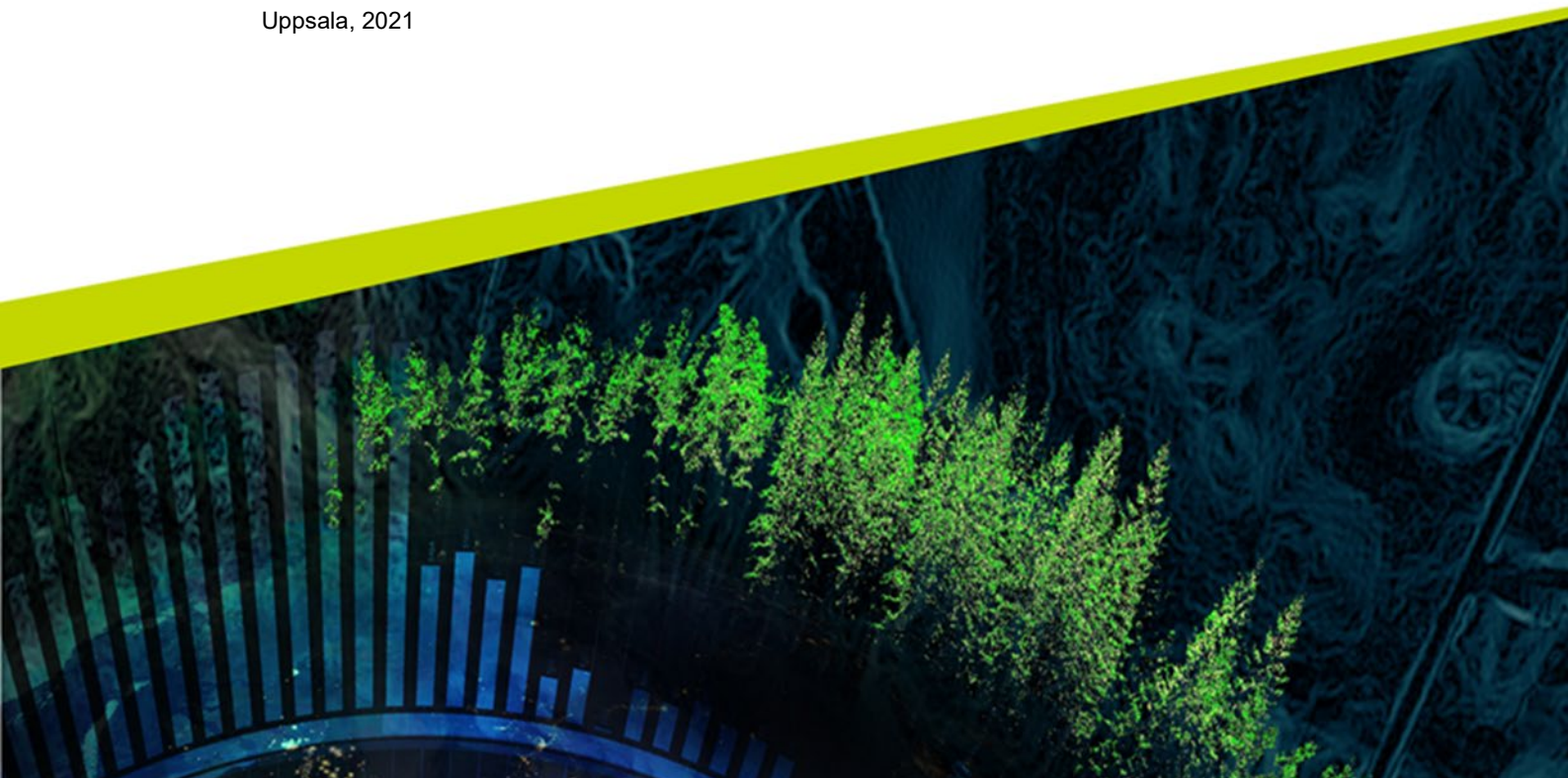

Sense and Nonsense of Localized Food Systems

– A case study of food manufacturing in Leipzig

Nytta och myt om lokala livsmedelssystem - Fallstudie om livsmedelsproduktion i Leipzig

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Abstract

***Purpose**:* Foods from localized food system approaches have become increasingly popular in recent years. There remains scholarly debate about the added value of such approaches, however. The aim of the present study was to identify potentials and challenges associated with localized food systems from the perspective of food manufacturers as well as their motives to engage in such. ***Methods**:* Five in-depth interviews with six craft-based food manufacturers in Leipzig were conducted. A thematic coding analysis based on a multi-perspective approach, which considered organization theory as well as Schwartz's (1992) theory of basic human values was applied. ***Results**:* The motives of food manufacturers to engage in localized food systems are interwoven with values that embrace change, independence, or pleasure and which promote social as well as ecological welfare. Engaging in localized food systems is associated with multiple potentials and challenges, for example, social and economic benefits from local networks and restricted access to raw materials. ***Implications**:* Greater endeavors are required to create a supporting and encouraging framework for food producers to engage in ecological sound food production. Further research, which takes food manufacturers' measures to promote sustainable development into account, is necessary.

Popular scientific summary

Conventional food systems are increasingly criticized as impeding sustainable development. In the same vein, the development of alternative and localized food system approaches has been widely promoted. The growing quest for local foods, however, is opposed to the increasing concentration within the food industry. In addition, there remains scholarly debate about the added value of localized and alternative food system approaches.

The present study set out to examine the potentials and challenges associated with localized food systems by focusing on a widely omitted perspective in the discourse, namely food manufacturing. An initial literature review was followed by the collection of secondary data on the case region's food system environment. Additionally, five in-depth interviews with six craft-based food manufacturers in Leipzig were conducted. The thematic coding analysis was based on a multi-perspective approach, which considered deterministic and voluntaristic as well as micro- and macro level perspectives in organization theory as well as Schwartz's (1992) theory of basic human values.

The results of this investigation show that the motives of food manufacturers to engage in localized food systems are interwoven with values that embrace change, independence, or pleasure and which promote social as well as ecological welfare. They see multiple potentials but also experience challenges in choosing to engage in local scale food production. For example, they profit from local food networks socially and economically and they can create shared value – for themselves and for their local community. Challenges include restricted accessibility to raw materials, uncertainties regarding resource quantities and qualities as well as securing economic sustainability.

The findings of the current research entail implications for future practice and research. Added policy efforts are required to promote synergies between primary producers, food manufacturers and retailers that operate at different scales. Moreover, greater endeavors are required to create a supporting and encouraging framework for food producers to engage in ecological sound food production. Further research, which takes food manufacturers' measures to promote sustainable development into account is necessary. The use of alternative modes of transport as well as the potential of local food networks to reduce food waste could be usefully explored in that regard.

Keywords: Germany, localism, local trap, organization theory, short supply chains, value theory

Sammanfattning

Traditionella livsmedelssystem kritiseras med avseende på hållbar utveckling. Lokala livsmedessystem har förordats som alternativa system. Lokala livsmedelssystem kan möta efterfråga på lokalt producerade livsmedel, men det står i bjärt kontrast till den nuvarande maktkoncentrationen inom industrin. Den akademiska debatten om behov av förändringar av livsmedelssystemen speglar olika syn på lokala och alternativa livsmedelssystem.

Den här studien syftar till att identifiera potentiella värden och utmaningar för lokala livsmedelssystem. Fokus ligger på aktörer i livsmedelsprocesser i livsmedelssystemet. En inledande litteraturgenomgång följdes av en empirisk fallstudie, och intervjuer med representanter för livsmedelsproducenter i Leipzig. En innehållsanalys av data genomfördes genom tematisk kodning genomfördes baserat på Schwartz (1992) teori om mänskliga värderingar.

Resultaten i den empiriska studien pekar på att motiven för livsmedelsproducenter att engagera sig i lokala livsmedelssystem beror av värderingar som stödjer förändring, oberoende eller upplevt socialt värdeskapande. Det lokala värdeskapandet har manga grunder, men det innebär också risktagande, för livsmedelsproducenten och för deras lokala nätverk. Utmaningar som är kopplade till begränsad tillgång till resurser, osäkerhet i resursvolymer och kvalité och finansiella aspekter upplevs som hållbarhetsutmaningar.

Implikationerna av resultaten i studien pekar på framtida behov av förändringar av livsmedelssystem och fortsatt forskning. Politiska mål och program efterlyses för att skapa synergier mellan primärproduktion, förädling och dagligvaruhandel. Ett politiskt och organisatoriskt ramverk för att stärka lokal och miljömässigt hållbar livsmedelsproduktion och förädling behövs, för att stödja förändringsprocesser. Här blir användning av alternativa transport- och resursanvändningsmodeller ett viktigt område för fortsatt forskning.

Nyckelord: Livsmedel, lokal produktion, organisationsteori, korta värdekedjor, livsmedel, Tyskland, värdeskapande

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Abbreviations

Abbr.	Meaning	Page introduced
AFN	Alternative food network	1
AMI	Agrarmarkt Informations-Gesellschaft *Engl.:* Agricultural Market Information Company	19
BMEL	Bundesministerium für Ernährung und Landwirtschaft *Engl.:* German Federal Ministry of Food and Agriculture	1
DBV	Deutscher Bauernverband *Engl.:* German Farmers' Association	2
FiBL	Forschungsinstitut für biologischen Landbau *Engl.:* Research Institute of Organic Agriculture	3
GHG	Greenhouse gases	16
LCA	Life-cycle assessment	16
LFS	Localized food systems	1
LfULG	Landesamt für Umwelt, Landwirtschaft und Geologie *Engl.:* State Office for the Environment, Agriculture and Geology	20
SMEKUL	Sächsisches Staatsministerium für Energie, Klimaschutz, Umwelt und Landwirtschaft *Engl.:* Saxon State Ministry for Energy, Climate Protection, Environment and Agriculture	18

1 Introduction

Chapter 1 provides the problem background to localized food systems as well as the aim and the research questions derived from the problem. Following, the study delimitations and the outline of the thesis are presented.

1.1 Problem background

Globally, food systems have faced manifold challenges in the past decades (Andrée *et al.* 2014; Inglis 2010). Most recently, the Covid-19 outbreak in early 2020 shifted broad public attention to food supply chain resiliency in times of crisis (European Commission 2020; Hobbs 2020). Images of empty supermarket shelves across the globe visualized the fragility of global supply chains to demand-side shocks, such as panic buying and hoarding behaviors and to disruptions on the supply-side, caused partially by labor shortages. The pandemic sparked a longing to support locally based agriculture and businesses while, simultaneously, it brought a loss in confidence in the reliability of global food chains (Hobbs 2020). But the Covid-19 pandemic is not the only crisis the global food system is currently facing, for example climate change already shows negative impacts on global food production in a variety of ways. Extreme weather conditions affect agricultural yields as well as the trade of commodities. Such events are likely to trigger market instability and price volatility of foods, posing a threat of future food price spikes and affecting food security of already vulnerable populations around the globe (Andrée *et al.* 2014).

Undoubtedly, globalization and industrialization have brought along many-faceted benefits for the global food system, contributing to an increase in the total food production, making foods available at low costs (Andrée *et al.* 2014), and shaping todays food cultures (Inglis 2010). Yet, this mode of production has not come without costs. International trade has led to an increasing separation between producers and consumers (European Academies Science Advisory Council 2017, 26). The *"globalizing food regime"* (Andrée *et al.* 2014, 4) is characterized by energy- and resource-intensive inputs (e.g., water, fertilizers, pesticides) and large-scale production modes, dominated by few powerful and profit-driven corporations. This development has happened at the expense of local or even national control over the food system and has been accompanied by the overconsumption of resources and vast environmental degradation such as soil erosion and a dramatic loss of biodiversity (*ibid.*). Further, the globality of the value chains adds food safety hazards, accelerating the quick spread of food- and animal-borne disease. In addition to food safety hazards, the dominance of few large processors in food chains make supply chains especially vulnerable. When a single processing facility must be shut down due to food contamination, it has massive impacts on the whole supply chain (European Academies Science Advisory Council 2017; Anderson 2015; Andrée *et al.* 2014).

Conventional food systems are increasingly criticized as not ensuring sustainable development (Michel-Villarreal *et al.* 2019, 2). Therefore, in recent decades, public attention has shifted to seeking for alternative food system approaches. This has prompted the emergence of a vast range of alternative food networks (**AFN**), which are described as challenging and even opposing the existing food system (*ibid.*). Community supported agriculture, farmers markets, box delivery schemes and urban farming have emerged, often organized by community-members, rooted in the idea of establishing localized food systems (**LFS**) and shortening supply chains (O'Neill 2014; Born & Purcell 2006). Simultaneously, consumers' quest for sustainably and specifically locally produced foods has seen a large increase (BMEL 2021, 18; Coelho *et al.* 2018; O'Neill 2014). The preference for local foods surpasses consumer preferences for

organic foods (BMEL 2021; AMI 2018), making *"regional"* or *"local"* popular buzzwords in the marketing of foods (McMahon 2014). Locally produced foods are no longer a niche but are filling whole shelves in large retail chains (Coelho *et al.* 2018).

Recently, this development has reached the policy agenda. In May 2020, the European Commission adopted the *"Farm to Fork Strategy",* aiming at a *"transition to sustainable food systems"* (European Commission 2020, 4). In order *"to enhance resilience of regional and local food systems,"* the European Commission (2020, 13) calls for the creation of shorter supply chains to *"support reducing dependence on long-haul transportation."* Short supply chains and LFS are thought to tackle a whole range of the challenges associated with the globalized food system. Local origin of foods is commonly assumed to be superior to larger scale and global systems and associated with environmental, social as well as health benefits (Thompson 2019; Andrée *et al*. 2014; McMahon 2014). For example, it may contribute to regional economic development, enhance the income of small-scale farmers (Hughes and Boys 2015) and provide *"a buffer against price volatility"* inherent to global markets (Anderson 2015, 257).

1.2 Problem

The food industry is facing a paradoxical situation: on the one hand, there is a growing desire of consumers to preserve and reconstruct short supply chains to increase the supply of foods with local origin. On the other hand, the structure of food industry has changed dramatically over the past decades and globally corporate concentration is proceeding relentlessly (Rutz *et al.* 2015). Taking Germany as an example, this development can be illustrated by the following figures: according to the German Farmers' Association (**DBV**), there were nearly 19,000 mills in operation in 1950/51. Today, only 550 mills are left in operation (DBV 2020, para. 11). The number of dairy processing plants shrunk from around 3,400 in 1950 to 214 in 2020 (Statista GmbH 2021), the number of bakeries decreased by 30 percent between 2009 and 2019 (DBV 2020, para. 4), and the number of butcheries decreased by 38 percent between 2002 and 2019 (Statista GmbH 2020a). This development implies a larger distance between the different stages of food value chains and the dependence on long-haul transportation in food systems. Coelho *et al.* (2018, 90) name the *"lack of economic, organizational and physical structures on the appropriate scale"* as major obstacle for the implementation of LFS. Clancy and Ruhf (2010) emphasize that, to achieve broad regional economic development, processing and logistic infrastructure are indispensable at regional scale.

In addition to the structural challenges associated with implementing LFS, there remains much scholarly debate about the significance and sustainability of such systems. Along with the (re)emergence of AFNs and LFS, these approaches have been discussed and criticized by many scholars (Tregear 2011; Jarosz 2008; Born & Purcell 2006; DuPuis and Goodman 2005; Allen *et al*. 2003). A key criticism is the widespread pitfall in conceiving local or alternative food system approaches as intrinsically good or sustainable and as inherently better than national- or global-scale systems (Allen *et al*. 2003). Despite its *"ambiguous character"* (Schönhart *et al.* 2009, 180), LFS are widely promoted as means to enhance sustainable development in the global north. Schönhart *et al.* argue that the complexity underlines the necessity of careful assessment of LFS and that it is necessary to consider the benefits and challenges that are associated with the implementation of such systems. They suggest research not to focus on the question, if LFS are good or bad, but to explore associated challenges that need to be solved, and to examine how LFS can contribute to solving these challenges.

1.3 Aim and research questions

The aim of this case study is to identify potentials and challenges associated with localized food systems. For this purpose, the specific perspectives of craft-based food manufacturers are ascertained. To fulfil the aim of the study, the following research questions are addressed:

1. *What are the motives of food manufacturers to engage in localized food systems?*
2. *What are the perceived potentials and what are the challenges associated with partaking in localized food systems?*

1.4 Delimitations

As the case region is confined to Leipzig, one cannot draw general conclusions from the findings on the impact of the environment on food manufacturers. Food manufacturer in other regions (e.g., rural areas, other federal states, or other countries) face different natural and structural preconditions and therefore may face different challenges and opportunities regarding the implementation of LFS. However, with a closer look at a specific region, the case reveals aspects that are related to the specific environment of the interviewees.

Moreover, craft-based manufacturers handle rather small quantities of resources. Food processing can also entail large-scale industrial companies (e.g., bakery chains, dairies, slaughterhouses). According to Forschungsinstitut für biologischen Landbau (**FiBL**) (2014), large-scale food processors often engage in supra-regional sales and procurement. The focus of the present study lies on small-scale and craft-based food manufacturing, which enables to attain data on the implications of LFS.

This case study applied a multi-perspective approach, which considers deterministic and voluntaristic as well as micro- and macro level perspectives. There are, however, additional perspectives that would have been relevant and intriguing to consider in relation to the research questions. These include the concepts of shared value (Diamond *et al.* 2014; Porter & Kramer 2011), resiliency (Lengnick *et al.* 2015; Tendall *et al.* 2015), and environmental strategy (Darnall *et al.* 2010; Albino *et al.* 2009), which are briefly touched upon in the present study. Due to the scope of the study, the conceptual framework was confined to the theories selected. These perspectives provided a rich and sufficient groundwork to fulfil the aim of the study.

1.5 Outline

Chapter 1 introduces the research problem as well as aim and research questions of the present study. Information on the methodological approach is provided in Chapter 2. In Chapter 3, the term *"local origin"* is defined and theoretical perspectives on organization theory and Schwartz's value theory (1992; 2012) are explored. Chapter 4 provides the empirical background on LFS and presents information on the case region. In Chapter 5, the results of the empirical findings are presented and analyzed based on the conceptual framework. Building on the analysis, in Chapter 6 the research questions are addressed, and methodological reflections are made. Concluding, Chapter 7 returns to the aim of study, points out practical implications and provides suggestions for future research.

2 Method

Chapter 2 presents the choices made regarding the methodological approach of this study. First, the literature review is outlined, followed by an introduction of the research design, including an account on the choice of unit of analysis and a description of the approach to data collection and analysis. Lastly, quality assurance measures are presented.

2.1 Literature review

In the first instance, a systematic literature review was conducted. Using the snowballing approach (Wohlin 2014), the literature search was started out by identifying a first set of literature. The keywords and search strings used for the initial search on *Google Scholar* and *Web of Science* are shown in Table 1.

Table 1. Literature review: keywords and inclusion criteria

Keywords and search strings	
"short food supply chains"; localized OR local AND "food systems"; local AND "food networks"; localism AND food; regional OR local AND "food branding", "regional development" AND food	
Parameters	
Language	English, German
Publication year	1995-2021
Type of publication	Journal articles, reports, book chapters

Table 1 depicts the keywords and search strings used in the web-based literature search. The keywords and search strings were used both in English and German language, though the latter are not included in the table. Publications in form of journal articles, reports, and book chapters, published between 1995 and 2021 were included in the search. Once a set of relevant literature was identified, *"backward snowballing"* (Wohlin 2014, 3) was conducted, utilizing publications' reference lists to identify additional publications. The latter were examined based on their titles and abstracts. Those relevant were chosen to be included in the review and used for further backward snowballing. In addition, *"forward snowballing"* (*ibid.*) was applied. Publications were identified based on literature citing a selected publication. The literature review was conducted intensely in the beginning of the project and was continued throughout the course of the project.

2.2 Research design

A case study was used as methodological approach, as the present study aims to investigate *"a contemporary phenomenon (the case) in depth and within its real-world context"* (Yin 2018, 45). The method of case studies is based on the endeavor *"to understand a real-life phenomenon"* (Riege 2003, 80). By conducting a qualitative case study, *"detailed, intensive knowledge about a single case, or of a small number of related cases"* is generated (Robson & McCartan 2016, 80). In order to ascertain the motives of food manufacturers, it is necessary to understand their contextual conditions. It is not a primary aim to achieve generalizability, but rather to fully grasp the meaning of the specific case studied.

2.2.1 Choice of case and unit of analysis

In the LFS and AFN literature, there has been extensive research and a multitude of publications on the perspectives of consumers (e.g., Birch *et al.* 2018; Giampietri *et al.* 2018; Kumar & Smith 2018; Rytkönen *et al.* 2018) as well as on the perspective of primary producers and the means of distribution (e.g., Peters *et al.* 2019; Nilsson 2009; Jarosz 2008; La Trobe & Acott 2000). Food manufacturing is a central element of the value chain. Yet, the perspective of this stage in the value chain, the system bound processing structure, is rarely considered in the LFS literature. The U.S. Bureau of Labor Statistics (2021, para. 2) defines food manufacturing as industries that *"transform livestock and agricultural products into products for intermediate or final consumption."* The industries entail amongst others meat and dairy processing, grain and oilseed milling, bakeries, as well as fruit and vegetable preserving (*ibid.*). Food manufacturers engaging in LFS face different challenges than primary producers, as they depend on the availability of locally produced raw materials. In the view of increasing concentration of processing facilities (FiBL 2014), local procurement may pose a specific challenge in LFS. For this reason, on-farm food manufacturers were excluded from the case study as their key resource is farm-produce. Furthermore, food manufacturers who process animal-based foods face specific challenges such as maintaining the cold chain in procurement and sales. Sampling was further delimited to craft-based manufacturers that process plant-based foods, in line with what is suggested to keep the amount of data manageable (Robson & McCartan, 2016).

The case region was chosen for multiple reasons. Firstly, a basal selection criterion was the geographic location within Germany, as it allowed the author sufficient access to materials and data. Secondly, the case area was selected, as Leipzig and region have a vibrant food network (see *Chapter 4.2*). Thirdly, it is particularly interesting to investigate the perspectives of food manufacturers in Leipzig as the implementation of LFS may be associated with more strains compared to other regions. These location-specific challenges relate to the history of the region (see *Chapter 4.2*) and the lack of established regional marketing initiatives (see Appendix 1). In Germany, most of such initiatives are located in the West and the South of the country (Bundesverband der Regionalbewegung n.d.). Corresponding to the criteria for selecting the case region, criteria for selecting craft-based food manufacturers as potential interviewee were: 1) production premises based in Leipzig; 2) product ingredients are at least partially sourced from Leipzig and region; and 3) regional origin of resources as well as Leipzig-based production is used in corporate marketing. These selection criteria enabled the identification of food manufacturers in Leipzig who engage in LFS.

2.2.2 Data collection and analysis

Multiple sources of data and collection methods were used to explore the case of food manufacturing in Leipzig. The literature review was followed by the collection of secondary data derived from local and federal authorities' webpages as well as government reports to examine the food system environment in the case region. Complementary, primary data was generated from five in-depth interviews (see Table 2) with six craft-based food manufacturers in Leipzig. To identify local food manufacturers, a web- and store-based search was conducted. Local foodstores and markets were examined for food products that are manufactured in Leipzig. Additionally, search engines and online-marketplaces were scanned. Once identified, the webpages of the manufacturers were searched for information on their product portfolio and marketing claims. Based on the selection criteria, six businesses were identified. All of them were contacted via email and five responded to the request and agreed to an interview.

Table 2. Overview of interviews with food manufacturers in Leipzig

No.	Date	Length (min)	Date of validation
1	10.06.2021	77:05	12.08.2021
2	11.06.2021	59:48	12.08.2021
3	11.06.2021	57:04	18.08.2021
4 & 5	14.07.2021	35:57	18.08.2021
6	23.07.2021	42:07	12.08.2021

Table 2 provides an overview of the interviews and the setting in which they were conducted. In the case of the oat milk business, two manufacturers agreed to an interview. As this enabled the integration of two valuable and possibly different perspectives from the same business, the interview was conducted with both. All interviews were conducted face-to-face in June and July 2021. The interviews were not limited in time and their duration varied between 35 minutes and 77 minutes. For validation, a summary of the transcripts was sent to all interviewees. The date of validation indicates the date when interviewees confirmed the content of the transcripts.

The interviews were semi-structured as suggested by Robson and McCartan (2016). Building on the research questions, an interview guide (see Appendix 2) was developed prior to the first interview. The order of the questions was adapted to the respective interview situation. The open design allowed the researcher to ask follow-up questions and gave the interviewees the possibility to speak freely about topics they considered important. This enabled new topics to emerge, while the guiding questions ensured that prioritized topics were covered in the interview (Bohnsack *et al.*, 2011). Informed consent was verbally obtained from all interviewees. The interviews were recorded with a smartphone with integrated microphone and were transcribed using a speech recognition software for automatic transcription (f4x software). The transcripts were corrected manually, which aided the researcher to familiarize with the data prior to processing it. Subsequently, the transcripts were systematically analyzed using thematic coding analysis.

A thematic coding analysis was conducted in line with the phases suggested by Robson and McCartan (2016, 469). In a first step, the author familiarized with the data. This was done by correcting, reading, and re-reading the transcripts and noting down ideas that emerged in this process. Following, initial codes were developed. Some codes were pre-determined, as they were derived from the conceptual framework and the research questions. More codes were generated inductively and emerged when processing the data. Using these codes, all interviews were coded manually: similar pieces of information (i.e., words, phrases, or whole paragraphs) were systematically labelled with the same color codes across the entire data set. The color codes were complemented with comments of the researcher. The initial coding was followed by clustering the codes into superordinate themes. The themes were *"theory-driven"* (Robson & McCartan 2016, 471), meaning that they were resting on the conceptual framework of the present study (e.g., values, strategic choice, environmental selection). The process of coding and analyzing was an iterative process, moving forth and back between data and analysis: initial codes and themes were revised, merged, complemented, or even discarded. The themes were then organized in a table to allow systematic comparisons of the data. This enabled easy and

visual exploration of patterns in the data. The interviews were conducted in German. The statements that are directly quoted in the analysis were translated to English by the author.

2.3 Quality assurance

According to Riege (2003), case study research requires the implementation of multiple measures to ensure validity and reliability in research design to dissociate from subjective judgments. Table 3 shows a selection of techniques based on Riege (2003) and how these techniques were applied in the present case study.

Table 3. Validity and reliability – techniques in case study research (adapted from Riege 2003, 78-79)

Case study design tests	**Examples of relevant case study techniques**	**Applied in this project**
Construct validity	- Multiple sources of evidence in data collection	- Multiple sources of data are used
	- Establish chain of evidence in data collection	- Detailed documentation of primary and secondary data
Internal Validity	- Ensure internal coherence of findings by cross-checking results	- Coded transcripts were sent to the interviewees for validation
External validity	- Define scope and boundaries in research design to achieve analytical generalizations	- Choice of case and unit of analysis is accounted for
	- Compare evidence with existing literature in data analysis	- Data analysis builds on theoretical framework and comprehensive literature review
Reliability	- Record observations and actions as concrete as possible	- Data collected is transferred to excel sheets and compiled as data base
	- Develop a case study data base	- Project proposal is reviewed by peer students and supervisor twice; one peer student serves as opposition for the final draft
	- Use peer review / examination	

Table 3 depicts various techniques to ensure validity in case study research and the measures taken in this project to meet quality standards. To ensure construct validity, multiple sources of data and collection methods were utilized. Several online-databases, websites and publications were used to identify the food system environment of food manufacturers. Data collected was documented thoroughly throughout the project. The empirical results were sent to the interviewees for internal validation. Their comments and feedback were considered in further analysis. External validity was provided for by defining the scope and boundaries of the case and building data analysis on an extensive literature review and a theoretical framework to generalize within the boundaries of the case study. Lastly, reliability of the project was assured by thorough documentation of the data collected. All data was transferred to an excel sheet and compiled as data base. The project proposal was reviewed by peer students and the project supervisor several times and the final draft was reviewed by a student opponent before submission.

3 Theoretical perspectives

Chapter 3 starts out with a brief outline of the chapter, followed by an elucidation of the meaning of "local" in food systems. Subsequently, four perspectives in organization theory as well as Schwartz's value theory are presented. Drawing on these theories, a conceptual framework for the analysis of the empirical data is presented.

The aim of the present study is to ascertain the perspectives and motives of food manufacturers regarding LFS. As *"local"* is a central element of LFS, it is important to understand it's meaning in the case of food systems. Therefore, this chapter attempts to elucidate the term. To do justice to the complexity of perceptions and motives of food manufacturers, a multi-perspective theoretical approach is applied. Drawing on four perspectives in organization theory based on Astley and Van de Ven (1983), the perceptions of food manufacturers can be accessed and systemized. As organizational choices are linked to the values and priorities of decision-makers (Child 1972), Schwartz's theory of basic human values (Schwartz 1992; 2012) is utilized additionally. By interlinking the different theoretical perspectives, a conceptual framework is developed that enables a comprehensive understanding of the motives of food manufacturers as well as perceived implications of LFS. Thereby, the framework lays the groundwork for the analysis and discussion of the empirical findings

3.1 Defining "local" in food systems

There is no generally valid definition of the term *"local"* (O'Neill 2014, 83; Gebhardt 2012, 20; Edwards-Jones 2010, 582; Stockebrand & Spiller 2009, 14). Instead, the term is subjective (Nilsson 2009) and depending on the context, it is used very differently (Coelho *et al.* 2018). This is well illustrated by consumers' understanding of the term. They often define *"local"* by geographic factors, specifying a particular number of kilometers. For example, in Saxony, 41 percent of consumers define local origin of foods by specifying a radius, which averages 84 km. Looking at the whole of Germany, the radius stated by consumers averages 69 km (AMI 2018, 12). Foods that origin from the federal state where consumers live are perceived as local by 28 percent of German consumers. Still 22 percent of German consumers perceive foods produced within the country borders as local (*ibid.*). Another term frequently used in the literature on LFS is *"regional"*. Kneafsey (2010) notes that the use of the terms *"local"* and *"regional"* is not consistent, but that they are often used interchangeably.

The complexity regarding terminology holds true for LFS as well, which also miss a common definition (Schönhart *et al.* 2009; Nilsson 2009). A food system comprises all activities related to the production of food, including the whole chain of activities from the production of agricultural inputs to the consumption of the foods (Anderson 2015). In general, in food systems *"local"* describes foods that are produced in physical proximity to where they are sold and consumed (Coelho *et al.* 2018; Edwards-Jones 2010; Schönhart *et al.* 2009). In addition, other factors, such as the source of raw materials, the place of processing, or the area where the products are sold can be considered (Gebhardt 2012). Moreover, a common conception is that LFS go beyond measuring physical proximity. Instead, they consider a range of aspects, such as environmentally sound production methods, increasing access to fresh and healthy foods in the community, or fostering relationships between producers and consumers (Thompson 2019; Coelho *et al.* 2018; Schönhart *et al.* 2009).

As the term *"local origin"* is relational, the present study does not attempt to confine the term to a single definition. However, the question of how local origin is defined, is integrated into

the interview guide. The individual perspectives of food manufacturers on the meaning of the terms are presented in the empirical findings. Their personal definitions need to be kept in mind when interpreting their statements on local origin in food systems.

3.2 Four perspectives in organization theory

Organizations are coalitions *"in which groups and individuals with varying interests and preferences come together and engage in exchange"* (Pfeffer & Salancik 2003, 26). Scott and Davis (2015, 308) further describe organizations as enabling *"individuals to collectively pursue a given purpose, the purpose acting to both support and constrain individual choice and decision making."* Food manufacturing businesses are organized in different ways. But they are all embedded in a value chain that interacts with the larger context bound environment and within that environment they collectively pursue the production of food. Drawing on organization theory as analytical lens in the present study, the perception of food manufacturers can be systemized.

According to Astley and Van de Ven (1983) there are four central perspectives in organization theory: the system-structural view, the strategic choice view, the natural selection view, and the collective-action view (see Figure 1). Astley and Van de Ven argue that debate around organization theory tends to focus on these different perspectives in isolation, but that it is necessary to acknowledge the interplay between them. Rather than considering only a single perspective on reality, the multi-perspective approach facilitates the attainment of a comprehensive understanding of organizations (*ibid.*).

Macro level	NATURAL SELECTION VIEW	COLLECTIVE-ACTION VIEW
Micro level	SYSTEM-STRUCTURAL VIEW	STRATEGIC CHOICE VIEW
	Deterministic orientation	**Voluntaristic orientation**

Figure 1. Four perspectives in organization theory (adapted from Astley and Van de Ven 1983, 247).

Figure 1 depicts four perspectives in organization theory based on Astley and Van de Ven (1983). On the horizontal axis, the figure distinguishes between the deterministic and the voluntaristic orientation. Seen from the first, behavior is determined by the environment, while the latter implies autonomous choice and proactive behavior. On the vertical axis, the figure distinguishes between macro- and micro level. On the macro level, the perspectives focus on populations and communities of organizations, while on the micro level, individual organizations are studied. The four perspectives are illuminated in more detail in the following subchapters.

3.2.1 Natural selection view

The natural selection view is a macro level perspective with deterministic orientation (Astley & Van de Ven 1983). It studies entire populations of industries and organizations and quantitatively assesses their vital rates (e.g., growth, mortality) (Hannan & Freeman 1977). From the natural selection perspective, the autonomous choice of organizations (Astley & Van de Ven 1983) and their ability to adapt to environmental changes is limited (Hannan & Freeman 1977). Organizational members interact with and are influenced by the environment but there are environmental forces that are beyond the control of organizations (Astley & Van de Ven 1983). Therefore, natural selection perspectives study the forces of environmental selection (Carroll 1988; Salimath & Jones 2011). The fate of an organization is determined by the

environment as organizations either *"fit into a niche or are selected out and fail"* (Astley & Van de Ven 1983, 250). Hannan and Freeman (1977, 947) define *"niche"* as the *"area in constraint space [...] in which the population outcompetes all other local populations."* The survival of an organization is dependent on selection of those that best fit the niche. According to Freeman and Hannan (1983) organizational characteristics are therefore based on selection pressures. Accordingly, the role of organizational managers is an inactive one. They can adapt and fine-tune the structural forms of organizations only to a limited degree, as they depend on the fate of their niche, which may disappear altogether (Astley & Van de Ven 1983). Astley and Van de Ven argue that the model of natural selection is suited best to be applied to smaller organizations with littler power. Large organizations are selected out less frequently as product or service diversification and geographical expansion typically allow them to serve multiple niches as compared to smaller organizations that specialize on a single niche (*ibid.*).

3.2.2 System-structural view

The system-structural perspective is located on the micro level, studying individual organizations. It has a deterministic orientation, which implies that organizational behavior is shaped by structural elements (e.g., roles in an organization) that serve organizational goals (Astley & Van de Ven 1983).

Similar to the natural selection view, this perspective implies that organizations and their environment are tightly connected. Unlike the first, the system-structural view implies that organizations adapt to the environment as required for survival (Pfeffer & Salancik 2003). Organizational managers are reactive as their decisions are a response to environmental constraints: all necessary steps are taken to adapt organizational structure to a changing environment to ensure effectiveness and organizational survival. This enables organizations to *"respond to change by fine-tuning themselves"* (*ibid.*, 254). Environmental conditions determine the characteristics of an organization as contextual factors impose constraints on the structural choices of decision-makers (Child 1997). Pfeffer and Salancik (2003) argue that it is essential to understand external constraints that organizations face to understand organizational behavior. No single organization is entirely self-contained, they are all embedded in a context that comprises other organizations. Organizations are depended on their environment as they require resources to survive. Accordingly, they need to interact with those who control resources. Interorganizational dependence is an aspect in how organizations are influenced by their environment. Increasing the interconnectedness among organizations enhances predictability and control. Organizations seek to avoid uncertainty and to create a stable as well as predictable environment. To cope with uncertainty which arises from their dependence on resources, organizations engage in interorganizational coordination such as merger (*ibid.*).

3.2.3 Collective-action view

The collective-action perspective is based on the macro level, focusing on whole populations of interdependent organizations (Astley & Van de Ven 1983). It has a voluntaristic orientation, which means that organizational change is viewed as determined by collective choice. Change is not triggered by external forces but is actively produced by interorganizational networks, which shape their environment collectively (*ibid.*). Interorganizational collaboration allows to regulate the environment and aids collective survival rather than competition. The network of organizations acts as a unit to attain its interest. Collective action is shaped by customs, norms, and laws. Managers within such networks have an interactive role. Organizations are involved in collective effort to *"manage and control its existence, partially free from the need to react to environmental intrusions"* (*ibid.*, 259). Not the economic but the social and political environment have a key influence. Environmental effects on the population are viewed as

minor, whereas *"the social construction of collective action,"* such as power relationships, is central in this view (*ibid.*).

3.2.4 Strategic choice view

The strategic choice view has a voluntaristic orientation and is situated on the micro level as the system is seen as result of individual acts and choices (Astley & Van de Ven 1983). Organizations are constructed and changed according to individuals' understanding of the situation and the environment can be adapted to fit organizational needs (*ibid.*). Child (1972) argues that strategic choice is the central variable in the study of organizations. Other variables such as environmental or technological change are regarded as points of reference in strategic decision-making. Organizational change is triggered by strategic choices of those in power (i.e., decision-makers) and is shaped by their underlying values (Child 1972). Managers are viewed as being proactive and shaping organizational life with their individual choices of what they perceive as important or relevant. They can exercise active choices, for example, where the organization operates, or which employees are recruited. As organizations are coalitions of individuals with varying interest and conflicting demands, Pfeffer and Salancik (2003) argue that it matters who has control and power of decision-making within an organization since *"control determines organizational activities"* (*ibid.*, 228).

The concept of strategic choice has developed over the years. With reference to earlier publications, Child (1997, 58) recognizes that strategic choice has been *"associated with an absence of external determination"* but that in fact there is an interactive relationship between organizational decision-makers and the environment. Decision-makers must respond to the environment *"if their organizations are not to risk severe market and institutional penalties"* (*ibid.*). Decision-makers are thought to have autonomy and can exercise choice (e.g., entering or exiting markets, adapting organizational structure). Simultaneously, the environment in which they operate limits their possibilities for action as it *"imposes certain conditions for their organizations to perform well"* (*ibid.*, 53). Thus, strategic choice emphasizes subjective interpretation and human agency, but it does not reduce organizations or the environment *"being simply the products of a subjective understanding"* (*ibid.*, 54).

The four perspectives of organization theory illustrate, that decisions that are taken within an organization and the underlying motives of decision-makers are complex. It can be deduced that it is necessary to consider multiple perspectives to gain a comprehensive understanding of the motives that underlie food manufacturers' decision to engage in local food systems. The personal values of decision-makers appear to be a key factor that influence the choices of organizational decision-makers. To illuminate the field of values in decision making, the following chapter introduces Schwartz's theory of basic human values.

3.3 Schwartz's theory of basic human values

According to Schwartz (2012, 4) people need goals to cope with the *"universal requirements of human existence."* These goals are represented and expressed using values. Values are beliefs that guide action and judgements *"beyond immediate goals to more ultimate end-states of existence"* (Rokeach 1968, 16). Bardi and Schwartz (2003, 3) describe values as conveying *"what is important to us in our lives."* Values are *"critical motivators of behaviors and attitudes,"* a central component of personalities (Schwartz 2012, 17) and a determinant of social behavior (Rokeach 1968). When values become internalized, they become a standard for guiding action as well as for morally judging and justifying actions (Rokeach 1968). Values exist at the individual as well as the collective level. Sagiv *et al.* (2011, 2) suggest that values

at the individual level represent goals that *"motivate the behavior of individuals"* while they take the form of cultural values at the collective level (e.g., nations, organizations, religions).

Schwartz' theory of basic human values (Schwartz 1992, 2004) defines ten universal types of human values that are in accordance with their underlying motivations: self-direction, stimulation, hedonism, achievement, power, security, conformity, tradition, benevolence, and universalism (see Table 4). The theory has been tested in comprehensive studies (Schwartz 1992; Schwartz & Boehnke 2004) and data that forms the basis for the theory was derived from highly diverse groups regarding geographic location (82 countries), culture, religion, linguistics, occupation, age, and gender. Schwartz (1992) proposes that the values identified are likely to be distinguished within and across various cultures and that they can therefore be considered universal. As data gives no evidence that there are additional values that are universal, Schwartz considers the list as exhausted (*ibid.*).

Table 4. Value types, defining goals and value items to measure values, adapted from Schwartz (2012, 5–7)

Value types	Defining goal	Value items
Self-Direction	Independent thought and action – choosing, creating, exploring	Creativity, freedom, independent, choosing own goals, curious, independent, [self-respect, intelligent, privacy]
Stimulation	Excitement, novelty, and challenge in life	A varied life, an exciting life, daring
Hedonism	Pleasure or sensuous gratification for oneself	Pleasure, enjoying life, self-indulgent
Achievement	Personal success through demonstrating competence according to social standards	Ambitious, successful, capable, influential, [intelligent, self-respect, social recognizing]
Power	Social status and prestige, control or dominance over people and resources	Authority, wealth, social power, [preserving my public image, social recognition]
Security	Safety, harmony, and stability of society, of relationships, and of self	Social order, family security, national security, clean, reciprocation of favors, [healthy, moderate, sense of belonging]
Conformity	Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms	Obedient, self-discipline, politeness, honoring parents and elders, [loyal, responsible]
Tradition	Respect, commitment, and acceptance of the customs and ideas that one's culture or religion provides	Respect for tradition, humble, devout, accepting my portion of life, [moderate, spiritual life]
Benevolence	Preserving and enhancing the welfare of those with whom one is in frequent personal contact (the "in-group")	Helpful, honest, forgiving, responsible, loyal, true friendship, mature love, [sense of belonging, meaning in life, a spiritual life]
Universalism	Understanding, appreciation, tolerance, and protection for the welfare of all people and for nature	Broadminded, social justice, equality, world at peace, world of beauty, unity with nature, wisdom, protecting the environment, [inner harmony, a spiritual life]

In addition to listing the ten universal types of values, Table 4 depicts the broad goals that are expressed by each value as well as the value items that Schwartz (1992) included in his survey to measure these values. For example, the defining goal of power encompasses social status, prestige as well as control over people or resources. The value items that were included to measure power were authority, wealth, and social power amongst others. Hedonism is based

on the broad goals of pleasure and sensual rewards. The value items listed in brackets are motivational goals that are linked to more than one value.

A key feature of Schwartz's value theory is represented by the structure of the relationships between the value types (Bardi & Schwartz 2003; Schwartz and Boehnke 2004). The ten values form a *"motivational continuum"* (Schwartz 2012) (see Figure 2). Pursuing one specific value implies social or psychological conflicts regarding the pursuit of other values. For instance, the promotion of social order (i.e., security value) is likely to be accompanied by a promotion of obedience (i.e., conformity value). Simultaneously, self-direction values (e.g., freedom) are likely to be restricted by actions to promote social order (Bardi & Schwartz 2003; Schwartz 2012). Another example of conflicting values is named by Schwartz (1992): the concern for welfare in the case of universalism and benevolence conflicts with the pursuit of dominance over other people and one's own success in the case of power and achievement.

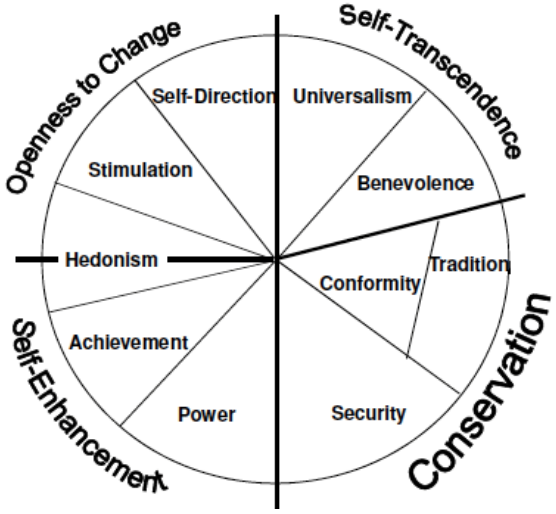

Figure 2. Theoretical model of relations among ten motivational types of values (Schwartz 2012, 9).

Figure 2 depicts the theoretical model of the motivational continuum of values. Conflicting or competing value types (e.g., power and benevolence) are situated in opposing positions in the circle. Schwartz (1992; 2012) argues that pursuing one hinders the attainment of the other. On the contrary, value types that are adjacent (e.g., security and conformity) have a congruent relation. They have a higher similarity in their underlying motivational goals (*ibid.*) and can be attained *"simultaneously through the same action"* (Sagiv *et al.* 2011, 21). The position of tradition and conformity in the same wedge is due to their same underlying motivation (i.e., subordination based on expectations that are socially imposed) (Schwartz & Boehnke 2004). The central location of the conformity value and the peripheral location of the tradition value illustrates the relationship with values on the opposing side of the model: conformity is more compatible with the opposing values (i.e., stimulation and hedonism) as compared to tradition values (*ibid.*). Schwartz (1992, 43) introduces higher order values to allow for a simpler illustration of value structures. The higher order value types form two bipolar dimensions. The first dimension *"openness to change versus conservation"* illustrates the conflict between self-direction and stimulation values and tradition, conformity, and security values on the other hand. The first embrace change and independence of actions and thought, while the latter emphasize resistance to change, self-restriction and preserving status quo (Schwartz 2012). The second dimension, *"self-enhancement versus self-transcendence,"* puts the value types of hedonism, achievement, and power in opposition to benevolence and universalism. Here, values are arrayed based on the extent to which they drive individuals to enhance their own

interests, possibly at the expense of others, versus the degree to which they drive individuals to promote social and ecological welfare (Schwartz 1992; 2012).

Pursuing values often goes along with specific behavior, for example to express or attain them. A study by Bardi and Schwartz (2003) revealed a significant correlation between values and behaviors that express these values. Individuals who pursue a value (e.g., universalism) behave in a certain way (e.g., use environmentally friendly products). However, the link between values and behavior is complex. According to Bardi and Schwartz (2003) behaviors are ambiguous and can express various values. For instance, an interest in hiking can be based on the pursual of adventure (i.e., stimulation), the love for nature (i.e., universalism) or to comply with others' expectations (i.e., conformity) (Bardi & Schwartz 2003). An explanation for value-consistent action is the human need to establish consistency between values and actions (*ibid.*). People strive to act in accordance with their values, but often values are just one of several factors that affect their behavior. In well thought out choice-situations, values are a common guidance. But often behavior is triggered more spontaneously and may be influenced by habits rather than conscious decision-making (*ibid.*). The relation between value and behavior is stronger in some areas than in others. For example, norms are a key pressure on behavior. Bardi and Schwartz argue that even when norms oppose one's values, one is likely to conform with norms. Therefore, when behavior is underlying normative pressure, the value-behavior-relations are weaker.

Sagiv *et al.* (2011) suggest that the Schwartz's value theory is suited for the study of organizations. To gain public legitimacy, organizations must reflect and adapt to cultural values that prevail in the society in which they operate. If they fail to do so, organizations face consequences that may be detrimental to their existence. Therefore, organizational culture tends to develop in a manner that is compatible with the culture in which they are embedded (e.g., national culture). Values are the basis to justify organizational goals and agendas in their social environment. Cultural values are an indicator for decision-making on a managerial level in organizations. The values that are prevailing in a society influence the personal values of organizational decision-makers (*ibid.*).

3.4 A conceptual framework

The theoretical perspectives outlined in the preceding chapters illustrate the diversity in perspectives to comprehend and interpret organizational behavior. Based on the assumption that multiple perspectives are necessary to understand complex matters, a conceptual framework is developed that interlinks the different theoretical perspectives and builds the basis for the analysis of the empirical findings.

Four central perspectives in organization theory based on Astley and Van de Ven (1983) form the basis of the conceptual framework. From the natural selection perspective the autonomous choice of organizations is limited, and their fate is determined by the environment (Astley & Van de Ven 1983; Hannan & Freeman 1977). From the system-structural perspective organizations and their environment are tightly connected, but they adapt to the environment as required for survival (Pfeffer & Salancik 2003; Astley & Van de Ven 1983). These perspectives facilitate comprehension of how the choices of food manufacturers are dependent on the environment into which they are embedded. From these views, food manufacturers are reactive to environmental pressures or even entirely inactive. In contrast, the collective-action perspective implies that organizational change is determined by collective choice and the environment is shaped by interorganizational networks and collaboration (Astley & Van de Ven 1983). From the perspective of strategic choice, the environment can be adapted to fit

organizational needs (*ibid.*). Organizational change is triggered by strategic choices of decision-makers, which are shaped by their underlying values (Child 1972). These perspectives recognize food manufacturers as proactive and their choices as autonomous from environmental pressures. They aid in understanding how values influence strategic choices of food manufacturers and how they can act as a collective to attain their interest.

In addition to the four perspectives in organization theory, the conceptual framework adds an additional interpretive layer: the environment of food manufacturers as well as Schwartz's value theory (see Figure 3). The first allows to assess the deterministic perspectives based on secondary data on the food system environment in Leipzig and region. The integration of Schwartz's value theory facilitates a more comprehensive understanding of the value perspective inherent to the voluntaristic view.

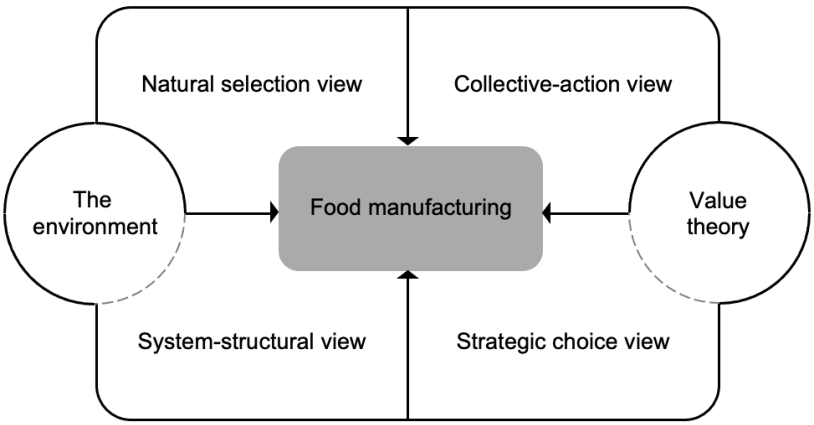

Figure 3. Conceptual framework (author's own compilation).

Figure 3 illustrates the conceptual framework applied in the analysis of the empirical findings. The model depicts how the four perspectives of organization theory are combined with Schwartz's value theory and secondary data on the environment to ascertain the perception and motives of food manufacturers. In the model, the case (i.e., food manufacturing in Leipzig) is in a central position. It is surrounded by the four perspectives of organization theory based on Astley and Van de Ven (1983). On the left-hand side, the deterministic position is depicted (i.e., natural selection view and system-structural view). On the right-hand side, the voluntaristic orientation is depicted (i.e., collective-action view and strategic choice view). Each of the perspectives provides an analytic lens to the empirical data, which is illustrated by the arrows that point to the center of the figure. As the voluntaristic orientation is shaped by norms and values, Schwartz's value theory is visualized adjacently. Likewise, the environment is positioned adjacent to the deterministic perspectives as both perspectives highlight environmental determination. The dotted line between the environment and the system structural perspective and between value theory and strategic choice view indicates that in the analysis of the empirical findings, these concepts are utilized and presented in combination. This approach was chosen as the present study was concerned with exploring the micro level (i.e., perspectives of individual food manufacturers) rather than the macro level (i.e., whole populations of food manufacturers).

The conceptual framework focusses on the connection between multiple perspectives in organization theory, secondary data on the environment as well as Schwartz's value theory. The interlinkages of these concepts provide an extensive comprehension of the motives, perceived potentials, and perceived challenges of food manufacturers. Thereby, the framework lays the groundwork for addressing the research questions.

4 Background empirics

This chapter depicts the empirical discourse on LFS. Following, the food system environment in Leipzig and region is elucidated based on agricultural preconditions, processing infrastructure and consumer preferences.

Along with the re-emergence of localized and alternative food system approaches, substantial scholarly debate developed over its added value (Tregear 2011; Edwards-Jones *et al.* 2008; Jarosz 2008; Born & Purcell 2006; DuPuis & Goodman 2005; Allen *et al*. 2003). By considering these scholarly perspectives, the motives and perceptions of food manufacturers can be put into a wider context and be interpreted based on the comprehensive scientific discourse surrounding LFS.

4.1 The "local trap"

A key criticism to AFNs and LFS is the widespread conception that these approaches are intrinsically good and sustainable or inherently better than larger scale systems (Tregear 2011, 425; Jarosz 2008, 241; DuPuis & Goodman 2005, 364). Drawing on scale theory in economic and political geography, Born and Purcell (2006) take a critical approach to previous food system research and introduce the term *"local trap."* In their article they argue that claims regarding local foods can be grouped into three categories: environmental sustainability, social- and economic justice, as well as human health and product quality. The criticism regarding each of these categories is briefly outlined in the subsequent subchapters, followed by scholarly perspectives on how to avoid the *"local trap."*

4.1.1 Environmental sustainability

One of the most prominent arguments for the consumption of local foods is the reduction of distances between production and consumption (Coelho *et al.* 2018; Schönhart *et al.* 2009). The idea of so called *"food miles"* is that food that travelled long distances causes higher emissions as compared to foods sourced locally. By purchasing local goods consumers expect to reduce food miles and thereby contribute to decreasing the emission of greenhouse gases (**GHG**) (Coelho *et al.* 2018). The conception that reduced food miles translate into reduced GHG emissions, however, has been challenged by many scholars (Brodt *et al.* 2013; Edwards-Jones *et al.* 2008; Weber & Matthews 2008; Saunders & Hayes 2007; Van Hauwermeiren *et al.* 2007). Coelho *et al.* (2018) point out that transport is not the only variable determining the climate impact of food production, but that GHG emissions are caused along the whole value chain. These other food system stages, including cultivation, processing, packaging, storage, and disposal, may contribute to a much higher degree to the carbon footprint of foods than transport does (*ibid.*). For example, Brodt *et al.* (2013) conducted a life-cycle assessment (**LCA**) to compare local- and national-scale supply chains in the United States and found that location-specific factors (e.g., soil type, water resources) have a central influence on the climate impact of food. Higher yields per hectare and reduced need for agricultural inputs in a location with favorable environmental preconditions can offset GHG emissions and energy use caused by long-haul transportation (*ibid.*). Energy intensities also depend on other factors such as the mode of transport (Brodt *et al.* 2013; Weber & Matthews 2008; Saunders & Hayes 2007; Van Hauwermeiren *et al.* 2007) and consumer behavior (Weber & Matthews 2008). For example, utilizing an input-output LCA to compare food-miles against food production and consumption, Weber and Matthews (2008) found that a dietary shift can contribute more effectively to reducing the climate impact of food.

4.1.2 Social and economic sustainability

Regarding social and economic sustainability, Born and Purcell (2006) argue that LFS may even exacerbate social injustice. Turning to the local does not imply an economic improvement for small-scale farmers (McMahon 2014; Jarosz 2008). Instead, small-scale and family-farmers are vulnerable to self-exploitation as unpaid family labor is a common practice (Jarosz 2008). It is further argued that AFNs and LFSs are not by nature progressive or just, but instead they may be exclusionary (Allen *et al*. 2003) and mostly of concern for intellectual and elite groups (Inglis 2010). Another aspect criticized by scholars is the common demonization of global food systems (Born & Purcell 2006, 199). Clancy and Ruhf (2010) argue that trade is an inherent part of regional food economies, as no region is fully self-sufficient. Inglis (2010, 497) points out that a lot of the foods that are inherent part of European food cultures, such as potatoes, originate in other parts of the world. Many local foods are *"in fact the product of long-term processes of inter-continental movement, mobility and exchange."* Moreover, those often made responsible for threatening the food system by homogenization – large supermarket chains – are those that have contributed to culinary heterogenization over the past decades, making food from all over the world available and widely used (*ibid.*). Consumers often want to make a positive impact with their purchasing power, e.g., to support or to boycott specific regions. Edwards-Jones *et al.* (2008, 272) note that when consumers decide to support local producers and local economy with their purchase, *"simultaneously they are implicitly deciding not to support farmers, regions and political systems beyond the locality."* Likewise, Schönhart *et al.* (2009, 180) note that *"any large-scale move from mainstream food systems to LFS can have far-reaching effects, for instance, on food-exporting countries."*

4.1.3 Health and quality

A popular assumption regarding local food is that it is more nutritious, fresher, healthier, and better in taste than food from mainstream food systems (Coelho *et al.* 2018; Schönhart *et al.* 2009). Born and Purcell (2006, 200) criticize the pervasive link between local production and wholesomeness or freshness of foods. Due to modern refrigeration systems and rapid-shipment, global supply chains can offer foods that are sometimes fresher than local produce from less efficient systems (Edwards-Jones *et al.* 2008). Schönhart *et al.* and Edwards-Jones *et al.* negate local origin as determinant of quality. Instead, location specific factors (e.g., soil quality), or factors related to the processing, transportation and storage determine the quality of food as they may cause mechanical damages, nutritional losses, or spoilage.

4.1.4 Avoiding the "local trap"

The preceding chapter illustrates the complexity of assessing the sustainability of LFS. McMahon (2014) suggests that critique of LFS should be acknowledged, but that it often lacks concrete alternatives or political guidance. This chapter attempts to depict some of the potentials that are associated with designing reflexive approaches to LFS.

According to McMahon (2014) it is necessary to think beyond the idea of local and to establish a strong link between rural and urban communities. Anderson (2015) argues that the urban and the rural are complementary. Yet, according to Mayer *et al.* (2016) urban and rural areas have been studied in isolation, often neglecting the linkages between these territories, consisting of flows of people, knowledge, capital, or goods. The authors underline the great contribution of such linkages in LFS for sustainable economic and rural development (Mayer *et al.* 2016; O'Neill 2014; Renting *et al.* 2003). Moreover, Thompson (2019) and Feenstra (1997) argue that LFS can be connected and tailored to local values and to the specific needs and priorities of a community. According to Schönhart *et al.* (2009), consumers may experience positive

shopping experiences, and producers may experience higher degrees of job satisfaction. The latter was also suggested by Nilsson (2009) who revealed that income generation was not the primary motivational factor for producers to engage in LFS, but that social interaction was a key factor to engage in LFS, giving producers *"a sense of belonging to a system or a community"* (*ibid.*, 357).

According to Born and Purcell (2006) and Kneafsey *et al.* (2001), LFS need to establish interlinkages with local as well as non-local networks to achieve long-term success. Hughes and Boys (2015) describe networks as social capital and as key for the economic development of LFS as they provide important market knowledge to the actors involved. Strong supply networks, characterized by collaborative relationships between buyers and suppliers are also thought to build resilience in supply chains (Hobbs 2020). Born and Purcell (2006) suggest the acknowledgement of networks can offer an approach to overcome the local trap. According to McMahon (2014), building strategic political alliances is essential when establishing local food networks, fostering democratic partnerships between farmers on a local, national, and global level as well as engaging food sovereignty movements. The concepts of food sovereignty and food democracy promote democratic models of the food system, empowering citizens to actively participate in shaping their local food system and gaining community control over it (Andrée *et al.* 2014). The concepts are related, but they have their roots in different perspectives. While the producer perspective lies the foundation for food sovereignty, it is primarily the consumer perspective that drives the concept of food democracy (*ibid.*). According to McMahon (2014), growing public interest in the topic of food production worries some, that future policy development is urban-driven, leaving farmers with little voice in decision-making processes. Food sovereignty can be seen as tool to remain decision-making in the hands of producers, which may provide a way in which local food can be understood as more than a mere niche market for the concerned middle-class consumers (*ibid.*).

Overall, this chapter provides an overview of the discourse around the *"local trap"* as well as the potentials of LFS. It depicts only a fragment of a large and complex scientific and political discourse on the environmental, social, and economic sustainability of LFS. Yet, despite its brevity, it quite clearly illustrates the argument of Born and Purcell (2006), who reason that a sweeping statement does not do justice to the complexity of food systems. Instead of assuming that a reduction in food miles inherently implies ecological superiority or the proximity between producers and consumers entails social and economic justice, it is important to bear in mind that the impacts of food production are case-specific and depend on an abundance of variables.

4.2 Food system environment in Leipzig region

The city of Leipzig is situated in Saxony, a federal state in the Eastern Germany, formerly the German Democratic Republic. In recent years, the Saxon state administration has implemented multiple measures to promote LFS. For example, it commissioned several studies to investigate the potential of LFS (see Table 5), launched a web-based platform[1] to promote locally produced foods, has implemented various funding instruments to enhance regional value chains (e.g., SächsABl. p. 1524; SächsABl. p. 575; SächsABl. p. 398) and in May 2021 the Saxon State Ministry for Energy, Climate Protection, Environment and Agriculture (**SMEKUL**) published a call for four organic and regional model regions. The model regions are supposed to develop ideas and projects to meet the growing demand for local and organic foods and are supported with up to 100,000 euros per year for three years (SMEKUL 2021).

[1] https://www.regionales.sachsen.de/

Table 5. Recent studies commissioned by the Saxon government on LFS (author's own compilation)

Year published	Author(s)/ publisher	Title	Content
2020	FiBL	*Machbarkeitsstudie zur Etablierung einer Agentur im Bereich Agrarmarketing für regionale und/oder ökologische land- und ernährungswirtschaftliche Erzeugnisse*	Feasibility of establishing an agency in the field of LFS and organic agriculture
2020	Lehr et *al.*	*Online-Marktplatz für regionale Lebensmittel in Sachsen*	Potential of online marketplaces for locally produced foods
2018	AMI	*Wie regional is(s)t Sachsen?*	Consumer preferences, perspectives of food manufacturers and retail
2014	FiBL	*Sächsische Lebensmittel regional vermarkten – eine Bedarfs-, Potenzial- und Machbarkeitsstudie*	Needs, potentials and feasibility regarding local food marketing

Table 5 shows a list of publications that were commissioned by the Saxon state administration in recent years. All four studies have a specific focus on marketing local foods in Saxony. In 2020, two studies were published: a feasibility study for the establishment of an agency in the field of agricultural marketing for regional and organic agricultural and food products (FiBL 2020) as well as a study on the potential of online marketplaces for regional foods (Lehr *et al*. 2020). In 2018, a study on consumer preference, the perspectives of food manufacturers (bakeries, butcheries) and the availability of local foods in retailers was conducted by Agrarmarkt Informations-Gesellschaft (**AMI**) on behalf of the Saxon State Ministry for the Environment and Agriculture (AMI 2018). These studies were preceded by a needs-, potential- and feasibility study regarding the marketing of local foods in 2014 (FiBL 2014). The list of publications illustrates the effort of the Saxon state administration to facilitate the development of LFS. The publications also represent a resource for food manufacturers to enhance their businesses and promote their sales.

With 605,407 inhabitants Leipzig is the biggest city in Saxony (Stadt Leipzig 2021) and one of the fastest growing cities in Germany (Slupina *et al.* 2017). Regionalization as well as social-ecological development of the food system have become strategic goals of the city in recent years. In 2017, it joined the Organic Cities Network (Stadt Leipzig n.d.), and in 2019 it declared a climate emergency (Stadt Leipzig 2020). The adopted climate emergency program includes plans to enhance regional value chains and to increase the share of organically produced food in out-of-home catering (*ibid.*). Moreover, since 2018, the city administration and the inter-municipal community Wurzener Land in Leipzig County have been implementing the urban-rural project *Wertvoll*[2]. The project aims at strengthening rural-urban partnerships and promoting local value chains by increasing the proportion of local and organic food in communal catering (Wertvoll 2021). In addition, there are multiple civil society initiatives that engage in promoting sustainable food production in the region. For example, the local food policy council (*germ. "Ernährungsrat Leipzig"*)[3] networks stakeholders from the food system and generates knowledge regarding the local food system.

[2] https://wertvoll.stoffstrom.org/

[3] https://ernaehrungsrat-leipzig.org/

4.2.1 Primary production

The agricultural sector in Eastern Germany has experienced a far-reaching structural change in the past 30 years. The former agricultural production cooperatives were phased out after reunification and the successor farms were integrated into the market economy structures (Tamásy & Klein 2020). Agricultural structures and farm size differ from those in the west of Germany up to today. While the national average for farm size lies at 62 hectares, it averages 138 hectares in Saxony (Statista GmbH 2019). In Northern Saxony and Leipzig County, the counties surrounding Leipzig, farm size even lie between 150 and 300 hectares on average (Statistische Ämter des Bundes und der Länder 2011, 10).

About half of the land area in Saxony is agricultural land (SMEKUL 2020, 29). According to the State Office for the Environment, Agriculture and Geology (**LfULG**), the most important crop in Saxony is cereals. The degree of self-sufficiency was 125 percent in 2019/2020 (LfULG 2021, para. *"Daten"*). A large share of the grain is marketed on a supraregional basis: Almost 60 percent of the quality wheats produced in Saxony leave the state (FiBL 2014: 43). Regarding vegetables, the degree of self-sufficiency lies at 8.5 percent (LfULG 2021, para. *"Daten"*) and only a small part of the cultivated vegetables is sold as fresh produce (FiBL 2014: 48). Due to contract cultivation for Frosta Ag, peas represent by far the largest share of regionally produced vegetables (SMEKUL 2020; FiBL 2014). These are grown locally, but frozen and exported to other regions (FiBL 2014). The self-sufficiency rate for fruit lies at 23 percent (LfULG 2021, para. *"Daten"*). Apples are the most widely grown crop, followed by sour cherries, pears, strawberries, and plums (SMEKUL 2020, 84). Considering the agricultural structure and availability of locally grown raw materials in Saxony, food manufacturers may encounter varying degrees of difficulties to access local resources depending on their product ranges.

Regarding organic agriculture, since 2015 the cultivation area in Saxony has increased by 80 percent and the number of organic farms by 45 percent (SMEKUL 2020, 74). Yet, these numbers must be put into context: In 2020, there were 856 organic farms cultivating organic produce on about 72,490 hectares in Saxony. In comparison, in the federal state Bavaria, which has the largest area of organic agriculture in Germany, are 10,989 organic farms and 383,496 hectares dedicated to organic cultivation. In Baden-Wuerttemberg, 10,624 organic farms cultivate organic produce on 193,342 hectares (Bundesanstalt für Landwirtschaft und Ernährung 2021). Looking at the share of organically farmed area in total agricultural area by federal state, Saxony lies about two percentage points below the national average of 9.7 percent (Statista GmbH 2020b). The highest share is found in Saarland (18,1 percent), followed by Hesse (15,5 percent) and Baden-Wuerttemberg (13,2 percent) (*ibid.*). Despite the growing share of organic agriculture in Saxony, these numbers show that food manufacturers in Leipzig may face limited access to certified organic raw materials.

4.2.2 Food processing

A central challenge of building regional value chains lies at the refining stage: the presence of processing infrastructure is essential – but most often deficient (FiBL 2014; Clancy and Ruhf 2010; Kullmann 2007). After reunification in 1990, processing companies such as mills, dairies and slaughterhouses have disappeared continuously in Eastern Germany (Deter 2019; FiBL 2014; Kullmann 2004). Many of the remaining processing companies are owned by investors from other regions or from abroad, which often have little interest in building regional value chains and instead engage in supraregional procurement and sales (FiBL 2014).

In Saxony, the food industry has developed continuously in recent years and generated sales of 6.3 billion euros in 2019 (Wirtschaftsförderung Sachsen 2020, para. 1). This was an increase

of three percent compared to the previous year. Milk processing is the most important sector in Saxony's food industry (38 percent of sales). Baking and pasta production make up thirteen percent of sales, slaughtering and meat processing twelve percent, and fruit and vegetable processing eight percent (*ibid.,* para. 3). According to FiBL (2014), in Saxony, the amount of craft-based food manufacturers is still very large compared to other German states, where the numbers have shrunk relentlessly in the past decade (DBV 2020). For example, there are still 1,380 bakeries and confectioneries in Saxony (FIBL 2014, 26). These have good opportunities to source regional raw materials as producer groups and mill structures for organically produced grain are sufficiently available in Saxony. However, regional origin of raw materials cannot always be guaranteed. A central challenge is that regionally produced raw materials are difficult to separate in processing. Smaller processing structures and special distribution concepts are lacking (FIBL 2014). For example, to achieve the desired quality characteristics of grain, it is mixed and traded according to processing quality. In the process, the regional origin of raw materials often lost (*ibid.*).

4.2.3 Consumer preferences for local foods

There is a contrasting development in the eastern German states. On the one hand, there is a declining amount of local processing structures (FiBL 2014), and on the other hand, there is a strong and growing consumer quest for locally produced foods (AMI 2018). The consumer study *"So regional is(s)t Sachsen"* (*ibid.*) gives a detailed overview of consumer trends regarding locally produced foods in Saxony. In 2018, 72 percent of consumers in Saxony stated that regional origin of food is important to them (*ibid.*, 16). However, 55 percent Saxons complain that the availability of regional food is not sufficiently given, and 46 percent do not buy (more) local foods as they are perceived as more expensive compared to non-local alternatives. In addition, consumers name a lack information and advertising about regional products as reason for not buying more locally produced foods (*ibid.*, 15). Regional origin is found to be of particular importance to consumers in case of unprocessed raw or little processed goods, specifically in the case of bread, eggs, potatoes, fruits, and vegetables as well as milk. The higher the degree of processing (e.g., tinned, or frozen food), the lower the significance of regional origin (*ibid.*, 13-14). Compared to local products, organic products are less attractive for Saxon consumers. Only eighteen percent prefer organic foods (*ibid.*, 17). An important indication from the study is, however, that organic foods become significantly more popular when they are from the region (*ibid.*).

This chapter provides an overview of the food system environment of food manufacturers in Leipzig. It illustrates that the promotion of regional value creation and local food system sustainability are a focus of the local state and city government. Evident is also that there is a demand for local foods in Saxony. Yet, there are certain factors that hamper the demand, including the higher price of local foods. Historic large-scale agricultural structures have implications for food system actors. A central challenge is that large-scale farms and the few remaining processing companies are focused on supra-regional procurement and sales. Organic agriculture has seen a vast increase in recent years but is still below the national average, which implies a lack of local certified organic raw materials as well. In sum, these aspects illustrate that there is a growing public and political interest in implementing LFS in Saxony, but that the political endeavors face large structural challenges in the region. These structural preconditions are likely to affect the perceptions of food manufacturers regarding the implications of LFS as well as their motives to engage in such.

5 Results and analysis

Chapter 5 presents and analyzes the empirical results derived from the interviews. The conceptual framework forms the basis for structuring the chapter: after some general information about the interviewees, the chapter starts with the natural selection perspective and is followed by the system structural perspective, which encompasses the environment of the interviewees. Thereafter, the analysis based on the collective-action perspective is presented and succeeded by the strategic choice perspective in combination with Schwartz' value theory.

In the frame of the case study, six food manufacturers were interviewed who work in five different craft-based businesses in Leipzig (see Table 6). As the interviewees were assured to remain anonymous, they are referred to with a pseudonym.

Table 6. Background information on the interviewees

Pseudonym	Product portfolio	Professional and motivational background
Interviewee_1	Ready-to-heat meals	- Event manager - Started the food manufacturing business when his event managing business came to a standstill during the first Covid-19 lock down
Interviewee_2	Oil, savory spreads, salt, mustard, chili paste	- Special education teacher - His initial business idea emerged from the aspiration *"to see what grows on the fields surrounding Leipzig"* and to preserve local raw materials
Interviewee_3	Fruit spreads, liqueur, oil, mustard	- Landscape planner - In his free time, he had been cooking jams for several decades. In the end of 2016, he decided to turn it into his profession
Interviewee_4 Interviewee_5	Oat milk	- Both work in an intercommunal project on rural-urban partnerships and regional value chains - They *"thought it was kind of cool to move a bit from theory to practice, to try something out ourselves a bit,"* and founded the business with two friends
Interviewee_6	Bread, rolls, pastry	- Trained as baker - He and his brother run a family-owned bakery in the fourth generation

Table 6 portrays the pseudonyms of the interviewees, their product portfolios as well as their professional and motivational background. The manufacturers produce various product groups, including ready-to-heat-meals, oil, jam, oat milk, bread. Except for interviewees_6, all interviewees have an educational and professional background in a different field than food manufacturing.

5.1 Natural selection view: local origin as niche

The natural selection perspective surfaced in the interviews in multiple manners. Two broad themes that relate to the theoretical perspective emerged: the limited possibility of food manufacturers to adapt their business to the environment as well as their dependence in the fate of their niche. Each theme consists of several subthemes, which are depicted in Table 7. The themes constitute the following subchapters, which will provide empirical examples for the perspectives of the interviewees.

Table 7. Empirical findings: natural selection view

Themes	Subthemes	Empirical example
Limited possibility to adapt to the environment	Raw material prices	Local organic oil seeds are three times more expensive than Mongolian ones (Interviewee_2)
	Production prices	Small scale production implies higher costs of the final product (Interviewee_4)
	Consumer behavior	*"When you put the price on the table, most of them start to swallow and say: 'is that necessary?'"* (Interviewee_6)
	Economic sustainability	*"After four years, I still can't pay myself a salary and I hope that it will work in the fifth year"* (Interviewee_3)
Dependence on the fate of the niche	Market growth	There is *"a big fuss around the topic of regionality at the moment, it's just totally en vogue"* (Interviewee_1)
	Competition	There are only few bakeries in the region that source their raw materials locally (Interviewee_6)
	Competitive advantage	*"[it allows me to] stand out from the classic organic manufacturer who markets nationwide."* (Interviewee_2)

Table 7 illustrates the themes and subthemes that emerged in the interviews, which relate to the natural selection perspective. It includes perspectives on the limited possibility of food manufacturers to adapt to the environment, as well as their dependence on niches. Additionally, the table provides empirical examples for each subtheme.

5.1.1 Limited possibility to adapt to the environment

The limited possibility of organizations to adapt to the environment (Astley & Van de Ven 1983; Hannan & Freeman 1977) is illustrated by the economic challenges that the interviewees face. The higher production price of locally produced goods was mentioned as challenge by several interviewees. One reason for the higher production prices which was named is that locally sourced raw materials are more expensive than non-local ones. For example, Interviewee_6 explained that he pays 2.50 euros per kilo for Chinese pumpkin seeds, and 8.50 euros for German ones. Similarly, Interviewee_2 said that local organic oil seeds are three times more expensive than the ones from Mongolia. Another reason for the higher production prices is named by Interviewee_4. According to him the production price is a question of scaling: if they would produce larger amounts of oat milk, they could buy the oats at a lower price. As stated by him, it is a *"balancing act"*. Scaling up production would enable them to reduce prices, but it would also imply that they could sell less via direct marketing, which would force them to increase their expenses for intermediaries.

According to Interviewee_2 the higher production price is not a problem as long as he can *"still live off it and pay an employee."* Sometimes, however, consumers complain about the product prices, he noted. Interviewee_6 criticized that many consumers demand regional products but are not willing to pay higher prices. According to Interviewee_1, many consumers decide for cheap and easy alternatives as they *"don't really care where the food comes from."* That not all customers complain about the prices of local products is depicted by Interviewee_3. He argued that many customers consciously choose the products regardless of the price. Yet, he added that in the light of his income-situation, he would not buy a jam for the price at which his products are sold at the retailer. Still, the interviewees are concerned that they do not want to offer luxury

products. For example, Interviewee_4 highlighted that oat milk is an everyday consumer product and *"not a delicacy that you buy only once a month, for which it would be okay to pay a little bit more."* At the same time, the manufacturers do not want to offer primary producers *"the lowest possible prices because we want to push down the price of the end product."* Instead, their goal is that "*somehow it has to fit together, the price of the raw materials and the price of the final product – and that is such a challenge"* (Interviewee_4).

That the hands of manufacturers are not entirely tied is illustrated by their approaches to adapt to the economic preconditions. For example, Interviewee_2 puts effort into structuring the business and processes cleverly to absorb higher raw material prices. A strategy implemented by Interviewee_3 is to subsidize high-cost products with products that have a higher margin. Interviewee_6 uses a mix of both local and non-local resources to reduce prices. For example, he uses imported seeds as decoration on breads, which largely burst of when baking anyways.

Another boundary to autonomous business choice is the fact that craft-based manufacturing as means of subsistence appears to be constricted in LFS. According to Interviewee_1, even though the market for local foods is growing, it is not growing enough to ensure economic sustainability of his business. Only the cook receives a salary, while all the others who engage in the business do it with the view to generate an income prospectively. He said that he and his colleagues consider giving up the business and that he will continue with his old profession *"to start earning money again – I can't put everything into my idealism."* Interviewee_3 can neither subsist on his business yet. After four years, he still cannot pay himself a salary. He is financed by the job center, *"otherwise, it wouldn't work."* The interviewee explained that in the last year his turnover increased, but that his costs have doubled as well, which implies that he needs to double his turnover as well. He emphasized that for a long time he had prioritized *"feeling good"* while the income *"wasn't so important."* But he carried out investments, needs to pay off loans and is increasingly concerned about how to finance his pension or how to handle situations when he might be unable to work. To him, it is an interplay between having to grow, having enough sales, and wanting to stand still. Interviewee_4 explained that economic sustainability is a major challenge: *"It just doesn't fit when you think a lot about economic sustainability and then exploit yourself 60 hours a week."* He acknowledged that they are *"in the comfortable position that there are four of us,"* which enables them to divide tasks, *"which others, who are alone, cannot do."*

5.1.2 Fitting into a niche

According to Astley and Van de Ven (1983) the natural selection perspective is suited best to be applied to small organizations as they are selected out more frequently compared to large organizations. The product diversification and geographical expansion of large organizations typically enable them to serve multiple niches as compared to smaller organizations (*ibid.*). This is reflected in the empirical data as the interviewees specialize mostly on a single niche (i.e., local and in some cases organic certified food) and have relatively small product ranges or even only a single product. Therefore, it can be assumed that the interviewees are more susceptible to environmental selection than larger food companies with wider product ranges.

The natural selection perspective also implies that the fate of an organization is determined by environmental pressures and organizations either *"fit into a niche or are selected out and fail"* (Astley & Van de Ven 1983, 250). The businesses of the interviewees are situated in the same niche: local craft foods. The interviewees witness the growing demand for local foods, yet still experience little competition in that specific niche in Leipzig. For example, Interviewee_6 said that he notices the growing demand for regional products but that there are few bakeries in the

region that source their raw materials locally. This means that the selection pressure based on competition can be assumed to be still relatively small.

Moreover, according to Astley and Van de Ven (1983) organizational managers depend on the fate of their niche, which may disappear altogether. The likelihood for the niche to disappear soon can be assumed to be relatively low considering the steady growth of the market. But the growing demand may imply that new businesses enter the market and outcompete existing businesses. Even though there are still few competitors on the market, competition may still play a role to food manufacturers in Leipzig. Interviewee_3 recounted that before he started his business, he examined the local market and interviewed an established food manufacturer. His intention was to see *"who I might be competing with or where I might fit in and if is it worth starting something."* He acknowledged that some of the product lines are overlapping partially, but that he perceives them as mostly complementing each other. He has given some thought to the perspective of emerging competition and argued that *"you have to assert yourself a bit in the market and not leave so much room for others."* He emphasized that he does not disapprove of other products, *"but if they become too similar or one tries to copy the other, which happens from time to time, then I wouldn't like that."*

By advertising local origin of resources, the interviewees differentiate their products from similar non-local products and experience a competitive advantage. For example, Interviewee_2 said that he emphasizes the localness of his products more than that they are certified organic because he wants "*to do it differently than the products that [are] already available in the stores."* He argued that it allows him to stand out from non-local organic manufacturers. Interviewee_3 does not advertise his products explicitly as local products. Yet, he considers taking a new approach when he starts selling his products via the wholesale, using local origin *"as a unique selling point […], because there aren't many products at this scale, which then perhaps also puts the price into perspective."* According to him, it is also important to *"have your own story – that's why people buy the product."* Beside focusing on local origin, the interviewees put emphasis on additional product characteristics such as high quality, taste, and sustainability. This strategy helps them to hold their own in their niche.

Overall, these results provide an important insight into the economic sustainability of craft-based food manufacturing in LFS. Foods from LFS appear to be an important niche that provide important sales opportunities and still little competition. Yet, craft-based food manufacturers may be more susceptible to environmental selection due to their focus on a single niche and small product ranges. Their ability to adapt to environmental forces is limited, which is illustrated by the economic challenges the interviewees face. Dealing with high production prices hampers them to subsist on their work. But environmental forces are not entirely beyond their control. The interviewees have various strategies to adapt to the environment and fill a market niche that goes beyond local origin of foods.

5.2 System-structural view: the environment of food manufacturers in Leipzig

In relation to the system-structural perspective, the perceptions of the interviewees regarding their local food system environment were investigated. The interviewees identified multiple potentials and challenges related to their natural and structural environment (see Table 8). As contextual factors impose constraints on the structural choices of decision-makers (Child 1997), it is essential to consider external constraints to understand organizational behavior (Pfeffer & Salancik 2003). Therefore, background empirics on the food system environment in Leipzig region are considered in this chapter.

Table 8. Empirical findings: system-structural view

Themes	Subthemes	Empirical examples
Interlinkage with environment	Structural environment	Interviewee_3 has on average only one supplier for each certified organic raw material, which causes high dependency
	Scale	According to Interviewee_1, a large-scale farmer said: *"come back, if you want two tons"*
	Natural environment	*"I don't know yet if there will be much harvest this year"* (Interviewee_3)
	Consumer expectations	*"[Customers] simply want the potato salad to taste the same 365 days a year"* (Interviewee_1)
Adapting to the environment as required for survival	Defining "local"	Interviewee_3 would not define local origin *"quite so narrowly,"* and interprets it based on the availability of resource
	Procurement	Interviewee_6 procures baguette-flour from France because German mills do not provide the same quality
	Sales region	*"At some point you have actually saturated the regional market"* (Interviewee_4)
	Sales channels	"[I do not] *sell masses in a single store, because the stores sell the products only rarely"* (Interviewee_2)

Table 8 depicts the themes and subthemes that surfaced in the interviews in relation to the system-structural view as well as empirical examples for the latter. The themes that were identified (i.e., the interlinkage between food manufacturers and their environment as well as approaches to adapt to their environment) constitute the following two subchapters.

5.2.1 Interlinkages between food manufacturers and their environment

From the system-structural perspective, organizations and their environment are tightly linked (Pfeffer & Salancik 2003). In accordance, the businesses of food manufacturers were found to be connected to their natural and structural environment. Despite the promotion of LFS in Saxony in recent years, the region is still perceived as "*development desert"* (Interviewee_3) and *"very bad example of regional food systems"* (Interviewee_1).

Limited availability of local raw materials and of processing industry are considered major structural challenges in the implementation of LFS by the interviewees. This is also reflected in the data on their food system environment. The most important crop in Saxony is cereals for which the self-sufficiency rate lies above 100 percent (LfULG 2021, para. *"Daten"*). Yet, except in the case of the baker and the oat milk producers, grain is not a primary resource for the interviewees. Other resources required for production, for example, are fruits and vegetables. By contrast to grain, however, the self-sufficiency rate for fruits and vegetables lies only at 23 and 8.5 percent respectively (*ibid.*) As a vast amount of locally produced fruits and vegetables is designated for the supra-regional market (FiBL 2014), local access to these raw materials is further limited. Moreover, despite the high self-sufficiency rate of grain, the implementation of grain-based value chains is hampered as well, because many local processing facilities, including mills, have disappeared and most of the remaining ones are oriented towards supra-regional procurement and sales (FiBL 2014; Kullmann 2004).

As per the system-structural perspective, organizations' need for resources makes them dependent on their environment (Pfeffer & Salancik 2003). This dependence causes uncertainty, which organizations seek to avoid. To cope with interorganizational dependence

and related uncertainties, organizations engage in interorganizational coordination (*ibid.*). In the case of the interviewed manufacturers, their dependence on their suppliers becomes visible in the face of restricted availability of local resources. For example, even though organic agriculture has seen a large increase in Saxony in recent years (SMEKUL 2020), it is still below national average (Statista GmbH 2020b). Interviewee_3 pointed to the lack of certified organic suppliers: he has little choice and on average only one supplier for each raw material. This causes a high dependency on his local suppliers.

Another challenge that the interviewees face in their work is the scale at which their business operates. Several interviewees name their need for small quantities as a central challenge in local procurement, because often much larger purchase volumes are requested than they can render at their scale. The large farms structures in the surrounding counties of Leipzig (Statista GmbH 2019; Statistische Ämter des Bundes und der Länder 2011) go along with large-scale and supra-regional distribution channels (FiBL 2014). According to Interviewee_1, large-scale farmers do not listen to small-scale buyers and tell them to *"come back, if you want two tons."* The manufacturer remembered negotiating with a local large-scale organic supplier who told him that it is *"of no use to him"* to sell 300 kg of vegetables at a time, but that he thinks in tons. Interviewee_1 criticized this approach and explained that such amounts are not manageable for craft-based manufacturers. Similarly, Interviewee_4 mentioned that they face scale-based challenges with an intermediate processor who was "*rather reserved"* in the beginning and had told them that *"he usually only produces in completely different quantities."* One explanation regarding the reluctance of large-scale businesses to cooperate with craft-based manufacturers was that it causes too much work when many buyers approach them individually. Instead of selling their products locally, large producers therefore often export their goods to other regions.

The availability of resources is also connected to the environmental preconditions of a region. This may be due to inadequate soil quality to cultivate certain raw materials (Interviewee_6), due to harvest damages caused by weather extremes, pests, and diseases (Interviewee_1; Interviewee_2; Interviewee_3) or because certain raw materials simply cannot be cultivated in the local climate (Interviewee_3). Generally, concerns were expressed about the reliability of local resource supply. Interviewee_3 explained that he does not know if there will be sufficient harvest this year and recollected that there was no plum harvest last year. Talking about this issue, Interviewee_1 pointed out: *"Then what do you do if it's supposed to be regional?"* A common view amongst the interviewees was that this is where a central challenge of LFS lies.

Regarding uncertainties, Interviewee_1 noted that the quality of foods in LFS is not consistent throughout the year as they are *"natural products."* He pointed out: *"A beet may taste a little different in 2020 than in 2021,"* which poses a challenge to food manufacturers, because customers *"simply want the potato salad to taste the same 365 days a year."* Interviewee_1 illustrated the challenge of consumer expectations and behavior with an example. In tomato-season, he and his colleagues produce tomato sauce. He experienced that during this season, people buy fresh tomatoes and have little interest to buy processed ones. The manufacturer searched for a way to prolong the product shelf-life to offer the tomato sauce in a season when the demand is higher. As their business model is based on dispensing with additives, the sauce must be stored refrigerated, which has implications for the product's environmental impact. *"We have relatively short transport distances, everything super – but then I have five months of refrigeration, which virtually nullifies all the other things."* He went on: *"You ask yourself: what pulls? regional or sustainable?"* The interviewee concluded that there is no silver bullet.

5.2.2 Adapting to the environment as required for survival

According to the system-structural perspective, organizational managers adapt organizational structure to the environment to ensure organizational survival (Pfeffer & Salancik 2003; Astley & Van de Ven 1983). The limited availability of resources is a major constraint that forces the interviewees to adapt their business accordingly. For example, they have different approaches to define local origin and to some the definition is closely connected to the availability of resources. For example, Interviewee_2 procures his vegetables from within 150 km around Leipzig, and the oil seeds from less than 110 km, except for pumpkin oil seeds, which he sources from 300 km away, since there are no producers in closer proximity to Leipzig. Interviewee_3 explained that he would not define local origin *"quite so narrowly,"* and that he interprets it based on the availability of resources, which in his case means central Germany, including the federal states of Saxony, Saxony-Anhalt, Thuringia, and Brandenburg. The oat milk manufacturers source their oats from Brandenburg, close to their hulling mill. The interviewee explained that there is no hulling mill closer to Leipzig, which implies that *"you simply can't become more regional at the moment."*

The interviewees counter the limited availability and uncertainties regarding qualities and quantities of raw materials implementing a flexible business strategy and adapting their procurement policy accordingly. They have two central approaches in doing so: if desired raw materials are not available locally, they either refrain from producing popular products that require these raw materials and accept associated economic losses. Or they stick to the product but compromise regarding the local origin of resources. For example, Interviewee_6 procures the flour for his baguette from France, because French mils grind the grain more slowly. *"That's how you get a completely different taste out of it – our mills can't do that!"* Another example is given by Interviewee_3: Only few spices are available with local origin in Germany. As they only make up a small share of a product, Interviewee_3 perceives it as reasonable to use non-local ones. Interviewee_2 acknowledged that he "*cannot expect so rigidly that every raw material is always available for a particular recipe."* Flexibility is *"something that my customers are used to, or that they understand."* Yet, he added: *"If a product is going really well and I can't produce it anymore, then it's a bit irritating not to be able to meet demand and to leave the money lying around"* (*ibid.*).

Another strategy to adapt to their environment related to defining their sales regions. Interviewee_2 has his primary sales market in the cities of Leipzig and Halle. He pointed out that in a big city like Leipzig this may be feasible, but in a smaller town or in the countryside it would be more difficult. Not for all manufacturers the market in Leipzig offers sufficient sales opportunities. For example, to subsist on his craft, it is necessary for Interviewee_3 to expand his sales region to the neighboring federal states. Interviewee_5 pointed to a central challenge associated with defining the sales region too narrowly: a small sales region implies that only a certain scaling is possible, because at some point the market is saturated. However, this does not prevent the manufacturers to confine their sales region narrowly. Interviewee_4 explained that otherwise *"the idea behind it is a bit lost, if you ship the finished product in glass bottles, which are also of heavy weight, to God knows where, that somehow makes little sense."* He thinks that if they were to sell their products in another region, they would build up a new local value chain in that specific region.

The sales channels of the interviewees require adaptiveness as well. The interviewees have varying distribution channels for their products such as direct marketing via farmers markets and their own online shops, or through retail channels such as organic and zero-waste stores, wholesalers, and large food retailers. It was suggested that choosing a single distribution

channel is usually not enough as manufacturers usually do not "*sell masses in a single store, because the stores sell the products only rarely"* (Interviewee_2). Each of the channels is also considered to come with benefits and trade-offs. One potential that was reported was that currently some large retailers explicitly advertise with regionality. Being listed at one of them doubled the sales of one interviewee (Interviewee_3). But selling products at the retail was also associated with challenges. Interviewee_1 noted that it is *"impossible at this scale,"* and that he and his colleagues can neither produce the quantities required nor meet the price expectation of the retailers. Using smaller organic stores as distribution channel is also marked with challenges. For example, Interviewee_3 said that often small stores perceive the effort of direct delivery as too high and prefer to be supplied by wholesalers, which has become a motive for him to sell his products through the wholesale.

Overall, the findings related to the system-structural perspective indicate that food manufacturers face challenges regarding their structural and natural environment. For example, manufacturers face obstacles due to a lack of local raw materials or uncertainties regarding product quality. Even though food manufacturers face considerable challenges due to their environment, they have strategies to cope with it and they set their own priorities in that regard. The results also illustrate that food manufacturers are dependent on a range of actors, including primary producers to supply them with raw materials, retailers to sell their products and consumers to be understanding and flexible in their choices.

5.3 Collective-action view: the potential of networks

In all cases, the interviewees reported that local food networks play a key role for their work. In that regard two themes emerged from the interviews: shaping the environment collectively and striving for collaboration instead of competition (see Table 9).

Table 9. Empirical findings: collective-action view

Themes	**Subthemes**	**Empirical examples**
Collectively shaping the environment	Influence on local agriculture	Interviewe_2 joined forces with other manufacturers to convince local farmers to cultivate oil pumpkins
	Farmers' needs	*"They are happy to have someone who can process it"* (Interviewee_3)
	Business relationships	*"It's a pleasant working atmosphere from the start"* (Interviewee_6)
	Establishing trust	*"[I can] check everything, talk to the people, have a look and even exert a certain amount of influence"* (Interviewee_1)
Collaboration instead of competition	Supporting each other	*"[I don't know] if I would still be around today, if the network wasn't there"* (Interviewee_3)
	Business relationships	Interviewee_6 resells local craft foods that complement his assortment

Table 9 depicts the themes, subthemes as well as empirical examples related to the collective-action perspective. The perceptions of the interviewees regarding these themes are portrayed in detail in the subsequent subchapters.

5.3.1 Collectively shaping the environment

According to the collective-action perspective it is not environmental forces that determine the actions of organizations, but instead the environment is actively produced and collectively shaped by interorganizational networks (Astley & Van de Ven 1983). The perspective also implies that organizational networks act as a unit to attain its interest (*ibid.*). This perspective is illustrated by the influence that some interviewees have attempted to take on the local agriculture. For example, Interviewe_2 joined forces with other manufacturers and collectively they approached local farmers with their demand for locally grown oil pumpkins. Approaching the farmers jointly, demonstrated that there is a demand for the raw material, which convinced the farmers to give the cultivation of oil pumpkins a try.

How food manufacturers take an active influence on their environment is also illustrated in the way they foster local networks across all stages of the value chain. A common view amongst interviewees was that LFS are advantageous because it allows them to respond to the needs of primary producers. Interviewee_2 explained that LFS allow him *"to hear what the farmer is complaining about,"* and to *"simply look him in the eye during a conversation."* There were also some suggestions that LFS enable manufacturers to use their own reach to provide a platform to primary producers and thereby giving *"the farmer the opportunity to appear himself"* (Interviewee_5). Reacting to overproduction and harvest peaks was mentioned as a central strategy to respond to the demands of primary producers. Interviewee_3 explained that many farms do not have processing lines and that he wants to help them *"deal with surplus stocks."* He illustrated this with the example of pesto, which he manufactures from excess produce from a local farm. *"They are happy to have someone who can process it."* The farm sells the pesto via their box scheme and in their store, which Interviewee_3 described as *"a good situation for both of us."* Similarly, Interviewee_1 produces dumplings from surplus bread from a local bakery and he also emphasized the importance of being able react to the harvest peak of tomatoes: *"There is always a point where everything happens so quickly that you can't market the stuff quick enough as they simply burst."* Reacting to overproduction is also inherent to the business strategy of Interviewee_2: "*I do not force, but simply react and do what is good for the others."* He explained that this happens for example during summer vacation, when large quantities of vegetables cannot be sold because people are on holiday, or when a summer is unusually hot and more chilis peppers are produced than can be sold. He imagines it to be more difficult to react to overproduction in long supply chains.

Being able to visit primary producers, was perceived as fostering a good business relationship by several interviewees. Interviewee_3 suggested that physical proximity enables to *"communicate faster when you're unhappy,"* and that *"you can just go there and discuss things in a short way, and you also have an added value."* Similarly, Interviewee_2 mentioned that *"it is much easier and more obvious for me to maintain contact with the farmer."* Interviewee_6 explained that before he starts procuring raw materials from a new supplier, he insists on a personal meeting. That way *"it's a pleasant working atmosphere from the start."* He perceives non-local sourcing as *"just so anonymous,"* and if something does not fit, *"you end up on some hotline that isn't responsible."* He also exemplifies that a good business relationship can also be beneficial regarding the reduction of food waste. He recounted that one of his suppliers called and told him that he had a bucket of curd for which the best-before date would have expired two days later. Officially, he was no longer allowed to sell it. The interviewee asked him to deliver it with a cross drawn on the lid. That way he was able to recognize the bucket easily and process the curd immediately. The baker concluded: *"This is the beauty of it, the short distances."* In the case of LFS, it is perceived as easy to know who to contact when resources are needed. Interviewee_2 exemplified this by saying that he *"would not know now*

at all, whom I would need to contact, in order to get chili peppers from Kenya." Another perceived advantage of knowing primary producers personally was the possibility of being able to receive raw materials that fit the specific needs of food manufacturers. Interviewee_1 said that the primary producers offer him to produce vegetables depending on his needs, *"big or small […], firm or a little less firm."*

Several interviewees emphasized that trust is a central motive for them to engage in LFS. Interviewee_6 stated that in the case of imported goods *"you don't know what's in there and how they grow it."* Interviewee_3 perceives it as beneficial to be able to visit his suppliers: *"I know the people and I can look at the things, how they are grown, and I can also pass on this knowledge."* Interviewee_1 reported that he knows all his suppliers personally and has visited each of them. *"Clearly, I do not know what they do when I leave the farm, whether they then take out the pesticide sprayer,"* he commented and continued: "*There has to be a certain amount of trust."* He mentioned that in the case of conventional food systems, even when products are certified organic, "*you really have no idea […] how it is produced, under what conditions, if people are exploited."* He reasoned that in the case of LFS, one can *"check everything, talk to the people, have a look and even exert a certain amount of influence."* Similarly, Interviewee_2 regularly visits his suppliers and their fields, and talks to the farm employees, which he perceives as important way of getting information about the origin of his raw materials. *"I really wouldn't know what happens on the fields that are so far away from me,"* he argued and underlined his concern regarding the *"exploitation of harvest workers in countries where we can hardly control it."* He illustrated the importance of proximity by giving the example that he has not been to his oil pumpkin supplier who is located around 300 km away from Leipzig.

5.3.2 Collaboration instead of competition

According to Astley and Van de Ven (1983), the collective-action perspective implies interorganizational collaboration and the aim for collective survival rather than competition. The network of food manufacturers in Leipzig is described in a similar way. Exchanging with other local craft-based food manufacturers is perceived as highly beneficial by all interviewees. Within the network in Leipzig, the manufacturers exchange information, and contacts, do joint purchases, and they share kitchens, machines, or refrigerators, all of which helps them save costs and enhance their businesses. For example, Interviewee_5 described that they *"put their heads together,"* and ask each other *"haven't you tried this? Or why don't you try this?"* Interviewee_2 explained that he enjoys spending time with other manufacturers, watching them at work and finding answers to questions such as: *"How does each food sector produce? What are the pitfalls? What solutions do I see? What kind of filling machine does he have? Could I use that too?"* He is convinced that the professional exchange does not only help him to develop individually, but that the whole network is strengthened. He noted that in many aspects, such as regarding their capital, local manufacturers *"are inferior to large globally marketing companies,"* but that they *"have each other when there are problems."* That the network is of importance when building up a business, is illustrated by Interviewee_3. When he started his business, he searched for dialogue with an established food manufacturer. He *"examined his situation a bit, how he started, and then I was able to take a few experiences with me,"* which he said, *"has saved a lot of time, and I could also start at a different point."* He explained: "*Although I'm a sole proprietor, I didn't feel so alone."* Later he added that he does not know *"if I would still be around today, if the network wasn't there."*

Local networks can also foster business relations and enhance economic gains of the actors involved. For example, the oat milk is not only sold to consumers but also to other food

manufacturers such as a bakery with a vegan product line. The interviewees highlighted that they actively foster a personal relationship with these local producers and try to find a good price for both sides. Interviewee_6 explained that local manufacturers occasionally approach him and order bread for their events, which he described as *"such a pleasant way of working together."* At his stores and sales vehicles, he also resells a variety of local craft products that complement his assortment. He explained that he does not want to *"earn a lot of money from the additional products,"* but instead provide a *"feel-good package"* for his customers.

The collective-action perspective illustrates the importance of local networks for LFS. Food manufacturers are not at the mercy of the environment but instead they can collectively shape the environment in their interest. Manufacturers benefit from collaboration among each other and across the stages of local value chains – both individually and as a collective. Local buyer-supplier networks foster good business relationships, which may enhance economic opportunities and possibly even contribute to environmental sustainability, for example, by counteracting food waste. Local networks also enable food manufacturers to share knowledge and resources and to collectively shape their food system environment.

5.4 Strategic choice view: the values of food manufacturers

The themes that surfaced in the interviews that relate to the strategic choice view are the active influence of food manufacturers on their environment as well as the role of their values in doing so (see Table 10). These themes are portrayed in more detail in the following subchapters.

Table 10. Empirical findings: strategic choice view

Themes	Subthemes	Empirical examples
Taking influence on the environment	Influence on local agriculture	The oat milk manufacturers convinced local farmers to cultivate old oat varieties
	Environmental sustainability	Interviewee_2 collects raw materials, which are cultivated just outside of town, by streetcar or via cargo bike courier
Business activities are influenced by values of food manufacturers	Values	See Table 11

Table 10 depicts the themes and subthemes relating to the strategic choice perspective as well as empirical examples for the first theme. Empirical examples for the value-related theme are provided in Table 11 below.

5.4.1 Taking influence on the environment

From the perspective it is the strategic choices of organizational decision-makers that trigger change (Child 1972). All interviewees are either self-employed or are in a position at which decision-making takes place. Therefore, all interviewees can be considered decision-makers at their businesses. Similar to the collective-action perspective, the strategic choice perspective encompasses the view that the environment can be adapted to fit organizational needs (Astley & Van de Ven 1983). That decision-makers can actively shape the environment in a similar way than interorganizational networks do is illustrated by the example of local agriculture. In the previous chapter, the example was given how food manufacturers successfully joint forces to incite local primary producers to cultivate oil pumpkins. That food manufacturers can exert influence on local agriculture by themselves is illustrated by the following examples. Interviewee_6 approached farmers with his need for locally grown seeds. He offered them that

if the bakery cannot buy the entire harvest, he will make sure that it gets sold to colleagues. Some farmers agreed and are willing to start a field trial now. Similarly, Interviewee_4 and his colleagues asked local farmers if they could imagine growing old oat varieties and to engage in seed propagation. They were successful and have already gotten some positive feedback. This illustrates a way in which food manufacturers can contribute to promoting biodiversity.

How the interviewees aim at shaping their environment is also demonstrated by their efforts to promote sustainable development. In all cases, the interviewees declared that they engage in efforts to enhance environmental sustainability. Interviewee_5 believes that a central opportunity of LFS lies in the assumption of responsibility. To him *"regionality really makes sense when it is […] transferred into sustainable, ecological production."* Interviewee_1 emphasized that a supplier is not sustainable just because he is local, and he noted: *"What use is it to me if the best regional supplier is using glyphosate on his fields?"* Similarly, Interviewee_4 said: *Just because an animal is slaughtered around the corner, it doesn't have to be kept well."* To address this challenge, Interviewee_4 argued that it is necessary to link local production to sustainability criteria. Organic certification is one example. But some of the interviewees have mixed views regarding organic certification, for example due to the bureaucratic workload for primary producers. The promotion of resource-efficiency was mentioned as important strategy to reduce the environmental impact of production. Interviewee_3 said that he tries to optimize production processes to save water and energy. He also attempts to reduce waste by reusing his own and others' cardboard packaging. The manufacturer further noted that he offers zero-waste stores to return jars if they have a deposit system. Yet, he mentioned that he is not sure if he is doing enough in that regard, but that the implementation of a full deposit system would imply that he would *"have the effort of washing the things and removing the labels."* The oat milk producers do have a deposit system and sell their product in glass bottles.

Reducing food miles was named by all Interviewees as a motive to engage in LFS. Interviewee_2 mentioned that he hopes to *"save some CO_2 emissions if we solve the logistics cleverly,"* and that shorter transport routes may decrease environmental pollution. Interviewee_5 emphasized that he sees a clear ecological potential in local production of oat milk. In conventional food systems, oat milk is usually transported over long distances. Because it consists of up to 90 percent water, the interviewee argued that it "*can be realized totally with short distances."* He asked: *"Why does an oat drink […] have to be driven all across Europe until I consume it?"* Interviewee_4 concluded: *"I just don't think that's necessary – and I think it's cool to show that!"* The mode of transport is utilized as strategy to reduce transport related environmental impacts by some interviewees. Interviewee_3 pointed to the discourse on the environmental impact of inefficient distribution systems in LFS. He countered the criticism, explaining that he usually transports his products by cargo bike. Only when the goods exceed 80 kg, he uses car sharing. The interviewee emphasized that he did not want to buy a car when he started his business, because he did not have one before and wanted to "*continue to live the way I lived before and try to transfer that to the company."* Interviewee_2 highlighted that physical proximity has a large impact on the mode of transport: raw materials that are cultivated just outside of town he collects by streetcar or via cargo bike courier. When the distance becomes too large, this turns unfeasible. Therefore, Interviewee_2 argued, a supplier location *"within easy cycling distance"* is beneficial. For a while, the cargo bike courier distributed the final products within Leipzig, but ceased doing so, because it turned out to be *"quite an extra effort and feat."* They had to pack boxes differently and upholster them, as the uneven roads in Leipzig caused oil bottles to burst. Now he uses an electric transporter.

5.4.2 Values of food manufacturers

According to the strategic choice perspective, decision-makers are proactive and shape organizational life (Child 1997). Organizational activities are closely interwoven with the individual perspectives of decision-makers on what they perceive as important (Pfeffer & Salancik 2003). As values are *"critical motivators of behaviors and attitudes"* (Schwartz 2012, 17), organizational activities are shaped and constrained by the underlying values of decision-makers (Child 1972). Therefore, the values of the interviewees are likely to be key motivators for the strategic choices of their businesses. The value types according to Schwartz (1992; 2012) that surfaced in the interviews were self-direction, stimulation, hedonism, benevolence, and universalism (see Table 11).

Table 11. Empirical findings: values of food manufacturers, based on Schwartz (2012, 5-7)

Value types	Empirical example
Self-Direction	*"I asked myself whether I wanted to continue doing it the way I was shown in my apprenticing company, or the way it was here […]. And at some point, we said to ourselves: no."* (Interviewee_6)
Stimulation	*"I like to do a wide variety of things during the day […] not standing in the kitchen all day five days a week and someone else is doing the bookkeeping."* (Interviewee_3)
Hedonism	*"For me, it's also a totally reassuring job [...], because it gives me peace and quiet […]. So, satisfaction in everyday work plays a big role."* (Interviewee_2)
Benevolence	*"Our people said that this is a totally nice, relaxed way of working. So that is an important factor."* (Interviewee_6)
Universalism	*"It sucks for all my fellow citizens who are just being fooled, and then I try to intervene."* (Interviewee_2)

Table 11 depicts the values identified in the interviews as well as empirical examples that reflect each value. The values identified can be allocated to the higher order values *"openness to change"* and *"self-transcendence."* These higher order values are comprised of values that embrace change and independence of feelings, actions and thought, and which drive individuals to promote social and ecological welfare (Schwartz 1992; 2012).

The self-direction value, which implies freedom, curiosity, and independence (Schwartz 1992; 2012), is reflected in the strategic choice of Interviewee_6 to withdraw from exercising his craft the way he had learned to and how it had been done in his family business previously. To him, it was important to dispense with ready-mixes and instead to only bake what he can manufacture without the help of such products, even if that required popular products to be taken out of the assortment. Another perception related to self-direction is the idea of becoming independent from the global market. This is perceived as providing the freedom to continue manufacturing and to offer products at a constant price independent of price fluctuations on the global market. For example, Interviewee_6 argued that there are always times when certain goods become unavailable on the market. *"If nothing can be imported from outside, regional chains become even more important."* In the middle of 2020, he remembered, all at once there was no more spelt on the market for several weeks and *"the price suddenly exploded from 75 cents to 1.50 euros per kilo."* He noted that his bakery was in a much better position than other local bakeries since they were already interconnected with local primary producers. A local farmer told him that he still had spelt in stock and offered it to him at the old market price. The bakery "*could simply continue to produce and had no problems with it."*

The value type of stimulation is characterized by the search for novelty, excitement, and challenge in life (Schwartz 1992; 2012). The value is reflected in the motive of some interviewees to start a business in food manufacturing despite a different profession learned. For example, the oat milk producers practice a profession in which they deal with regional value chains on a more theoretical level and *"thought it was kind of cool to move a bit from theory to practice, to try something out ourselves a bit"* (Interviewee_4). Both the stimulation value and the hedonism value are related to interviewees' notion of work satisfaction. Several interviewees underline that they find great pleasure in their work routines and strategically foster a pleasant working climate. For example, Intereviewee_2 stated that it is *"really great and important to be able to do handicraft work."* He enjoys to *"put all the labels on the jars by hand, […] fill the salt and the oil by hand."* To him it is *"a totally reassuring job,"* because it gives him *"peace and quiet."* Similarly, it is important to Interviewee_3 to *"do a wide variety of things during the day."* He enjoys that he is *"not standing in the kitchen all day five days a week and someone else is doing the bookkeeping."* He highlighted the value to *"just like working every day and it's fun."* He fears that it will be difficult to main these diverse working routines when the business grows. Therefore, to him it is *"a question of how far you have to grow and when it is enough."*

Benevolence is concerned with enhancing the welfare of people with whom one has a personal relationship (Schwartz 1992; 2012). This value is reflected in the interviews in multiple ways. It encompasses strategic intraorganizational decisions to enhance job satisfaction of employees. For example, Interviewee_6 explained that two of his employees are master bakers, and if he would tell them to weigh dough all day, they would ask: *"What did I make my master baker for?"* Therefore, he has invested in machines that do the weighing and the bakers can concentrate on more demanding tasks. *"Our people said that this is a totally nice, relaxed way of working, so that is an important factor."* Interviewee_2 said that work satisfaction includes a good hourly wage, which has risen in his company, *"because the team members have grown older and have families. And for them, of course, it's nice to have money so they can shop at the organic grocery store."*

Benevolence is also reflected in the concern to be honest and transparent toward customers. Fostering the relationship to customers is a central element of the interviewees' work. Some of the interviewees sell their products through direct marketing, which implies that they meet many of their customers in person. Interviewee_2 pointed out that *"offline care"* is very important to him. Therefore, he opens his oil mill once a month, showing interested people what food production looks like at the oil mill. Likewise, Interviewee_6 said that he thinks about offering baking courses and tours around the bakery to *"disclose how we work."* One reason for the oat milk producers to emphasize transparency is that they perceive oat milk and its production process as "*generally very untransparent."* For the manufacturers it is important to do it differently, for example by publishing information on the production processes and the pricing structure. Similarly, Interviewee_2 lists the origin of all ingredients on his product labels. *"There are spreads that have 98 percent regional ingredients, and there are some that have only 56 percent."* The manufacturer explained that the list allows consumers to see at one glance that non-local ingredients are used. *"Even if something is not regional, then I inform my customers about it, so they do not have to actively ask for it."*

The universalism value is concerned with protecting the welfare of all people and the nature regardless of a personal relationship (Schwartz 1992; 2012). This value is reflected in the manifold efforts of the interviewees to promote environmental sustainability. Examples are the promotion of biodiversity by providing incentives for farmers to cultivate old varieties or using low-impact transport systems as described in the previous chapter. Universalism is also

reflected in the personal engagement of the interviewees that goes beyond mere business activities. For example, even before he started his business, Interviewee_1 *"knew and appreciated all the producers personally."* He remembered: *"Since I was a child, I have had some kind of inner need to meet producers. I have always done this."* For many years he has also been an active member of the Slow Food movement. Likewise, Interviewee_2 recollected the time when he was not a manufacturer yet and was already interested in understanding *"what added value looks like, what's involved, where the glass comes from for the yogurt, what the goats eat."* Today, he sometimes writes or calls companies to confront them when he assumes consumer deception. *"Sometimes it gets on my nerves when I suspect a false statement,"* Interviewee_2 said and continued that he thinks that *"it sucks for all my fellow citizens who are just being fooled, and then I try to intervene."* Intereviewee_3 actively engages in the community of interest for meadow orchards, which aims at preserving orchards and establishing new ones. The interviewees' conviction of LFS is also reflected in their own consumption behavior. All of them stated that they endeavor consuming locally produced foods. Interviewee_2 explained that once he has visited a field and years later consumes produce from that field, he still links it *"to the experience I once had."* Interviewee_6 experiences locally produced foods as increasing appreciation: *"I eat more selectively and simply don't throw away as much at the end."*

Furthermore, the universalism value is an integral element of the aspiration of food manufacturers to promote regional development. For example, Interviewee_4 said that he is convinced that LFS enhance a region and *"make it more attractive for both the people who live here and the people who come to visit."* Interviewee_5 noted that it is important to them *"that there is not only added value for the company, but for everyone who works there. And for all partners, whether they are producers, retailers, or buyers."* Interviewee_4 saw a potential of LFS in the fact that money does not flow into *"some anonymous world market to someone with whom I have nothing to do."* Instead, *"the farmer who farms outside Leipzig gets something out of it."* Interviewee_2 said that he is interested in enhancing regional value-adding and that regional raw material purchasing, and regional distribution is *"what my company is all about and what drives me in my daily work."* He hopes that *"the more products I develop with regional networks, the more it will strengthen the agricultural structure and the supply chains."*

Universalism also surfaces in the aspiration of food manufacturers to produce high quality food. For example, Interviewee_1 described their business idea as challenging because they wanted to preserve foods *"honestly, without preservatives, without any additives."* But preserving the jars in a way that they can be stored unrefrigerated would require them to *"boil down the stuff for so long that then really just nothing is left in it, no nutritional content, no vitamins, no nothing."* Interviewee_6 remembered that at one point he had to decide if he wanted to continue his job the way he had learned at his training company, *"with various ready-mixes, and partial ready-mixes."* He and his brother decided: *"Everything that we can't produce ourselves, we simply don't have anymore."* For Interviewee_3, the taste is a central aspect of product quality. He described his product recipes as *"a piece of me that I pass on."*

Often values are just one of several factors that affect behavior (Bardi & Schwartz 2003). Values act as guidance in choice-situations, but there can also be other reasons for certain behavior (*ibid.*). This is illustrated by Interviewee_3 who is concerned with reducing packaging and engages in different activities to do so. Yet, he does not have a deposit system for his jars because it would imply an increased amount of work for him. This example demonstrates that the values of food manufacturers are important to consider, but that it is also necessary to examine other behavior-related factors when assessing the perceptions of food system actors. The values that surfaced in the interviews are adjacent to each other in Schwartz's (2012) model

of the motivational continuum of values (see Figure 2). This indicates that there are no conflicts in the value types and that they can be attained simultaneously. They are, however, in conflict with the opposing higher order values *"conservation"* and *"self-enhancement,"* which are defined by resistance to change, self-restriction and preservation of the past as well as driving individuals to enhance their own interests (Schwartz 1992; 2012). Evidence for the prevalence of these value types were not identified in the interviewees. Further research should investigate quantitatively if these findings can be confirmed. A reflection on the use of the value theory in the present study will be discussed in the next chapter.

In sum, the strategic choice perspective illustrates that food manufacturers actively shape their environment. Their choices and activities are interwoven with their individual perspectives and values, which were found to be central to their motives to engage in LFS. The interviewees were found to have a strong personal interest to create shared value with their business, which can be considered as driving their work. They acknowledge that local is not intrinsically sustainable, but they engage in a various efforts to integrate sustainability into their business strategies. Yet, ensuring economic sustainability is a major challenge. The interviewees have high aspirations: wanting to live up to high environmental standards, paying fair wages and fair prices for raw materials and simultaneously being able to subsist on the businesses and offering products at a price that is affordable to consumers with small income. Living up to all of them all at once appears to be a central challenge for food manufacturers in Leipzig.

Overall, the analysis of the findings shows that each perspective in organization theory has merit to ascertain the perspectives of food manufacturers. The ability of food manufacturers to adapt to environmental forces is limited, but they are not entirely beyond their control. The interviewees have multiple strategies to adapt to this environment. Both individually and as a collective they can shape the environment in their interest.

6 Discussions

In Chapter 7, the research questions are addressed. First, the motives of food manufacturers to engage in LFS are described, followed by the perceived potentials and challenges associated with LFS. Lastly, reflections on the methodological approach are depicted.

6.1 Motives to engage in localized food systems

The first research question that was addressed within the present case study is: *"What are the motives of food manufacturers to engage in localized food systems?"* As values are "*critical motivators of behaviors"* (Schwartz 2012, 17), organizational activities are shaped and constrained by the underlying values of decision-makers (Child 1972). Therefore, the values of food manufacturers can be understood as motivators for their engagement in LFS. One part of value types prevalent among the food manufacturers interviewed embrace change, independence and pleasure and can be linked to the pursuit of personal well-being of food manufacturers. Examples are starting a business despite a different profession learned and pursuing a self-determined job that satisfies them. But their work is also driven by values that promote social and ecological welfare. These include strategic choices to create social added value and to promote environmental sustainability. The findings of the case study show that the motives of food manufacturers are embedded in a strong personal interest in LFS rather than a quest for profit. This assumption is reflected in the personal preference for local products in their own consumption patterns as well as their acceptance of economic drawbacks associated with small-scale and local food production.

The specific motives of food manufacturers to engage in LFS are closely interlinked with the second research question, namely: *"What are the perceived potentials and what are the challenges associated with partaking in localized food systems?"* The findings concerning this research question are discussed in the following two chapters.

6.2 Potentials linked to partaking in localized food systems

The present study found that partaking in LFS is associated with multiple potentials. A central criticism regarding the *"local trap"* is that LFS are not inherently more sustainable than foods from larger scale systems (Born & Purcell 2006). Coelho *et al.* (2018) call for a food system approach that considers sustainable production methods and regional economic benefits. An important finding from this study is that all interviewees have adopted a *"beyond local perspective"* (*ibid.,* 92) that connects local with sustainable food production. Reducing food miles was a prevalent concern among all interviewees, even though it may only account for a small share of GHG emissions and energy use in food production (Weber & Matthews 2008). Previous research found that the reduction of food miles is often offset by scale effects and high efficiency of larger scale systems (Saunders & Hayes 2007; Van Hauwermeiren *et al.* 2007). Therefore, Weber and Matthews (2008) and Van Hauwermeiren *et al.* (2007) highlight the importance of considering other factors to assess the environmental impact of LFS. One factor to consider is the mode of transport. For example, previous studies have found that refrigerated transport is more energy intensive than non-refrigerated transport (Weber & Matthews 2008), air freighted products are more energy intensive than sea freighted foods (Saunders & Hayes 2007; Van Hauwermeiren *et al.* 2007), and road transport is more energy intensive than rail transport (Brodt *et al.* 2013). The findings of the present study show that food manufacturers utilize innovative and low-impact modes of transport. These modes of transport require proximity between buyers and suppliers, which illustrates a unique potential of LFS. It is

possible, therefore, that choosing alternative modes of transport may have a significant impact on the reduction of GHG emissions and energy use associated with small-scale systems. It is important to bear in mind, however, that higher expenditure of time and labor are required, which may be reflected monetarily in the product price.

Moreover, Brodt *et al.* (2013) and Edwards-Jones *et al.* (2008) reason that there are far more environmental impacts of food production than climate change that need to be considered when assessing the sustainability of food systems. The findings from the present study show that food manufacturers adopt multiple strategies to address environmental factors such as the promotion of biodiversity and sustainable use of resources. These measures are, however, not inherent to the local scale but are strategic and individual choices of the food manufacturers. It is their own motives to pursue environmental sustainability and these aspirations are to some extent prioritized over economic gains. Moreover, previous research (Schönhart *et al.* 2009; Weber & Matthews 2008; Van Hauwermeiren *et al.* 2007) indicates that a shift in consumer habits is required to curtail environmental and economic trade-offs associated with LFS. The findings of this case study illustrate this challenge as food manufacturers perceive consumer expectations and behavior (e.g., regarding pricing, seasonality, consistent product quality) to be challenging for the implementation of LFS with low environmental impact. To address sustainability challenges in LFS, it is therefore necessary to not only consider the production side but to focus on facilitating sustainable consumption habits.

The importance of local networks is a key finding to emerge from the analysis. They are perceived as invaluable element of LFS from which food manufacturers profit economically and socially. The results are in line with Hughes and Boys (2015), who argue that networks are social capital which are key for economic development of food producers. The findings further support previous research by Hughes and Boys (2015) and Nilsson (2009) who found that geographic clustering allows food producers to utilize economies of scale and scope, reduce cost associated with distances and increase production efficiency. Astley and Van de Ven (1983) argue that developing a social environment among organizations can reduce harsh competition. Congruously with these assumptions, the findings shows that food manufacturers support each other, cooperate, exchange information, share equipment, all of which help them to collectively hold their own against large-scale and non-local competitors. The findings also indicate that food manufacturers appreciate personal relationships that emerge in LFS and foster a pleasant working climate. These findings are consistent with studies by Schönhart *et al.* (2009) and Nilsson (2009) who found that producers that engage in LFS may experience higher degrees of job satisfaction. Moreover, argued by Hobbs (2020), strong supply networks with collaborative relationships can build resilience in supply chains, which was experienced as benefit of LFS by some of the interviewees as well. In the case of direct marketing, there may as well be some economic benefits: marketing costs may be reduced, as intermediary stages in the supply chain (i.e., retailers) may become redundant (Nilsson 2009; Schönhart *et al.* 2009).

As stated by Mayer *et al.* (2016), LFS have the potential to strengthen rural-urban linkages. Food production in urban areas is restricted by confined space and high property costs, rendering urban areas depend on food supplies from rural areas (Anderson 2015; Jarosz 2008). At the same time, such linkages may entail economic opportunities for rural areas, provide rural producers with market knowledge, access to urban networks, and may induce innovation (Mayer *et al.* 2016). Moreover, LFS may enhance appreciation of rural assets (Mayer *et al.* 2016) and increase tourism in rural areas (Nilsson 2009), which is a view shared by some of the manufacturers interviewed. The present study investigated the perspectives of food manufacturers in an urban center. As most of their suppliers are based in the surrounding rural areas, the rural-urban linkage becomes visible. Physical proximity to their suppliers is perceived

as fostering a good business partnership and trust, which is also said to promote fair price negotiations. Simultaneously, it also enables food manufacturers to respond to the needs of primary producers and to provide them a platform to urban consumers. Even though the perspectives of primary producers were not investigated in this study, it can be assumed that they profit from and appreciate the close business partnerships in a similar way.

The findings from the case study further support the concepts of food sovereignty and food democracy, which emphasize democratic decision making and community empowerment in food systems (Andrée *et al.* 2014). Food manufacturers in LFS can actively and collectively shape their environment, for example, by exerting influence on what is cultivated locally. According to Andrée *et al.* (2014) this is a central opportunity for LFS to become more than a niche market for wealthy consumers. Moreover, according to Thompson (2019) and Feenstra (1997), LFS can be tailored to local values and to the specific needs and priorities of a community. The results from the interviews support these assumptions. Manufacturers foster their relationship with local primary producers, listen to them and strategically respond to their needs. How LFS can be tailored to local values is also reflected in the attempts of food manufacturers to interact with consumers.

The interviews with the manufacturers indicate that trust and transparency are central features positively associated with LFS. Knowing their supplier personally, being able to visit the farms frequently and being able to talk to the farm employees creates a sense of auditability and trust. Being transparent toward customers and interacting with them was also identified as key aspiration of manufacturers. Born and Purcell (2006) reason, however, that direct interaction between producers and consumers in LFS is no assurance that the production system is more transparent than in other systems. Similarly, Schönhart *et al.* argue that established certificates or policy measures may be a more efficient mean of guaranteeing socially sound production. This discrepancy illustrates the conflict between the subjective feeling of trust and objectives measures of transparency. Being able to visit primary producers and their fields is perceived as benefits of LFS. However, to establish transparency in value chains this may not be sufficient. Other measures, such as engaging in certification schemes, or publishing information on pricing structures are necessary to ensure objective transparency in LFS.

The results of the case study show that food manufacturers experience an increasing demand for local products. These findings are consistent with recently published market research (BMEL 2021; AMI 2018). Filling this niche, manufacturers can differentiate their products at the point of sale. The likelihood for the niche to disappear can be assumed to be low, but the growing demand may imply an increase in competition. Nilsson (2009) suggests that producers can create a niche by focusing on additional product characteristics such quality or sustainability, which generates added value and increases the return. The findings of the present study indicate that food manufacturers in Leipzig have a similar strategy to hold its own in the market. An additional potential of LFS is, that organic food is significantly more popular among consumers when it is local (AMI 2018). This implies that in LFS, manufacturers who produce certified organic food possess a competitive advantage over its non-local rivals. However, it is necessary to call to mind that previous market research has found local origin to be of particular importance to consumers in case of unprocessed foods (*ibid.*). As food manufacturers offer processed food, the demand for their products may be lower compared to fresh farmers produce.

Overall, partaking in LFS is considered to come along with multiple potentials that match findings of previous research. Food manufacturers benefit from local networks socially and economically, experience job satisfaction, can actively shape their food system environment, and are positioned in a market niche that is experiencing growth. Moreover, LFS are considered

to have a potential to be transparent and to promote environmental sustainability. Yet, it must be considered that these are not inherent characteristics of LFS, but they are highly dependent on the personal priorities and efforts of food manufacturers.

6.3 Challenges linked to partaking in localized food systems

A central challenge of LFS that was identified in the present study is the dependence of food manufacturers on their natural and structural environment. The environment is perceived as deficient and as being accompanied by uncertainties regarding quantities and qualities of raw materials. The findings are in line with a study by FiBL (2014) that found that the food system in Saxony faces significant challenges due to limited availability of processing industry and raw materials. In that regard, the absence of a common definition of local origin (O'Neill 2014; Gebhardt 2012) may be beneficial for food manufacturers, at it allows them to define local origin based on the availability of resources. These findings agree with Astley and Van de Ven (1983) who argue that there are different ways for organizations to control their environment and that the natural environment can be turned into being part of the boundaries of a company.

A key criticism of LFS is that they are exclusionary (Allen *et al*. 2003) and mostly of concern for intellectual and elite consumers (Inglis 2010). This is also reflected in previous market research which indicates that the higher price of local foods puts off consumers (AMI 2018). The findings of the current case study show that the economic accessibility of foods is a central challenge in LFS. It was found that food manufacturers are vastly concerned with ensuring affordability of their products. However, higher raw material prices and higher production prices implicit to small-scale production pose a major conflict regarding pricing strategy. This goes along with another challenge mentioned by McMahon (2014) and Jarosz (2008), namely, that LFS do not imply economic sustainability of small-scale farmers. The findings indicate that food manufacturers in LFS are concerned with paying their suppliers fair prices and do not want to push down raw material prices to increase affordability of their products. Yet, finding a balance between raw materials prices and product pricing is challenging. An opportunity may lie in scaling up production to utilize scale-effects on prices. However, this may be conflicting with food manufacturers' desire to maintain small-scale and craft-based food production.

Regarding social and economic sustainability, it is further argued that LFS may even exacerbate social injustice (Born & Purcell 2006, 200). Jarosz (2008) argues that small-scale farmers are vulnerable to self-exploitation. Arguably, this is also a concern in the case of craft-based food manufacturing. The findings show that not all manufacturers are able to subsist on their work. Income generation may not be the first concern and food manufacturers may rely on other sources of income, as following their ideals and ensuring work contentedness is prioritized. These findings are in line with a study by Nilsson (2009), who revealed that income generation is not a primary motivational factor for producers to engage in LFS. Instead, social interaction and *"a sense of belonging"* were found to be key motivators to engage in LFS (*ibid.*, 357). Yet, the case study displays that food manufacturers acknowledge that it is essential to secure economic sustainability to ensure that they can proceed with their business in the long run.

One aspect that is related to enhancing economic profitability of craft-based foods in LFS is the choice of target market. Born and Purcell (2006) reason that the promotion of LFS may cause economic losses for food producers, due to a loss of opportunities to economically benefit from other regions. The findings indicate that selling one's products in a highly confined space may be feasible in a large city but may be more difficult in smaller towns or in rural areas. But even the market of a single urban area may not offer sufficient sales opportunities, especially in the case of manufacturers with narrow product ranges or with specialty foods. The target market is

also connected to manufacturers' choice of sales channels. If manufacturers sell their products only through direct marketing or in a few small stores, their sales volume may be too small. According to Inglis (2010), large supermarket chains are frequently made responsible for the ills in food chains and are often shunned in AFNs. Yet, the findings show that utilizing large retailers as distribution channel may offer manufacturers a significant increase in turnover. However, the results from the interviews support evidence from previous studies by Nilsson (2009) and Schönhart *et al.* (2009) which indicated that adding intermediary stages in the supply chain (i.e., retailers) implies higher total costs. Selling through the retail was also shown to require manufacturers to offer large product volumes and meeting the price expectations of retailers, both of which deter some of them from choosing the retailer as sales channel.

In sum, partaking in LFS is associated with multiple challenges. The dependence on the natural and structural environment limits the option for actions of food manufacturers. In addition, local and small-scale production is associated with higher prices, which conflicts with the aspiration of food manufacturers to offer affordable products. Moreover, ensuring economic sustainability is a central challenge when wanting to do justice to one's expectations on social and environmental sustainability.

6.4 Methodological reflections

It is important to consider, that there is a potential for bias regarding the reporting of the food manufacturers. As values *"represent cultural ideals"* (Schwartz 1992, 50) the responses may reflect cultural norms. Interviewees may be inclined to name values that are perceived as socially desirable. This is especially true because they are speaking as representatives of their businesses. If organizations fail to reflect cultural values, they face consequences and may lose public legitimacy (Sagiv *et al.* 2011). Therefore, it is important to bear in mind the possible bias in the responses as the interviewees may not have disclosed conflicting viewpoints. Moreover, pursuing values often goes along with specific behavior (Bardi & Schwartz 2003). Even though there were some specific examples how food manufacturers translate their values to behavior, not everything that was said must be reflected in their actions.

As the present case study took a qualitative approach to Schwartz's value theory, which is based on a quantitative survey, the results need to be interpreted with caution. The values identified emerged both from direct questions (e.g., *"Which values are important for you as producer?"*) and indirectly from other questions (e.g., *"Why is local-origin important to you?"*). The interview guide did not comprise explicit questions concerning the whole value range. It is possible, that a value survey that queries the whole range of values directly, would identify additional values that did not surface in the interviews. For example, engaging in LFS with the aim to increase food chain resiliency may be related to security values and promoting localness may also be rooted in tradition values. However, the goal was not to serve the value theory completely, but to explore which values emerged.

The open design of the interviews enabled topics to surface which were not considered in the interview guide. It can be inferred, however, that this affected the comparability of the interviews. How the answers were distinctively differentiated is reflected in the varying length of the interviews (see Table 2). It is important to note that statements such as *"all interviewees said,"* or *"one interviewee said"* do not attempt to weigh the answers. This was neither an aim of the study nor intended by the research design. Instead, the research design allowed the interviewees to talk freely and express themselves within their own argumentation, which generated valuable content to address the research questions. The numerical significance of the themes that emerged could be examined in further quantitative research.

7 Conclusions

Chapter 8 returns to the aim of the research project. It recapitulates the key findings and depicts practical implications as well as suggestions for future research.

The present study set out to ascertain the motives of craft-based food manufacturers to engage in LFS and to identify the perceived potentials and challenges associated in doing so. To address the research questions, four perspectives in organization theory based on Astley and Van de Ven (1983) and Schwartz's value theory (1992; 2012) were applied. Linking the theories enabled the systematization of the findings and provided an analytical groundwork to answer the research questions. The value theory was an important analytical lens to ascertain the motives of food manufacturers, while the utilization of organization theory aided in identifying the perceived potentials and challenges associated with LFS.

The findings show that the motives of food manufacturers to engage in LFS may go beyond weighing the potentials and challenges but instead they were found to be interwoven with the personal values of food manufacturers. The idealistic aspirations, for example, may be weighted more heavily than economic potentials. The study found that the choices and activities of food manufacturers are affected by the environment. Food manufacturers are, however, not utterly dependent on environmental forces and instead, they can – individually and collectively – shape their local food system. Partaking in LFS was found to be experienced as beneficial in multiple ways. Food manufacturers perceive that they profit from local food networks both socially and economically, that LFS contribute to strengthening rural-urban linkages and supply chain resiliency, and that they can create shared value – for themselves, their employees, their suppliers, consumers as well as for the environment. The study has also shown that partaking in LFS is associated with challenges. A central difficulty is the restricted accessibility to raw materials and uncertainties regarding their quantities and qualities. In addition, a major difficulty lies in securing economic sustainability both for their own business and for their suppliers while ensuring economic accessibility of the products.

The scientific discourse points to the common pitfall in conceiving LFS as intrinsically sustainable. It does not void the potentials of LFS generally. It does, however, point to the complexity of food systems, which cannot be explained with a sweeping statement. This complexity entails a need to consider a range of different factors, including the respective preconditions of a product and a region. The current study set out to consider the perspectives of food manufacturers who experience LFS in practice and on a day-to-day basis. The findings demonstrate that the sustainability potential of certain factors (e.g., mode of transport) depends on personal aspirations of individuals and their creativity and drive to innovate. Simultaneously, these aspirations are affected by economic challenges that food manufacturers face.

7.1 Practical implications

The results of the present study add to an ongoing debate concerning the sense and nonsense of LFS. By focusing on the widely omitted perspective of food manufacturers, the study contributes to a more holistic understanding of the implications of LFS. The findings have important implications for future practice. Two of which are called attention to here.

Specifically, regarding local procurement and sale through retail, craft-based food manufacturers face major disadvantages due to their scale. The findings clearly support the statement by Coelho *et al.* (2018), who argued that for the implementation of LFS, processing and logistic infrastructure are indispensable at regional scale. Strengthening the availability of

local processing infrastructure which have capacities to handle small volumes, and which can separate local and non-local raw materials needs to be considered in future policy development. In addition, greater policy efforts are required to promote synergies between primary producers, food manufacturers and retailers that operate at different scales. These efforts could include funding instruments to set up a joint logistic system. This would enable food manufacturers to bundle their resource requirements, to supply the retail collectively and to profit from scale effects regarding price and efficiencies.

Furthermore, globally, we face major environmental challenges, including vast environmental degradation, a dramatic loss of biodiversity and climate change (Andrée *et al.* 2014; Inglis 2010). Today's food regime is not only affected by but is also a significant contributor to these developments – for example by its heavy reliance on energy- and resource-intensive inputs as well as use of environmentally harmful pesticides and insecticides (*ibid.*). Therefore, ensuring environmental sustainability of global and local food systems is indispensable and needs to be a policy priority. The findings show that small-scale producers have vast creative potential to reduce their ecological impact and to actively promote sustainable development. Examples are the promotion of old plant varieties, the reduction of food waste by quickly responding to harvest peaks and surplus stocks of primary producers, and the use of low-impact transport. Food manufacturers in LFS know their local environment, not least because they foster personal relationships to consumers and suppliers. This unleashes great potential for effective measures that fit the specific local environment. Yet, the findings suggest that craft-based manufacturers face major obstacles in ensuring economic sustainability. This implies that innovative potential may be squandered because producers give up their business or possibly lower their standards. Greater endeavors are required to create a supporting and encouraging framework for food producers to engage in ecological sound food production. Policy measures could, for example, include subsidies for sustainably produced goods to ensure economic sustainability of producers as well as the broad accessibility of ecologically sound foods.

7.2 Future research

The present study lays the groundwork for further research into the implications of LFS from the perspectives of food manufacturers. Future studies, which take a quantitative approach, are suggested to investigate the generalizability of the findings. To develop a full picture of craft-based food manufacturing in LFS, additional case studies in different regions with different preconditions should be undertaken to investigate the influence of the environmental preconditions on LFS. Moreover, food manufacturers who process mainly animal-based foods were excluded from the study due to the scope and the specific preconditions they face. It would be of interest to investigate their perceptions on LFS and if these differ from manufacturers that engage primarily in plant-based value chains.

Furthermore, applying Schwartz's value theory provided a useful analytic lens to identify the prevailing motives of food manufacturers to engage in LFS. To develop a full picture of the motives of food manufacturers to engage in LFS, quantitative studies based on Schwartz's value questionnaire are recommended. It would also be of interest to specifically investigate the role of tradition and security values in the frame of a qualitative investigation.

The previous chapters have illustrated that to ensure environmental, social, and economic sustainability of LFS, great policy efforts are required. Therefore, future research should usefully investigate the role of policy makers. It would be of interest to explore policy makers' assumptions, motives as well as potentials and challenges associated with LFS.

Previous research has contested the environmental sustainability of LFS as they are, for example, associated with inefficiencies in transport. The findings of the current case study, however, suggest that food manufacturers employ various measures to reduce their environmental footprint. The impact of these measures could be usefully explored in future research to establish a greater degree of accuracy on the matter. Low-impact modes of transport and the potential of food waste reduction in LFS are intriguing ones to further investigate.

Science has an important role in efforts to achieve sustainable development. Comprehensive research is indispensable for approaching today's sustainability challenges. Schönhart *et al.* (2009) highlighted the necessity of research to explore food system challenges and to examine how LFS can contribute to solving them. This said, rather than disputing about whether local or global-scale systems are more sustainable, future research should investigate how to design food systems sustainably – both at a local and at the global scale.

Bibliography

Literature and publications

Agrarmarkt Informations-Gesellschaft (AMI) (2018). *Wie regional is(s)t Sachsen?* Bonn.

Albino, V., Balice, A. & Dangelico, R.M. (2009). Environmental strategies and green product development: an overview on sustainability-driven companies. *Business strategy and the environment,* 18(2), 83-96.

Allen, P., FitzSimmons, M., Goodman, M. & Warner, K. (2003). Shifting plates in the agrifood landscape: the tectonics of alternative agrifood initiatives in California. *Journal of Rural Studies,* 19(1), 61-75. https://doi.org/https://doi.org/10.1016/S0743-0167(02)00047-5

Anderson, M.D. (2015). Roles of rural areas in sustainable food system transformations. *Development,* 58(2), 256-262.

Andrée, P., Ayres, J., Bosia, M.J. & Massicotte, M.J. (2014). *Globalization and Food Sovereignty: Global and Local Change in the New Politics of Food*. Toronto: University of Toronto Press.

Astley, W.G. & Van de Ven, A.H. (1983). Central Perspectives and Debates in Organization Theory. *Administrative Science Quarterly,* 28(2), 245-273. https://doi.org/10.2307/2392620

Bardi, A. & Schwartz, S.H. (2003). Values and Behavior: Strength and Structure of Relations. *Personality and Social Psychology Bulletin,* 29(10), 1207-1220. https://doi.org/10.1177/0146167203254602

Birch, D., Memery, J. & De Silva Kanakaratne, M. (2018). The mindful consumer: Balancing egoistic and altruistic motivations to purchase local food. *Journal of Retailing and Consumer Services,* 40, 221-228. https://doi.org/https://doi.org/10.1016/j.jretconser.2017.10.013

Bohnsack, R., Marotzki, W. & Meuser, M. (2011). *Hauptbegriffe Qualitativer Sozialforschung*. Opladen & Farmington Hills: Verlag Barbara Budrich.

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.

Brodt, S., Kramer, K.J., Kendall, A. & Feenstra, G. (2013). Comparing environmental impacts of regional and national-scale food supply chains: A case study of processed tomatoes. *Food Policy,* 42, 106-114. https://doi.org/https://doi.org/10.1016/j.foodpol.2013.07.004

Bundesministerium für Ernährung und Landwirtschaft (BMEL) (2021). *Deutschland, wie es isst – Der BMEL-Ernährungreport 2021*. Berlin.

Carroll, G.R. (1988). *Ecological models of organizations*. Cambridge: Ballinger.

Child, J. (1972). Organizational Structure, Environment and Performance: The Role of Strategic Choice. *Sociology-the Journal of The British Sociological Association - SOCIOLOGY,* 6, 1-22. https://doi.org/10.1177/003803857200600101

Child, J. (1997). Strategic Choice in the Analysis of Action, Structure, Organizations and Environment: Retrospect and Prospect. *Organization Studies,* 18(1), 43-76. https://doi.org/10.1177/017084069701800104

Clancy, K. & Ruhf, K. (2010). Is local enough? Some arguments for regional food systems. *CHOICES,* 25(316-2016-7158), 1-5.

Coelho, F., Coelho, E.M. & Egerer, M.H. (2018). Local food: benefits and failings due to modern agriculture. *Scientia Agricola,* 75, 84-94.

European Commission (2020). *A Farm to Fork Strategy – for a fair, healthy and environmentally-friendly food system*. (381). Brussels.

Darnall, N., Henriques, I. & Sadorsky, P. (2010). Adopting proactive environmental strategy: the influence of stakeholders and firm size. *Journal of Management Studies,* 47, 1072-1094. https://doi.org/10.1111/j.1467-6486.2009.00873.x

Diamond, A., Tropp, D., Barham, J., Frain, M., Kiraly, S. & Cantrell, P. (2014). *Food value chains: Creating shared value to enhance marketing success*. U.S. Dept. of Agriculture, Agricultural Marketing Service. http://dx.doi.org/10.9752/MS141.05-2014

DuPuis, E.M. & Goodman, D. (2005). Should we go "home" to eat?: toward a reflexive politics of localism. *Journal of Rural Studies,* 21(3), 359-371. https://doi.org/https://doi.org/10.1016/j.jrurstud.2005.05.011

Edwards-Jones, G., Milà i Canals, L., Hounsome, N., Truninger, M., Koerber, G., Hounsome, B., Cross, P., Whitworth, E., Hospido, A., Plassmann, K., Harris, I., Edwards, R., Day, G., Tomos, A., McLaren, S. & Jones, D. (2008). Testing the assertion that 'local food is best': the challenges of an evidence-based approach. *Trends in Food Science & Technology,* 19(5), 265-274. https://doi.org/10.1016/j.tifs.2008.01.008

European Academies Science Advisory Council (2017). *Opportunities and challenges for research on food and nutrition security and agriculture in Europe*. Halle (Saale).

Feenstra, G.W. (1997). Local food systems and sustainable communities. *American Journal of Alternative Agriculture,* 12(1), 28-36. https://doi.org/10.1017/S0889189300007165

Forschungsinstitut für biologischen Landbau (FiBL) (2020). *Abschlussbericht: Machbarkeitsstudie zur Etablierung einer Agentur im Bereich Agrarmarketing für regionale und/oder ökologische land-und ernährungswirtschaftliche Erzeugnisse im Freistaat Sachsen*. Frankfurt am Main.

Forschungsinstitut für biologischen Landbau (FiBL) (2014). *Sächsische Lebensmittel regional vermarkten – eine Bedarfs-, Potenzial- und Machbarkeitsstudie*. Frankfurt am Main.

Freeman, J. & Hannan, M.T. (1983). Niche Width and the Dynamics of Organizational Populations. *American Journal of Sociology,* 88(6), 1116-1145. https://doi.org/10.1086/227797

Gebhardt, B. (2012). *Akzeptanz und Erfolg kleinräumiger Systeme der Lebensmittelversorgung im urbanen Umfeld am Beispiel Stuttgart: empirische Untersuchungen von Verbrauchern und Unternehmen*. (Hohenheimer Agrarökonomische Arbeitsberichte). Stuttgart.

Giampietri, E., Verneau, F., Del Giudice, T., Carfora, V. & Finco, A. (2018). A Theory of Planned behaviour perspective for investigating the role of trust in consumer purchasing decision related to short food supply chains. *Food Quality and Preference,* 64, 160-166. https://doi.org/https://doi.org/10.1016/j.foodqual.2017.09.012

Hannan, M.T. & Freeman, J. (1977). The Population Ecology of Organizations. *American Journal of Sociology,* 82(5), 929-964. https://doi.org/10.1086/226424

Hobbs, J.E. (2020). Food supply chains during the COVID-19 pandemic. *Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie,* 68(2), 171-176.

Hughes, D.W. & Boys, K.A. (2015). What we know and don't know about the economic development benefits of local food systems. *CHOICES,* 30(1), 1-6.

Inglis, D. (2010). Globalization and Food: The Dialectics of Globality and Locality. In: Turner, B. (ed.) *The Routledge International Handbook of Globalization Studies*. New York: Routledge. 492-513.

Jarosz, L. (2008). The city in the country: Growing alternative food networks in Metropolitan areas. *Journal of Rural Studies,* 24, 231-244. https://doi.org/10.1016/j.jrurstud.2007.10.002

Kneafsey, M. (2010). The region in food—important or irrelevant? *Cambridge Journal of Regions, Economy and Society,* 3(2), 177-190. https://doi.org/10.1093/cjres/rsq012

Kneafsey, M., Ilbery, B. & Jenkins, T. (2001). Exploring the Dimensions of Culture Economies in Rural West Wales. *Sociologia Ruralis,* 41, 296-310. https://doi.org/10.1111/1467-9523.00184

Kullmann, A. (2004). *Regionalvermarktung von ökologischen Produkten-Stand, Erfolgsfaktoren und Potentiale*. Frankfurt am Main.

Kullmann, A. (2007). *Regionalvermarktung in den deutschen Biosphärenreservaten – Status Quo-Analyse und Optimierungspotentiale*. (BfN-Skripten). Frankfurt am Main.

Kumar, A. & Smith, S. (2018). Understanding Local Food Consumers: Theory of Planned Behavior and Segmentation Approach. *Journal of Food Products Marketing,* 24(2), 196-215. https://doi.org/10.1080/10454446.2017.1266553

La Trobe, H.L. & Acott, T.G. (2000). Localising the global food system. *International Journal of Sustainable Development & World Ecology,* 7(4), 309-320. https://doi.org/10.1080/13504500009470050

Lehr, T., Oppermann, L., Osterburg, T. & Schubert, M. (2020). *Bedarfs-und Machbarkeitsstudie für einen Online-Marktplatz für regionale Lebensmittel in Sachsen*. Dresden.

Lengnick, L., Miller, M. & Marten, G.G. (2015). Metropolitan foodsheds: a resilient response to the climate change challenge? *Journal of Environmental Studies and Sciences,* 5(4), 573-592. https://doi.org/10.1007/s13412-015-0349-2

Mayer, H., Habersetzer, A. & Meili, R. (2016). Rural–urban linkages and sustainable regional development: The role of entrepreneurs in linking peripheries and centers. *Sustainability,* 8(8), 745-158.

Mayring, P. (2016). *Einführung in die qualitative Sozialforschung*. Weinheim: Beltz Verlag.

McMahon, M. (2014). Local food: Food sovereignty or myth of alternative consumer sovereignty. In: *Globalization and Food Sovereignty: Global and Local Change in the New Politics of Food*. Toronto: University of Toronto Press. 111-138.

Michel-Villarreal, R., Hingley, M., Canavari, M. & Bregoli, I. (2019). Sustainability in Alternative Food Networks: A Systematic Literature Review. *Sustainability,* 11(3), 859. https://www.mdpi.com/2071-1050/11/3/859

Nilsson, H. (2009). Local food systems from a sustainability perspective: experiences from Sweden. *International Journal of Sustainable Society,* 1, 347-363.

O'Neill, K. (2014). Localized food systems – what role does place play? *Regional Studies, Regional Science,* 1(1), 82-87. https://doi.org/10.1080/21681376.2014.904596

Peters, C.J., Gómez, M.I. & Griffin, T. (2019). Roles of regional production in a global food system. *Renewable Agriculture and Food Systems*, 1-11. https://doi.org/10.1017/S1742170519000401

Pfeffer, J. & Salancik, G.R. (2003). *The external control of organizations: A resource dependence perspective*. Stanford University Press.

Porter, M. & Kramer, M. (2011). Creating shared value. *Harvard Business Review,* January-February 2011.

Renting, H., Marsden, T. & Banks, J. (2003). Understanding Alternative Food Networks: Exploring the Role of Short Food Supply Chains in Rural Development. *Environment and Planning A,* 35, 393-411. https://doi.org/10.1068/a3510

Riege, A.M. (2003). Validity and reliability tests in case study research: a literature review with "hands-on" applications for each research phase. *Qualitative Market Research: An International Journal,* 6(2), 75-86. https://doi.org/10.1108/13522750310470055

Robson, C. & McCartan, K. (2016). *Real world research*. John Wiley & Sons.

Rokeach, M. (1968). A Theory of Organization and Change Within Value-Attitude Systems1. *Journal of Social Issues,* 24(1), 13-33. https://doi.org/https://doi.org/10.1111/j.1540-4560.1968.tb01466.x

Rutz, C., Gehrlein, U. & Schmidt, M. (2015). Lassen sich regionale Verarbeitungsstrukturen noch erhalten? *LandInForm,* 5, 11-13.

Rytkönen, P., Bonow, M., Girard, C. & Tunón, H. (2018). Bringing the Consumer Back in—The Motives, Perceptions, and Values behind Consumers and Rural Tourists' Decision to Buy Local and Localized Artisan Food—A Swedish Example. *Agriculture,* 8(4), 58. https://www.mdpi.com/2077-0472/8/4/58

Sagiv, L., Schwartz, S. & Arieli, S. (2011). Personal values, national culture and organizations: Insights applying the Schwartz value framework. In: Ashkanasy, N.N., Wilderom, C. & Peterson, M.F. (eds) *The handbook of organizational culture and climate*. Newbury Park: Sage. 515-537. https://doi.org/10.4135/9781483307961.n2

Salimath, M.S. & Jones, R. (2011). Population ecology theory: implications for sustainability. *Management decision: MD,* 49(6), 874-910.

Saunders, C. & Hayes, P. (2007). *Air freight transport of fresh fruit and vegetables*. (Research Report No. 299). Lincoln.

Schwartz, S.H. (2012). An Overview of the Schwartz Theory of Basic Values. *Online Readings in Psychology and Culture,* 2. https://doi.org/10.9707/2307-0919.1116

Schwartz, S.H. & Boehnke, K. (2004). Evaluating the structure of human values with confirmatory factor analysis. *Journal of Research in Personality,* 38(3), 230-255. https://doi.org/https://doi.org/10.1016/S0092-6566(03)00069-2

Schwartz, S.H. (1992). Universals in the Content and Structure of Values: Theoretical Advances and Empirical Tests in 20 Countries. In: Zanna, M.P. (ed.) *Advances in Experimental Social Psychology*. (25). Academic Press. 1-65. https://doi.org/https://doi.org/10.1016/S0065-2601(08)60281-6

Schönhart, M., Penker, M. & Schmid, E. (2009). Sustainable Local Food Production and Consumption:Challenges for Implementation and Research. *Outlook on Agriculture,* 38(2), 175-182. https://doi.org/10.5367/000000009788632313

Scott, W. & Davis, G. (2015). Organization: Overview. *International Encyclopedia of the Social & Behavioral Sciences*. https://doi.org/10.1016/B978-0-08-097086-8.73112-6

Slupina, M., Dähner, S., Maget, K. & Klingholz, R. (2021). *Globale Ansprüche, lokale Wirklichkeit – Wie unterschiedlich deutsche Kommunen eine nachhaltige Entwicklung umsetzen*. Berlin.

Stadt Leipzig (2020). *Sofortmaßnahmen-Programm zum Klimanotstand 2020.* Leipzig.

Statistische Ämter des Bundes und der Länder (2011). *Agrarstrukturen in Deutschland – Einheit in Vielfalt. Regionale Ergebnisse der Landwirtschaftszählung 2010*. Stuttgart.

Stockebrand, N. & Spiller, A. (2009). *Verknüpfung regionaler Beschaffungskonzepte mit innovativen regionalen Marketingansätzen (Kooperatives Erzeuger-Handels-Konzept)*. Göttingen.

Sächsisches Staatsministerium für Energie, Klima, Umwelt und Landwirtschaft (SMEKUL) (2020). *Agrarbericht in Zahlen 2020*. Dresden.

Tamásy, C. & Klein, O. (2020). Zukunftsfähige Agrarstrukturen in Ostdeutschland? In: Becker, S. & Naumann, M. (eds) *Regionalentwicklung in Ostdeutschland: Dynamiken, Perspektiven und der Beitrag der Humangeographie*. Berlin, Heidelberg: Springer Berlin Heidelberg. 361-373. https://doi.org/10.1007/978-3-662-60901-9_28

Tendall, D.M., Joerin, J., Kopainsky, B., Edwards, P., Shreck, A., Le, Q.B., Kruetli, P., Grant, M. & Six, J. (2015). Food system resilience: Defining the concept. *Global Food Security,* 6, 17-23. https://doi.org/https://doi.org/10.1016/j.gfs.2015.08.001

Thompson, K. (2019). Agrarianism and the Ethics of Eating. In: Kaplan, D.M. (ed.) *Encyclopedia of Food and Agricultural Ethics*. Dordrecht: Springer Netherlands. 33-42. https://doi.org/10.1007/978-94-024-1179-9_300764

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. https://doi.org/https://doi.org/10.1016/j.jrurstud.2011.06.003

Van Hauwermeiren, A., Coene, H., Engelen, G. & Mathijs, E. (2007). Energy Lifecycle Inputs in Food Systems: A Comparison of Local versus Mainstream Cases. *Journal of Environmental Policy & Planning,* 9(1), 31-51. https://doi.org/10.1080/15239080701254958

Weber, C. & Matthews, H. (2008). Food-Miles and The Relative Climate Impacts of Food Choices in the United States. *Environmental science & technology,* 42, 3508-13. https://doi.org/10.1021/es702969f

Wohlin, C. (2014). Guidelines for snowballing in systematic literature studies and a replication in software engineering. In: *Proceedings of the 18th international conference on evaluation and assessment in software engineering*. 1-10.

Yin, R.K. (2018). *Case study research and applications*. Sage.

Internet

Bundesanstalt für Landwirtschaft und Ernährung (2021, June 22). *Zahlen zum Ökolandbau in Deutschland.* Ökolandbau.de. Available: https://www.oekolandbau.de/landwirtschaft/biomarkt/oekoflaeche-und-oekobetriebe-in-deutschland/ [2021-07-30]

Bundesverband der Regionalbewegung (n.d.). *Was ist regional? DAS ist regional! Regionalvermarktungsinitiativen*. Regionalbewegung. Available: https://www.regionalbewegung.de/netzwerk/ [2021-05-25]

Deter, A. (2019, December 30). *Umbruch in der Schlachtbranche – Immer mehr Schlachthöfe in Ostdeutschland schließen.* top agrar online. Available: https://www.topagrar.com/panorama/news/immer-mehr-schlachthoefe-in-ostdeutschland-schliessen-11945632.html [2021-04-28]

Deutscher Bauernverband (DBV) (2021, n.d.). *Situationsbericht 2020/21 – 1.4 Ernährungswirtschaft*. Deutscher Bauernverband. Available: https://www.bauernverband.de/situationsbericht/1-landwirtschaft-und-gesamtwirtschaft-1/14-ernaehrungswirtschaft [2021-05-17]

Landesamt für Umwelt, Landwirtschaft und Geologie (LfULG) (2021, June 22). *Selbstversorgungsgrad mit pflanzlichen Erzeugnissen*. Sachsen.de. Available: https://www.landwirtschaft.sachsen.de/selbstversorgungsgrad-mit-pflanzlichen-erzeugnissen-37321.html [2021-07-03]

Stadt Leipzig (2021, January 1). *Leipzig hat jetzt 605.407 Einwohner*. Stadt Leipzig. Available: https://www.leipzig.de/news/news/leipzig-hat-jetzt-605407-einwohner [2021-04-25]

Stadt Leipzig (n.d.). *Leipzig ist Bio-Stadt!* Stadt Leipzig. Available: https://www.leipzig.de/umwelt-und-verkehr/energie-und-klima/biostadt [2021-04-25]

Statista GmbH (2021, April 28). *Anzahl der Betriebe in der Milchverarbeitung in Deutschland in den Jahren 1935/38 bis 2020*. Statista. Available: https://de.statista.com/statistik/daten/studie/28749/umfrage/anzahl-der-molkereien-in-deutschland/ [2021-06-01]

Statista GmbH (2020a, October, 12). *Anzahl der Betriebe im Fleischerhandwerk in Deutschland in den Jahren 2002 bis 2019*. Statista. Available: https://de.statista.com/statistik/daten/studie/310568/umfrage/anzahl-der-betriebe-im-fleischerhandwerk-in-deutschland/ [2021-06-01]

Statista GmbH (2020b, December 14). *Anteil der Anbaufläche im ökologischen Landbau an der landwirtschaftlich genutzten Fläche in Deutschland nach Bundesländern in den Jahren 2017 bis 2019*. Statista. Available: https://de.statista.com/statistik/daten/studie/165217/umfrage/anteil-der-oekologisch-landwirtschaftlichen-flaeche/ [2021-06-02]

Statista GmbH (2019, December 16). *Durchschnittliche genutzte landwirtschaftliche Fläche pro Betrieb nach Bundesland in Deutschland 2019*. Statista. Available: https://de.statista.com/statistik/daten/studie/173089/umfrage/betriebsgroesse-von-agrarbetrieben-2010/ [2021-06-01]

Sächsisches Staatsministerium für Energie, Klima, Umwelt und Landwirtschaft (SMEKUL) (2021, May 3). *Jetzt erste sächsische Bio-Regio-Modellregion werden*. Sachsen.de. Available: https://www.medienservice.sachsen.de/medien/news/250952 [2021-05-25]

U.S. Bureau of Labor Statistics (2021, n.d.). *Food Manufacturing; NAICS 311*. Available: https://www.bls.gov/iag/tgs/iag311.htm [2021-08-07]

Wertvoll (2021, July 8). *WERTvolles Aktionsgericht „Schotenklump“*. Wertvoll Stoffstrom. https://wertvoll.stoffstrom.org/2021/07/08/wertvolles-aktionsgericht-schotenklump/ [2021-07-10]

Wirtschaftsförderung Sachsen (2020, January 21). *Sächsische Ernährungsbranche wächst*. Sachsen! Weltweit dabei. Available: https://standort-sachsen.de/de/exporteure/info-center/nachrichten/77496-saechsische-ernaehrungsbranche-waechst [2021-04-26]

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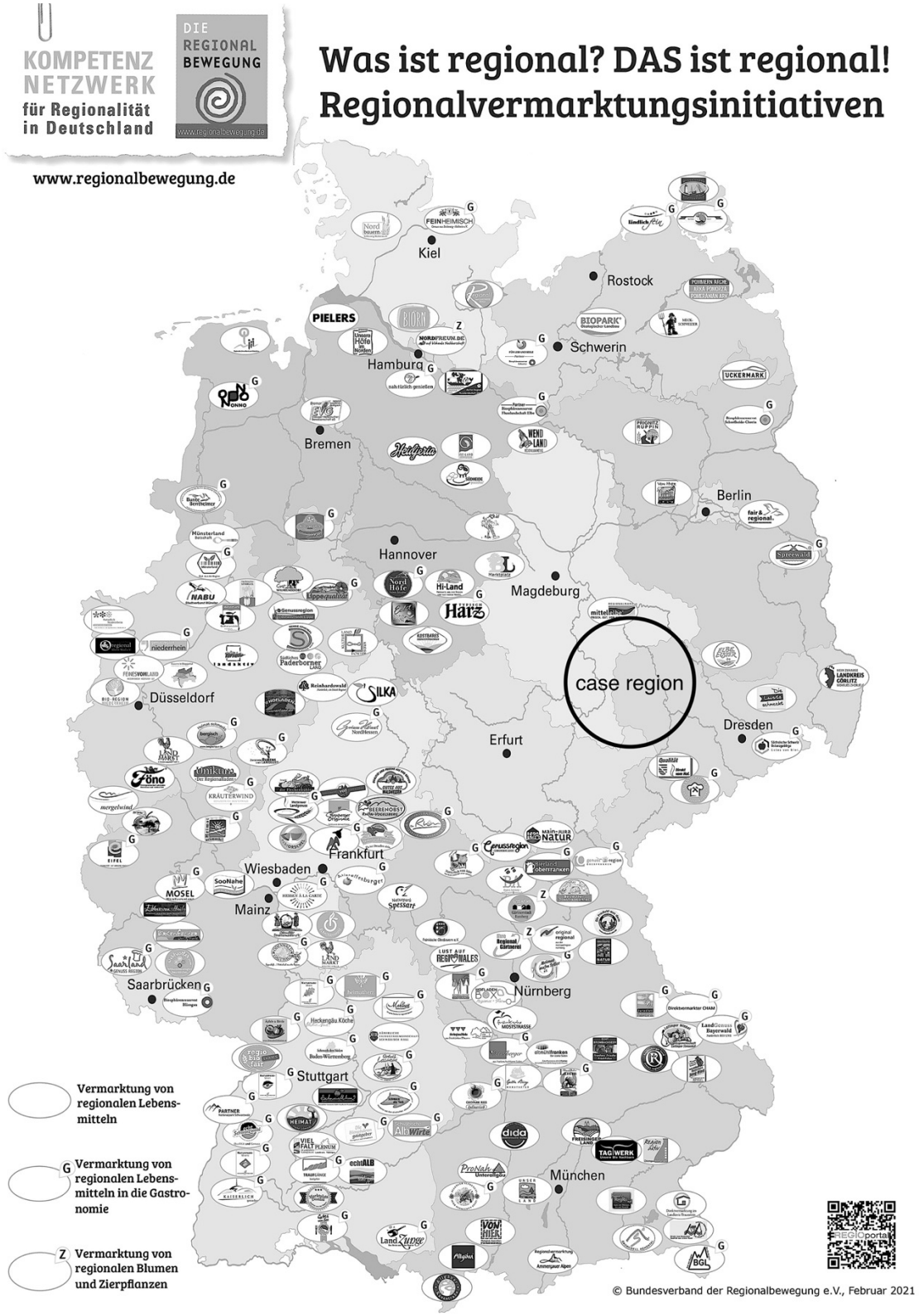
Appendices

Appendix 1. Local food marketing initiatives in Germany



Source: Adapted from Bundesverband der Regionalbewegung (n.d.)

Appendix 2. Interview guide

Themes / Questions*	Conceptual framework
Introduction - Introduce myself and the purpose of the interview - Ensure data confidentiality - Ask for permission to record the interview	
Business background - What is your business? - What is your personal role in the business? - What is your product portfolio? - Where are the products sold? - How are the products distributed? - How do you get your resources? (logistics) - What has motivated you to start the business?	- Environmental selection perspective - System-structural perspective - Strategic choice perspective
LFS - How do you define "local"? - What role do LFS play for your business? - What role do LFS play for you as consumer? - Are there differences between these two perceptions? - Why is local-origin important to you? - As producer: what advantages do you experience in LFS? - As producer: what disadvantages do you face in LFS? - What role do LFS play for your brand marketing?	- Strategic choice perspective - Schwartz's value theory - Environmental selection perspective
Values and sustainability - What are additional principles that guide your work? - Which values are important for you as producer? - How do you transfer these values into concrete actions? - What role does sustainability play for your business?	- Strategic choice perspective - Schwartz's value theory
Relationships and networks - What kind of relationship do you maintain with your customers? - What kind of relationship do you maintain with other producers? - What role do networks play for your business?	- Collective-action perspective
Closure - Thank you - Goodbye	

*This version of the interview guide is a translation from the original German version.