

Social capital and short food supply chains: Evidence from Fisheries Local Action Groups

Richard Freeman MSc, MA^{1,2}  | Jeremy Phillipson MPhil^{2,3} |

Matthew Gorton PhD¹ | Barbara Tocco PhD³

¹Newcastle University Business School, Newcastle University, Newcastle upon Tyne, UK

²Centre for Rural Economy, Newcastle University, Newcastle upon Tyne, UK

³National Innovation Centre for Rural Enterprise, Newcastle University, Newcastle upon Tyne, UK

Correspondence

Richard Freeman, Newcastle University Business School, 5 Barrack Road, Newcastle, NE1 4SE, UK.
Email: r.freeman2@newcastle.ac.uk

Funding information

Economic and Social Research Council (ESRC), UK

Abstract

Fisheries and coastal economies across Europe have witnessed substantial structural changes that have brought about challenges for territorial cohesion and social renewal within the fishing sector. Notably, there has been a disconnect between the industry and local communities, with fisheries largely producing commodities for wide-ranging and often distant markets. In response, short food supply chains (SFSCs) are often an important element of the local development strategies of Fisheries Local Action Groups (FLAGs), being regarded as a possible mechanism for increasing added value and (re-)localising the sector to aid territorial development. This article examines the conditions that lead to SFSCs having a higher market share in a FLAG area. Drawing on social capital theory, we employ a novel *fuzzy-set* qualitative comparative analysis approach using survey data from FLAG managers from across Europe, in what is a first empirical attempt to apply the method in the context of community-led local development. The analysis pays particular attention to the three dimensions of social capital—structural, normative-cognitive and network governance—and finds that while

This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2023 The Authors. *Sociologia Ruralis* published by John Wiley & Sons Ltd on behalf of European Society for Rural Sociology.

different combinations of social capital can lead to a stronger presence of SFSCs, certain types of social capital are more conducive to SFSCs depending on the nature of territorial factors.

KEYWORDS

fisheries, FLAGS, short food supply chains (SFSCs), social capital, territorial development

INTRODUCTION

Short food supply chains (SFSCs) have gained increased attention in recent years due to their potential for creating beneficial economic, social and environmental outcomes (Malak-Rawlikowska et al., 2019). While the vast majority of literature on SFSCs is grounded in rural and farming contexts (Kneafsey et al., 2008, 2013; Venn et al., 2006), many of the key theoretical concepts are transferable to fisheries—particularly their potential to deliver socioeconomic benefits to both fisheries' producers and local consumers (Chiffolleau et al., 2019).

Due to their potential to create added value to fish and seafood, particularly those from small-scale and artisanal producers, SFSCs are often a focal point for the local development strategies of Fisheries Local Action Groups (FLAGS). FLAGS are public–private partnerships that bring together local actors in creating synergies and networks in the implementation of community-led local development (CLLD; Miret-Pastor et al., 2020; Freeman & Svets, 2022). The innovation in CLLD lies in the transfer of funds and decision-making to the local level, enabling local actors and stakeholders to develop sets of bottom-up actions through the creation of FLAGS, which offer fishing communities the prospect of reintegration within territorial development focused on placed-based factors such as amenities, production, local food systems and local relations (Phillipson & Symes, 2015; van de Walle et al., 2015).¹

Like LEADER before it in rural areas, the CLLD programme seeks to enhance the capacity of local actors through increasing social capital (Christoforou, 2017). Healy and Cote (2001, p. 41) define social capital as 'networks together with shared norms, values and understandings that facilitate cooperation within or among groups', while Putnam (2000, pp. 664–665) conceptualises social capital as consisting of 'networks, norms and trust' that 'enable participants to act together more effectively to pursue shared objectives'. Thus, FLAGS can be viewed as a *territorial instrument*, and when applied within a single sector policy (i.e., fisheries) can be an innovative mechanism for realising the development of activities that present benefits to both fishers and the wider community (Budzich-Tabor, 2014).

How social capital is mobilised through local groups such as FLAGS as public–private partnerships is, therefore, critical to understanding differences in these interactions and identifying what combinations of factors best lead to economic outcomes, particularly those related to food supply chains and opportunities for sustainable development. The objective of this study is, therefore, to explore what conditions, and combinations of conditions, within a FLAG area are optimal for the creation of strong SFSCs. Focusing on social capital theory, the study examines the three dimensions of social capital (structural, normative-cognitive and network governance) as separate causal conditions in a novel *fuzzy-set* qualitative comparative analysis (fsQCA) approach, which

allows for the comparison of how different types of social capital combine and impact on SFSCs that are present in an area. The article is a very first empirical attempt to apply the method in the contexts of FLAGs and CLLD more widely and to a field of research that is often characterised by individual or loosely connected case-study examples. Using an fsQCA approach, we consider how the three dimensions of social capital are combined with wider territory-based factors in the FLAG area. Using data collection from 14 European countries, the study addresses the following research questions: (i) What configurations of social capital and the place-based conditions in a FLAG area lead to a strong presence of SFSCs? and (ii) what is the role of FLAGs in enhancing this process?

The remainder of the article is structured as follows. In the following section, we discuss the relationship between social capital and territorial development before turning to issues related to its measurement. The materials and methods used are then outlined in the Data and Methods section, followed by the Results and Discussion sections. Finally, concluding remarks and implications are offered.

THEORETICAL FRAMEWORK

Social capital and territorial development

The concept of social capital is multifaceted, reflecting the complex characteristics of social relations in the real world (Lewis, 2010). Due to its complexity, different social science domains take varying, and often conflicting, approaches to understanding what constitutes social capital (Burt, 2005). From the perspective of economics, social capital is referred to as the types of capital held by individuals (or groups) based on the norms of trust, reciprocity, identity and shared values across a network, which enable collaboration and collective action, and thus promote development (Pisani, 2017). From the perspectives of territorial (and rural) development research, social capital is often used to understand why areas with similar levels of capital (physical or natural, institutional and human) show different levels of economic performance (Tamásy & Diez, 2016). The position, generally supported in the literature, is that these differences are a result of social capital (Pisani, 2017; Putnam, 2000; Putnam et al., 1994; Raagmaa, 2016; Tamásy & Diez, 2016). In other words, the social factors specific to the territory interact in different ways with other factors (including other forms of capital), and these differences affect economic outcomes. However, it is rare for research to explicitly consider the way that different combinations of factors may lead to the same outcomes. This study, therefore, employs complexity theory and the principles of equifinality (i.e., the same outcome being achieved through several causal configurations; Woodside, 2014).

From a territorial perspective, Putnam et al. (1994) compare the economic and institutional performance of territories in relation to social capital. Based on measures of trust, membership in voluntary associations and civic behaviour, the results showed differences between areas in terms of lower social capital explaining lower levels of development and institutional effectiveness. According to Woolcock and Narayan (2000), public institutions, particularly those that form partnerships with the private sector, play a central role in the formulation of social and political contexts, which aid participation and co-operation. Such institutions, FLAGs being a good example, co-ordinate relations between local actors and enable them to mobilise and work together to determine their local development. Through collective action, democratic local governance,

accountability and transparency, they build social capital that can lead to positive social and economic outcomes (Woolcock & Narayan, 2000).

Some scholars have pointed to the inherently positive connotations attached to social capital theory (Woolcock, 1998), claiming that the concept has become overly diluted and applied everywhere, resulting in a loss of any real meaning (Durlauf & Fafchamps, 2005; Woolcock, 1998). In other words, if social capital theory is applicable everywhere, it can also be argued that it is simultaneously applicable nowhere (Durlauf & Fafchamps, 2005). Such criticisms of social capital theory are often a result of the concept being used as a whole, instead of being broken down by its sub-dimensions (Pisani et al., 2017).

Such is the perceived economic and social potential of social capital it has drawn significant attention in the implementation and measurement of European territorial development programmes and in its role in the development of local areas (Evans & Syrett, 2007; Pileček et al., 2013; Pisani et al., 2017; Raagmaa, 2016; Tamásy & Diez, 2016; Trigilia, 2001). Several researchers draw links between social capital theory and the elements and objectives of local development policy (Da Re et al., 2017; Pisani et al., 2017; Teilmann, 2012). Early studies sought to measure the presence of social capital and those factors that lead to its increase. For example, Knack and Keefer (1997) compare factors between countries, while other studies make comparisons at regional (Beugelsdijk & Van Schaik, 2005; Iyer et al., 2005) and local levels (Trigilia, 2001). Central to these parallels is the nature of Local Action Groups (LAGs), which connect actors and form ties. Consequently, LEADER LAGs have become the focus for measuring social capital across several studies, though few of these separate out its component features (e.g., Arturo et al., 2010; Pisani et al., 2017; Teilmann, 2012; Thuesen, 2010).

Measuring social capital

It is widely agreed in the literature that there are stable and measurable factors of social capital (Borgatti et al., 1998; Burt, 2005; Da Re et al., 2017; Lin, 2012; Nardone et al., 2010; Raagmaa, 2016; Sabatini, 2009; Teilmann, 2012). Lewis (2010) argues that social capital is best understood as a multilevel concept. That is, while social capital is best measured at the *micro* (individual) level, its benefit accumulates through greater numbers of individuals at the *meso* level (groups or a local community) and through to the *macro* level. In measuring social capital, Lewis (2010) therefore emphasises three principles for measuring, analysing and applying social capital. These principles are (1) levels, (2) forms and types of ties and (3) use and accumulation. Teilmann (2012) applied this method to measuring social capital created by the implementation of the LEADER programme in Denmark. Through the case study of a single LAG area, the author found that through affecting the individual level (i.e., individual project promoters), social capital did accumulate new ties through the LEADER approach, and thus increased social capital in the area. The study found no significant link between the increase of social capital and the funding value of a project, suggesting that emphasising on more smaller projects may lead to a greater accumulation of social capital, compared to fewer larger projects.

Teilmann (2012) also uses micro-level findings as a proxy for increased social capital across levels and the territory. While such an approach allows for the possible use of a comparative index across multiple FLAG areas, in using proxies, it does not address the problem of social capital becoming a diluted concept, in that its presence at the micro level is framed only as leading to positive connotations at the *meso* and *macro* levels. Furthermore, this approach may not capture the quality and quantity of relationships within a territory's internal and, perhaps more importantly,

external networks and how LAGs might increase social capital and thus strengthen the overall governance of local territories (OECD, 2006, 2009; Secco & Burlando, 2017; Shortall, 2008). While networks might be comparable in terms of structure and the types of actors involved, if different cultures, values and norms are present, outcomes may vary significantly, particularly as social capital is accumulated across levels (Rostila, 2011).

The most widely accepted and used framework for understanding social capital is that of Nahapiet and Ghoshal (1998), who distinguish between structural, cognitive and governance social capital. (Eagle et al., 2010; Pisani, 2017; Westlund & Adam, 2010). Structural social capital refers to social networks, supplemented by rules, procedures and precedents that facilitate mutually beneficial collective action. For example, the local development strategies of FLAGs are defined by horizontal and vertical relations developed through public–private partnerships. The outputs of a FLAG are generally considered to be generated from processes of investing in social capital; they relate to innovation and the strengthening and development of new connections and forms of co-operation (Marquardt et al., 2012).

Normative-cognitive social capital focuses on the meanings and understanding that individuals or groups share: These include shared norms, values, attitudes and beliefs and predispose people towards mutually beneficial collective action (Krishna & Shrader, 2002). Normative-cognitive social capital is considered less tangible (Christoforou, 2017). Pisani (2017) argues that it provides information that can be lacking in structural capital analysis. For example, it can provide contextual information on the ways in which actors interact across networks. While networks might be comparable in terms of structure, if different cultures, values and norms are present, outcomes may vary significantly (Rostila, 2011).

While both structural and normative-cognitive social capital refer to networking and relationships between individuals and groups, a third dimension of social capital refers to governance and decision-making processes, including how and why decisions are made and by whom. When making reference to natural resources, such as fisheries, this facet of social capital interconnects with concepts of participatory governance and refers to the basis of rules and power distribution amongst actors (Fristch & Newig, 2012). Such forms of governance are typically characterised as interactions between network-based private–public collaborative organisations such as FLAGs (Da Re et al., 2017).

As governance and social capital are interrelated, network governance is particularly important when analysed in the context of network-based, public–private multisector organisations that are based on collaboration, that is, LAGs and FLAGs (Secco & Burlando, 2017). Despite the connections between governance and social capital, to date, there is still limited knowledge on how governance is related to social capital (Górriz-Mifsud et al., 2016; High & Nemes, 2007), and whether it fosters innovation and favourable economic and social outcomes (Secco & Burlando, 2017).

As argued by Woolcock and Narayan (2000), obtaining one single measure of social capital is inappropriate. However, approaching its measurement from multiple angles may provide a more detailed explanation of its impact by offering both broader and more specific inferences (Christoforou, 2017). Furthermore, each of the forms of social capital can be further broken down into several sub-dimensions. Widely recognised sub-dimensions in the literature are those proposed by Krishna and Shrader (2002) who identify, for normative-cognitive social capital: (1) shared values (including reciprocity and solidarity), (2) social norms (e.g., trust), (3) behaviours and (4) attitudes. According to the authors, structural social capital refers to: (1) the structure of horizontal networks, (2) collective decision-making processes, (3) accountability of leaders and (4) collective action.

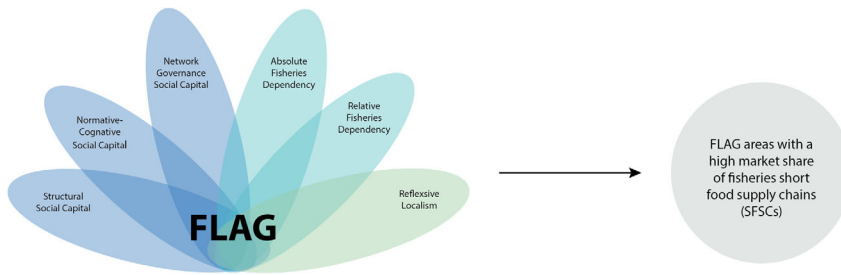


FIGURE 1 Conceptual model.

Four key dimensions of network governance are outlined by Pisani (2017): (1) decision-making processes, (2) efficiency and effectiveness, (3) organisational culture and capacity and (4) vertical structure of the organisation. As noted in reference to governance and vertical structures, FLAGs, as multi-sectoral organisations, rely on integration within a territory as a key feature for achieving strategic goals (FARNET, 2013, 2015; van de Walle et al., 2015).

Furthermore, to fully understand and interpret measures of social capital and how it operates, it is important to explore its local context (Babb, 2005). As such, to understand the impact of FLAGs on social capital and specific outcomes such as the development of SFSCs, an understanding of the area's sectoral and territorial situation is required, for example, in terms of levels of absolute and relative fisheries dependency (Phillipson & Symes, 2015). Absolute fisheries dependency is a measure of a territory's dependency on fisheries as a primary sector. Relative fisheries dependency, by comparison, refers to an area's comparative dependency in relation to other economic and social factors, such as a well-balanced regional economy with significant opportunities outside of fisheries and high diversification of fisheries activities into other sectors.

An area's dependency on fisheries impacts significantly on a FLAG's local development strategy, and thus the types of social capital that may be present in a territory. For example, areas with a developed tourism sector may have a high relative dependency on fisheries to supply the industry, particularly given the rise in pesca and gastronomy tourism. In such areas, we could expect to see high levels of social capital bringing these two sectors together in economic outcomes such as SFSCs. Key questions here are: What types of social capital are more important in combination with fisheries dependency in achieving the outcome of an area having a high degree of SFSCs? Are all types of social capital important in the presence of different territorial factors? It is also possible that a local community has a common positive attitude towards the localisation of food systems and SFSCs (referred to as reflexive localism; DuPuis & Goodman, 2005), regardless of its dependency on fisheries or the social capital at play through the FLAG. How these conditions combine in achieving SFSCs as an outcome are illustrated in the conceptual model in Figure 1.

DATA AND METHODS

Research design

Data collection occurred between September 2020 and July 2021 with a sample comprising FLAG managers from 14 EU member states (see Table 2). The sampling frame was all the 368 FLAGs

TABLE 1 Sample characteristics.

Country	Fisheries Local Action Groups (FLAGs; cases)	Mean surface area (km ²)	Mean population
Bulgaria	1	553	67187
Croatia	3	755	27,910
Cyprus	1	516	120,350
Estonia	2	1728	16,895
Finland	6	11,286	304,000
France	3	1073	161,584
Greece	5	6750	160,000
Germany	1	4	247
Ireland	5	2424	24,240
Italy	1	448	117,463
Portugal	4	771	161,401
Spain	9	538	165,600
Sweden	1	5427	325,000
UK	3	4165	679,770
Total (average)	46	2603	166,546

implementing local development strategies under the European Maritime and Fisheries Fund (EMFF). The final sample accounts for 12% of all FLAGs across the EU. From the 368 surveys dispatched, 78 questionnaires were returned, representing a response rate of 21%. From the returned questionnaires, 28 were completed fully, while 50 were completed only partially (with reasons given) due to the unavailability of the data requested or further clarity required in providing accurate data. From the 50 partially completed responses, follow-up semi-structured telephone interviews were conducted with 18 respondents to complete the questionnaire, giving a final sample of 46 FLAGs (Table 1). On average, the surveys took 130 min to complete across multiple visits to the surveying platform. The detailed nature of the survey often required desk research by the respondent and several visits to the platform.

The survey comprised three main sections. The first concerned the FLAG area and collected information on demographics, geography and the local economy. This included information related to the area's primary and secondary sectors and detailed information on the area's fisheries. The second section collected information on SFSCs. This included data on imports and exports, market concentration and the SFSC types present in the area. The third section of the survey concerned the FLAG and social capital and was broken down into three sub-sections, each evaluating a specific social capital type (structural, normative-cognitive and network governance). In this section, detailed information was gathered relating to the structure of the FLAG, its local development strategy, projects and beneficiaries and the stakeholders involved.

Secondary data on the FLAG and its territory—including population, surface area, the make-up of the fishing fleet and sector and the FLAGs' strategic objectives—were also collected to reduce the information required from primary data collection. The lead author compiled these data for the Fisheries Areas Network Support Unit of the Directorate-General for Maritime and Fisheries

TABLE 2 Definition of fuzzy-set qualitative comparative analysis (fsQCA) variables.

Conditions	Set membership
Outcome Short food supply chains (SFSCs)	<i>FLAG areas with a high market share of SFSCs</i>
Conditions Structural social capital	<i>FLAG areas with high structural social capital</i>
Normative-cognitive social capital	<i>FLAG areas with high normative-cognitive social capital</i>
Network governance social capital	<i>FLAG areas with high network governance social capital</i>
Absolute fisheries dependency	<i>FLAG areas with a high absolute dependency on fisheries</i>
Relative fisheries dependency	<i>FLAG areas with high relative dependency on fisheries</i>
Reflexive localism	<i>FLAG areas with high reflective localism (proximity)</i>

Affairs as part of the reporting of CLLD by member states and from FLAG websites and official documentation including their local development strategies.

The data were analysed using the fsQCA method. fsQCA offers a novel empirical approach, particularly to the study of situations with multilevel influences and explanations (Woodside, 2013). The method allows for a detailed analysis of how causal conditions contribute to a given result and how different combinations of causes may lead to the same outcome (Xie et al., 2016). QCA is also innovative in allowing for medium-size samples of cases that are not large enough to apply traditional quantitative methods (Ragin, 2000) while remaining suitable for investigating high levels of causal complexity (Rihoux & Ragin, 2009).

In QCA, a *set* is the classification of a group of cases (in this research FLAGs/FLAG areas) with shared values that serve as a predictor for indicating an observed outcome of interest. Such sets are categorised by a membership function that assigns each case with a membership value between 0 and 1 (Pappas & Woodside, 2021). Conventional QCA employs dichotomous variables known as *crisp sets*, which are limited to a value of 0 or 1 (i.e., ‘yes’ or ‘no’ logic). To overcome this limitation, fuzzy set theory can be applied to QCA allowing for the use of continuous variables (Pappas & Woodside, 2021). In fsQCA, each case is given a value between 0 and 1. Values over 0.95 are considered as having *full set membership* (i.e., above this value, the case is fully in the set). A value of 0.05 or lower means the case is considered to have *full none set membership*. Any value in between is considered either more ‘in’ than ‘out’ (e.g., a value of 0.75), or more ‘out’ than ‘in’ (e.g., a value of 0.25) as a continuous variable, with 0.5 being the point of maximum ambiguity (Rihoux & Ragin, 2009). The definitions of variables included in the fsQCA, with associated conditions, are illustrated in Table 2.

Measures

Seven fsQCA variables were used in the present study, including one outcome variable and six causal conditions (Table 3). The outcome variable used was the market share of SFSCs in a FLAG area, measured using the percentage of seafood landed in the FLAG’s territory being sold through SFSCs. This percentage was estimated by the FLAG managers. In the survey, SFSCs were defined as supply chains operational within a 100-km radius of the landing or production source (in the case of aquaculture). The survey emphasised that only supply chains for food were to be considered, excluding supply chains for other markets including pharmaceuticals and fish used for aquaculture feed. Respondents also identified the types of SFSCs operational in their FLAG areas (i.e., local fish markets, home deliveries, local festivals and events, box schemes, consumer

TABLE 3 Summary of social capital types and sub-dimensions measured.

Social capital type	Sub-dimensions
Structural	<p>Relational properties—how and why new connections are created and their benefits</p> <p>Network members—number and types of members in the network</p> <p>Structure (horizontal)—ties between actors or groups with similar resources, functions and power</p> <p>Accessibility and transparency—extent to which the network and its benefits are accessible to all potential actors</p>
Normative-cognitive	<p>Trust—interpersonal trust between actors</p> <p>Quality of the network—effective and efficient information sharing, cognition and reputation</p> <p>Quality of participation—composition of group and meetings, rate of attendance, expression of opinion</p> <p>Shared values—shared cultural norms, traditions and practices</p>
Network governance	<p>Structure (vertical)—ties between actors or groups with varying resources, functions and power; links to external bodies</p> <p>Decision-making processes—how decisions are taken, implemented and put into force</p> <p>Efficiency and effectiveness—as an organisation and its wider integration in the territory</p> <p>Organisational culture and capacity—culture of learning, enabling knowledge transfer, collaboration and growth</p>

Source: Krishna and Shrader (2002), Nahapiet and Ghoshal (1998), and Pisani et al. (2017).

co-operatives, local shops, fishmongers, restaurants and catering institutions and local tourism enterprises). The six conditions used in the analysis were the three types of social capital (structural, normative-cognitive and network governance), fisheries dependency (absolute and relative) and reflexive localism.

Social capital in the present study was broken down into three main types that were measured separately (see Table 3). The sub-dimensions of each social capital type were measured using an adaptation of Pisani et al.'s (2017) framework of indicators used to assess social capital in LEADER LAGs, modified slightly to the fisheries and aquaculture context.

Absolute fisheries dependency is a measure of a territory's dependency on fisheries as a primary sector. This includes areas with high fisheries employment, significant fisheries catch (tonnes), high added value and a well-developed infrastructure in relation to harbours, local markets and processing. In contrast, *relative fisheries dependency* is a measure of the area's comparative dependency in relation to other economic and social factors, such as the extent to which there is a well-balanced regional economy with substantial opportunities outside of fisheries, diversification of fisheries activities into other sectors and low levels of market concentration in the fisheries sector. Adapted from the conceptual framework of Phillipson and Symes (2015), absolute and relative fisheries dependency were measured on a five-point Likert scale.

Reflexive localism is a measure of proximity between local actors. In the present study, proximity relates to food systems and the distance between producers and consumers in terms of space, attitudes and perceptions of food systems in a given territory. Drawing on DuPuis and Goodman (2005) and DuPuis et al. (2006), reflexive localism was measured using six items, answered on

a five-point Likert scale with items ascertaining the proximity between actors in the FLAG area and their orientation towards seeking alternatives to mainstream and globalised fisheries supply chains.

Data treatment

The critical step of fsQCA is the calibration of the data used (Ragin, 2008). Considering fuzzy sets as groups of cases, the process of calibration defines the degree to which a FLAG case belongs to each set (i.e., a group of FLAGS with a similar score for a causal condition, e.g., all FLAGS with a high degree of structural social capital). The outcome variable is also considered as a set (i.e., the group of FLAGS with a high market share of SFSCs being present in the area). In fsQCA, the degree to which a case is 'in' or 'out' of a set is referred to as *membership* (Ragin, 2008). To determine the set membership of each FLAG case, the direct method of fsQCA data calibration was used to transform the data into comparable values between 1 and 0. In the direct method of calibration, three qualitative breakpoints (or thresholds) are used to define the level of membership of each case (Fiss, 2011). The present study used the typical values for these breakpoints, which are 0.95, 0.50 and 0.05 (Greckhamer et al., 2018).

To establish the three qualitative breakpoints (thresholds), percentiles were used to allow for the calibration of any measure regardless of its original value (Greckhamer et al., 2018). As several different measurement types were used in the present study, for example, Likert scales with a range [0–5] and percentages [0–100], the data were calibrated to form comparisons through the fsQCA on a common scale [0–1]. After the data calibration process, the main analysis, called a *truth table solution*, was performed. In fsQCA, a *truth value* is attached to a statement instead of a probability (Ragin, 2008). For example, the variable representing structural social capital can be coded as 'high structural social capital', and in the analysis, we look for the presence or absence of the condition of high structural social capital.

The main output from an fsQCA, the *truth table*, documents truth values as to how the causal conditions combine when the outcome of interest occurs (Ragin, 2008). In other words, the truth table shows which variables have a high number of FLAG cases and where a combination of these variables with a high number of cases consistently leads to the outcome of interest, that is, SFSCs having a high market share. The truth table is then used to compute simplified solutions to the fsQCA. A 'solution' refers to a combination of variables that is supported by a high number of FLAG cases for which the configuration of variables consistently leads to the outcome of interest.

Two key measures assess the robustness of fsQCA, the model's *overall solution consistency* and its *overall solution coverage*. The *overall solution consistency* ranges from 0 to 1 and refers to the number of cases within any given configuration that are also in the outcome set (Greckhamer et al., 2018). In the present study, we report an overall solution consistency of 0.891, meaning that there is high consistency between FLAG cases within each of the causal configurations.² The *overall solution coverage* in fsQCA is comparable to the *R*-squared value reported in regression-based analyses (Woodside, 2013). In the present study, the results indicate an overall solution coverage of 0.796, which indicates that a substantial proportion of the outcome of interest is covered (i.e., explained) by the fsQCA solutions. Put plainly, the causal combinations of the variables used in the study are associated with the outcome of interest: a high market share of SFSCs being present in the FLAG area.

RESULTS

Overview of marketing channels and social capital

All 46 FLAGs reported that SFSCs are present in their areas with, on average, 32% of locally landed fish sold through SFSCs ($SD = 0.28$). On average, FLAGs reported that the amount of locally landed fisheries produce being sold through SFSCs over the past 10 years has increased by 61%. The most frequent SFSC types across the FLAGs surveyed are local shops and restaurants (43%), local fish markets (41%), dedicated retailers and fishmongers (39%) and local festivals and events (34%). Across the sample, there is a relatively low fisheries market concentration (Herfindahl–Hirschman Index [HHI] = 1263),³ indicating strong competition amongst producers. On average, the FLAGs indicated that 71% of fishers in their area are small-scale (i.e., using vessels under 10 m in length). Of the FLAG managers surveyed, 43 (93%) have been in position for at least 1 year and 29 for at least 4 years (63%).

After data normalisation (i.e., conversion to a common scale of 0–1), the mean combined social capital reported by the FLAGs was 0.58 ($SD = 0.21$) indicating that FLAG managers perceive generally high social capital in their areas. However, across the sample, social capital varied by type. FLAGs reported their territories to have higher network governance social capital ($M = 0.64$, $SD = 0.20$), compared to normative-cognitive ($M = 0.60$, $SD = 0.11$), and structural social capital ($M = 0.49$, $SD = 0.30$). FLAG managers believe that absolute dependency on fisheries is not ubiquitous in FLAG areas (score of 0.53, $SD = 0.14$). Relative fisheries dependency is on average only slightly higher but with a greater standard deviation ($M = 0.54$, $SD = 0.20$). Finally, reflexive localism across the areas surveyed scored on average 0.52 ($SD = 0.15$).

fsQCA

Table 4 reports the results from the fsQCA, indicating seven solutions (i.e., seven combinations of causal conditions that lead to the outcome of FLAG areas with a high market share of SFSCs). To present the results in an accessible way, fsQCA standard practice is to visualise the presence of a condition in a solution using a solid black circle (●) and the absence of a condition using a circle with a '×' (⊗). In fsQCA, the absence of a condition is as important as the presence of a condition (Fiss, 2011). For example, for the presence of a causal condition (e.g., high normative-cognitive social capital) to lead to a particular outcome (e.g., a high market share of SFSCs in a FLAG area), the absence of another condition (e.g., high absolute fisheries dependency) may be required.

The most important conditions—those that exhibit a strong relationship with the outcome—are indicated with a large circle. These important conditions are referred to as 'core conditions' (Fiss, 2011). Conditions that exhibit a weak connection with the outcome are indicated with a small circle. Such cases are referred to as 'peripheral conditions' (Fiss, 2011). Peripheral conditions, while their connection to the outcome of interest is weaker than that of core conditions, are still important to any given solution in the fsQCA. Finally, a blank space in the table signifies a condition that may be either present or absent from the configuration; in other words, the condition does not play a role in the specific configuration. In fsQCA, such cases are typically referred to as the 'do not care' condition (Pappas & Woodside, 2021).⁴

TABLE 4 fsQCA findings.

Configuration	Solution						
	1	2	3	4	5	6	7
Social capital							
Structural	●	●	●		⊗	⊗	
Normative-cognitive	•	•	⊗	⊗	●	●	⊗
Network governance	●	●	⊗	●	⊗	⊗	⊗
Territorial factors							
Absolute dependency	●		●	●	⊗	⊗	⊗
Relative dependency	●	●	●	●		⊗	⊗
Reflexive localism		•		•	•		●
Consistency	0.922	0.951	0.855	0.890	0.994	0.995	0.871
Raw coverage	0.430	0.437	0.182	0.251	0.241	0.201	0.221
Unique coverage	0.048	0.047	0.012	0.043	0.035	0.028	0.052
<i>Overall solution consistency</i>	0.891						
<i>Overall solution coverage</i>	0.796						

Note: Solid black circles (●) indicate the presence of a condition, and circles with a 'x' (⊗) indicate the absence of such a condition. Large circles indicate a core condition, and small circles indicate a peripheral condition. Blank space indicates the 'do not care' condition.

The seven combinations are presented in Table 4. Solutions 1 and 2 indicate combinations with the presence of structural and network governance social capitals in the presence of high relative fisheries dependency as core conditions, highlighting the importance of these factors.

In Solution 1, the combination of structural and network governance social capitals with high relative and absolute fisheries dependency as core conditions (i.e., the conditions are present in the FLAG cases included in this solution) and normative-cognitive social capital as a peripheral condition leads to the outcome regardless of the level of reflective localism in the area.

Solutions 1 and 2 are the only two solutions where two types of social capital (structural and network governance) work in combination. In Solution 1, both high absolute and high relative fisheries dependency are present as core conditions. The only change in Solution 2 is the 'do not care' condition for absolute fisheries dependency, meaning that its presence in the solution is irrelevant (Woodside, 2013). This indicates a greater importance of relative fisheries dependency in FLAG areas with higher degrees of structural and network governance social capitals.

Solutions 3 and 4 are similar to Solution 1 but with only one social capital type present as a core condition. In Solution 3, structural social capital is a core condition, and in Solution 4, network governance is a core condition, indicating that these social capital types can work both in combination and independently in the presence of both absolute and relative fisheries dependency.

Solutions 5 and 6 show normative-cognitive to be the only social capital type that leads to the outcome, without the presence of any other core conditions. In both solutions, structural and network governance social capitals are peripheral absent conditions. In Solution 5, absolute fisheries dependency is a peripheral absent condition, and relative fisheries dependency is a 'do not care' condition. In Solution 6, both absolute and relative fisheries dependency are core absent conditions. These results indicate that normative-cognitive social capital leads to the outcome with or without the presence of absolute or relative fisheries dependency in a FLAG area.

Solution 7 is the only combination leading to the outcome in the absence of all three types of social capital, as well as the absence of both fisheries dependency types. Here, reflexive localism as a core condition alone leads to the outcome. In other words, reflexive localism alone is sufficient in leading to a FLAG area having a high market share of SFSCs.

The results indicate that territorial characteristics are important to the presence of SFSCs in an area. Solutions 1–4 reveal how different types of social capital work in combination with an area that has a dependency on fisheries. Solutions 5 and 6 are contexts in which SFSCs are developed through social capital without the presence of either absolute or relative fisheries dependency. In Solution 5, normative-cognitive social capital leads to a high degree of SFSCs in FLAG areas in the absence of (i) structural social capital, (ii) network governance social capital and (iii) absolute fisheries dependency with (iv) the peripheral presence of reflexive localism. Similarly, in Solution 6, normative-cognitive social capital acts alone as the only social capital type, with absolute and relative fisheries dependency being core absent conditions (i.e., the absence of both fisheries dependency types has a strong causal connection to the outcome in this solution).

DISCUSSION

The present study examines how combinations of social capital and other territorial characteristics affect the nature of fisheries SFSCs. While thriving SFSCs are a common goal, some initiatives and localities have been more successful than others in nurturing their development, so it is important to understand the factors associated with such desired outcomes. To establish this understanding, we have used fsQCA to better understand the combinations of conditions that lead or do not lead to SFSCs having a higher market share in a FLAG area.

The results indicate that all three social capital types, as well as wider territorial characteristics, matter when it comes to realising SFSCs in a FLAG area. The fsQCA analysis reveals how these variables can work in differing combinations, thus forming deeper insights into the role of social capital and counteracting some of the criticisms of its application as being imprecise or lacking explanatory power (e.g., Durlauf & Fafchamps, 2005; Woolcock, 1998). By breaking down and attending to the multifaceted nature of social capital, FLAGs can potentially harness its economic and social potential in achieving desired outcomes, such as increasing the role of SFSCs. Moreover, understanding an area's territorial situation is equally important in influencing those aspects of social capital that will have the greatest impact on achieving such outcomes. These findings suggest practical implications for FLAGs and LAGs in developing more focused local development strategies under European territorial development programmes.

Structural social capital is a core condition in three of the seven solutions. However, for structural social capital to yield a higher degree of SFSCs, other conditions are required: either other forms of social capital or the presence of particular territorial conditions. There is a strong correlation between structural social capital and network governance, indicating the importance of a connection between the structure of the FLAG and how it is governed. Both structural and network governance social capital can act as the only social capital type leading to a high degree of SFSCs, but in such cases, the FLAG area must also have both a strong absolute and a strong relative dependency on its fisheries sector (see Solutions 3 and 4). One difference is the role of reflexive localism (i.e., pre-existing attitudes towards the benefits of local food systems); the effect of this is more apparent on network governance than it is on structural social capital (Solutions 2 and 4).

The results show that normative-cognitive social capital impacts in a different way to structural and network governance social capital. The main difference is that normative-cognitive social capital is the only social capital type that can lead to a higher degree of SFSCs with or without the presence of any other condition in the conceptual model; that is, with or without the presence of structural and network governance social capital and whether or not an area has any type of dependency on its fisheries sector. This supports the notion that interpersonal trust and shared values are essential to fostering SFSCs (e.g., Kneafsey et al., 2008). An important finding, however, is that normative cognitive social capital, while important, is not the only means for increasing SFSCs in FLAG areas; in areas with a strong dependency on fisheries, structural and network governance social capital can also lead to the presence of SFSCs.

As normative-cognitive is the only social capital type that can lead to SFSCs independently of a FLAG's governance and structure, this has implications for FLAGs wanting to achieve SFSCs as a strategic objective, particularly areas that have no dependency on fisheries but that have small-scale producers. Solutions 5 and 6 suggest a key role for FLAGs in fostering normative-cognitive social capital as a basis for encouraging SFSCs, meaning that trust, the quality of the network, participation and shared values put in place through the FLAG can help realise more substantial fisheries SFSCs in an area. Furthermore, irrespective of an area's dependency on fisheries, in either absolute or relative terms, high levels of normative-cognitive social capital in a FLAG area can lead to more substantial SFSCs. In other words, in the complete absence of absolute and relative fisheries dependency in a FLAG area (Solution 6), high levels of SFSCs can still be present if high levels of normative-cognitive social capital are produced through the FLAG's activities.

Overall, the findings provide insights for any FLAG wanting to focus on SFSCs in its local development strategy, by hinting at the best ways in which to develop social capital in its area, depending on the territorial situation. For example, FLAG areas with higher levels of absolute and relative fisheries dependency might want to focus their efforts on fostering structural social capital (i.e., relational properties, members of the network, the network's horizontal structure, accountability and transparency) and network governance social capital (i.e., the network's vertical structure, decision-making processes, efficiency and effectiveness and its organisational culture and capacity). Both types of capital work in isolation and also together in areas where there is high absolute and relative fisheries dependency (Solutions 1 to 4). As FLAGs try to focus their resources, those that are set in areas with low levels of fisheries dependency or reflexive localism may find that normative-cognitive social capital might be the best focus as a way to develop SFSCs.

CONCLUSION

Using an fsQCA approach, the present study sheds light on how specific types of social capital impact upon the presence of higher degrees of SFSCs in FLAG areas, and therefore provides insight into how FLAGs might look to create the conditions in which SFSCs are more likely to flourish. It also identifies how these different types of social capital work in combination with each other, as well as other key territorial factors such as levels of fisheries dependency and local perceptions towards more localised supply chains (reflexive localism).

A key finding is that several combinations of the conditions used in the present study can make it more likely that SFSCs are present in a given FLAG area. That is, there is no one solution to the creation of SFSCs, and several combinations of social capital types can lead to higher degrees of SFSCs in an area.

However, normative-cognitive social capital is the only social capital type that can operate independently without the presence of any other causal conditions. This highlights the important role FLAGs should play in developing trust in their territories, which is a widely noted prerequisite to the creation of SFSCs (Kneafsey et al., 2008). Normative-cognitive is the least tangible side of social capital, and it can often fill in the missing links and gaps in structural and governance social capital (Krishna & Shrader, 2002). The dimensions of normative-cognitive social capital (i.e., quality of the network, quality of participation in the network and shared values within the network) emphasise the importance of FLAGs in bringing multiple stakeholders in an area together in creating SFSCs. Normative-cognitive social capital also leads to the presence of SFSCs when combined with reflexive localism. While the two conditions have parallels, reflexive localism is a measure of the existence of positive perceptions towards more localised supply chains in an area and a common drive towards local initiatives. Reflexive localism is the only other variable that works independently in increasing the degree to which SFSCs are present in a FLAG area.

The results suggest that structural and governance social capital can both work independently of other social capital types. However, it seems that these forms of social capital may rely on the presence of other causal conditions to strengthen SFSCs in a FLAG territory. While both can operate as the *only* form of social capital present, they each rely on the presence of absolute and relative fisheries dependency in an area for more substantial SFSCs to occur. In the case of governance social capital, the peripheral presence of reflexive localism is also required. This suggests that social capital through governance has the least impact on the presence of SFSCs. In other words, governance, while important to several solutions, is the type of social capital most dependent on other causal conditions (i.e., in three of the seven solutions).

In some settings, all three types of social capital lead to stronger SFSCs. Here, the results of the current research suggest that relative fisheries dependency may be a prerequisite. That is, all three social capital types work in combination with the presence of a regional economy with significant opportunities outside of fisheries, high diversification, low market concentration in the fisheries sector and a dependence on mainly small-scale fishing enterprises.

As FLAGs move into a third programming period of CLLD under the European Maritime, Fisheries and Aquaculture Fund (EMFAF), there is an expectation of more focused local development strategies. Specifically, under the new EMFAF, FLAGs are expected to focus their activities around fostering a sustainable blue economy in which shorter supply chains are paramount. The present research offers practical implications for new and existing FLAGs wanting to stimulate SFSCs through their activities, as well as offering a novel approach to assessing CLLD and its future directions for related policy. While CLLD is a bottom-up approach to development driven by local actors, the findings of the present fsQCA show that there is no one-size-fits-all approach to achieving specific outcomes through local development. Importantly, the research demonstrates equifinality in the combinations of conditions, social capitals and circumstances that lead to SFSCs having a high market share in a FLAG area.

Finally, the study offers a novel application of fsQCA: the ability to examine the conditions within a designated territory associated with strong SFSCs. It is subject to some limitations, which can inform future research. First, the approach is cross-sectional as it only addresses responses at one point in time, limiting our ability to understand dynamic changes. Second, while fsQCA is a theory-based approach, there may be other important factors, beyond social capital, which we do not capture in this research. Further research could expand the coverage by applying the same method to LAGs under other European Structural and Investment Funds, particularly the European Agriculture Fund for Rural Development. By applying the method to the context of rural LAG areas and agriculture, several food and supply chain types could be explored, forming

valuable comparisons. Further research could also investigate emerging forms of social capital in the context of SFSCs. For example, digital social capital within a network could be an important factor to consider. Notwithstanding these limitations, the present research presents a novel way of assessing the impact of LAGs and social capital on economic objectives such as the creation of SFSCs.

ACKNOWLEDGEMENTS

This research was funded by the Economic and Social Research Council (ESRC), UK.

CONFLICT OF INTEREST STATEMENT

We confirm that this article has not been published elsewhere and is not under consideration by another journal. There are no conflicts of interest. All authors have approved the manuscript and agree with its submission to *Sociologia Ruralis*.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ORCID

Richard Freeman MSc, MA  <https://orcid.org/0000-0002-4575-0468>

ENDNOTES

¹ CLLD was first introduced to fisheries areas under Axis 4 of the European Fisheries Fund 2007–2013. Following the EMFF 2014–2020, FLAGs and CLLD are again being implemented under the new EMFAF 2021–2027.

² In fsQCA, the acceptable overall solution consistency threshold is >0.800 (Pappas & Woodside, 2021).

³ The HHI was used to ascertain market concentration in the FLAG areas. The HHI ranges from 0 to 10,000 with a lower score indicating a more competitive market.

⁴ Core conditions are present in both the parsimonious and intermediate solutions of the fsQCA, both of which were considered in the present study. Peripheral conditions are only present in the intermediate solution, which is a simplified sub-set of the parsimonious solution obtained through a counterfactual analysis. For a detailed and mathematically justified description of the steps in a counterfactual analysis, see Mendel & Korjani (2012).

REFERENCES

- Arturo, C., Concetta, N. & Luigi, R. (2010) Trust building and social capital as development policy tools in rural areas. An empirical analysis: the case of the LAG CDNISAT. *Mediterranean Journal of Economics, Agriculture and Environment (Revue Méditerranéenne d'Economie Agriculture et Environment)*, 9(1), 24.
- Babb, P. (2005) *Measurement of social capital in the UK*. London: Office for National Statistics.
- Beugelsdijk, S. & Van Schaik, T. (2005) Differences in social capital between 54 Western European regions. *Regional Studies*, 39(8), 1053–1064. <https://doi.org/10.1080/00343400500328040>
- Borgatti, S.P., Jones, C. & Everett, M.G. (1998) Network measures of social capital. *Connections*, 21(2), 1–36.
- Budzich-Tabar, U. (2014) Area-based local development: a new opportunity for European fisheries areas. In: Urquhart, J., Abbot, T.G., Symes, D. & Zhao, M. (Eds.) *Social issues in sustainable fisheries management*. Dordrecht: Springer, pp. 183–197.
- Burt, R.S. (2005) *Brokerage and closure: an introduction to social capital*. Oxford: Oxford University Press.
- Chiffolleau, Y., Millet-Amrani, S., Rossi, A., Rivera-Ferre, M. & Merino, P. (2019) The participatory construction of new economic models in short food supply chains. *Journal of Rural Studies*, 68, 182–190. <https://doi.org/10.1016/j.jrurstud.2019.01.019>

- Christoforou, A. (2017) Social capital and local development in European rural areas: theory and empirics. In: Pisani, E., Franceschetti, G., Secco, L. & Christoforou, A. (Eds.) *Social capital: from theory to empirics*. Cham: Springer Nature. pp. 43–50.
- Da Re, R., Castiglioni, M. & Burlando, C. (2017) Social capital and the LEADER approach: a statistical method for the evaluation of Local Action Groups. In: Pisani, E., Franceschetti, G., Secco, L. & Christoforou, A. (Eds.) *Social capital and local development: from theory to empirics*. Cham: Springer Nature. pp. 175–199.
- DuPuis, 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/10.1016/j.jrurstud.2005.05.011>
- DuPuis, M., Goodman, D. & Harrison, J. (2006) Just values and or just value? Remaking the local in agro-food studies. In: Marsden, T. & Murdoch, J. (Eds.) *Between the local and the global: confronting complexity in the contemporary agri-food sector*. Oxford: Elsevier, pp. 241–268.
- Durlauf, S. & Fafchamps, M. (2005) Social capital. In: Aghion, P. & Durlauf, S. (Eds.) *Handbook of economic growth*. New York: Wiley. pp. 1639–1699.
- Eagle, N., Macy, M. & Claxton, R. (2010) Network diversity and economic development. *Science*, 328(5981), 1029–1031. <https://doi.org/10.1126/science.1186605>
- Evans, M. & Syrett, S. (2007) Generating social capital: the social economy and local economic development. *European Urban and Regional Studies*, 14(1), 55–74. <https://doi.org/10.1177/0969776407072664>
- FARNET. (2013) *Axis 4: a tool in the hands of fisheries communities: FARNET guide 7*. Brussels: European Commission, DG MARE.
- FARNET. (2015) *Sailing towards 2020: Axis 4 in action*. Brussels: European Commission, DG MARE.
- Fiss, P.C. (2011) Building better causal theories: a fuzzy set of approach to typologies in organization research. *Academy of Management Journal*, 54(2), 393–420. <https://doi.org/10.5465/amj.2011.60263120>
- Fristch, O. & Newig, J. (2012) Participatory governance and sustainability. Findings of a meta-analysis of stakeholder involvement in environmental decision-making. In: Brousseau, E., Dedeurwaerdere, T. & Siebenhüner, B. (Eds.) *Reflexive governance for global public goods*. Cambridge, MA: MIT Press. pp. 181–204.
- Freeman, R. & Svells, K. (2022) ‘Women’s empowerment in small-scale fisheries: The impact of Fisheries Local Action Groups’, *Marine Policy*, 136, 104907.
- Górriz-Mifsud, E., Secco, L. & Pisani, E. (2016) Exploring the interlinkages between governance and social capital: a dynamic model for forestry. *Forest Policy and Economics*, 65, 25–36. <https://doi.org/10.1016/j.forpol.2016.01.006>
- Greckhamer, T., Furnari, S., Fiss, P.C. & Aguilera, R.V. (2018) Studying configurations with qualitative comparative analysis: best practices in strategy and organization research. *Strategic Organization*, 16(4), 482–495. <https://doi.org/10.1177/1476127018786487>
- Healy, Y. & Cote, S. (2001) *The well-being of nations: the role of human and social capital*. Paris, France: OECD Publishing.
- High, C. & Nemes, G. (2007) Social learning in LEADER: exogenous, endogenous and hybrid evaluation in rural development. *Sociologia Ruralis*, 47(2), 103–119. <https://doi.org/10.1111/j.1467-9523.2007.00430.x>
- Iyer, S., Kitson, M. & Toh, B. (2005) Social capital, economic growth and regional development. *Regional Studies*, 39(8), 1015–1040. <https://doi.org/10.1080/00343400500327943>
- Knack, S. & Keefer, P. (1997) Does social capital have an economic payoff? A cross-country investigation. *The Quarterly Journal of Economics*, 112(4), 1251–1288. <https://doi.org/10.1162/003355300555475>
- Kneafsey, M., Cox, R., Holloway, L., Dowler, E., Venn, L. & Tuomainen, H. (2008) *Reconnecting consumers, producers, and food: exploring alternatives*. Oxford: Berg.
- Kneafsey, M., Venn, L., Schmutz, U., Balázs, B., Trenchard, L., Eyden-Wood, T., Bos, E., Sutton, G. & Blackett, M. (2013) *Short food supply chains and local food systems in the EU: a state of play of their socio-economic characteristics*. Luxembourg: Publications Office of the European Union.
- Krishna, A. & Shrader, E. (2002) The social capital assessment tool: design and implementation. In: Grootaert, C. & van Bastelaer, T. (Eds.) *Understanding and measuring social capital. A multidisciplinary tool for practitioners*. Washington DC: The World Bank, pp. 17–40.
- Lewis, J.M. (2010) *Connecting and cooperating: social capital and public policy*. Sydney: UNSW Press.
- Lin, N. (2012) *Social capital: a theory of social structure and action*. Cambridge: Cambridge University Press.
- Malak-Rawlikowska, A., Majewski, E., Waś, A., Borgen, S.O., Csillag, P., Donati, M., Freeman, R., Hoàng, V., Lecoecur, J.-L., Mancini, M.C., Nguyen, A., Saïdi, M., Tocco, B., Török, Á., Veneziani, M., Vittersø, G. &

- Wavresky, P. (2019) Measuring the economic, environmental, and social sustainability of short food supply chains. *Sustainability*, 11(15), 4004. <https://doi.org/10.3390/su11154004>
- Marquardt, D., Möllers, J. & Buchenrieder, G. (2012) Social networks and rural development: LEADER in Romania. *Sociologia Ruralis*, 52(4), 398–431. <https://doi.org/10.1111/j.1467-9523.2012.00571.x>
- Mendel, J.M. & Korjani, M.M. (2012) Charles Ragin's fuzzy set qualitative comparative analysis (fsQCA) used for linguistic summarizations. *Information Sciences*, 202, 1–23. <https://doi.org/10.1016/j.ins.2012.02.039>
- Miret-Pastor, L., Svells, K. & Freeman, R. (2020) Towards territorial development in fisheries areas: a typology of projects funded by Fisheries Local Action Groups. *Marine Policy*, 119, 104–111. <https://doi.org/10.1016/j.marpol.2020.104111>
- Nahapiet, J. & Ghoshal, S. (1998) Social capital, intellectual capital, and the organizational advantage. *The Academy of Management Review*, 23(2), 242–266. <https://doi.org/10.2307/259373>
- Nardone, G., Sisto, R. & Lopolito, A. (2010) Social capital in the LEADER initiative: a methodological approach. *Journal of Rural Studies*, 26(1), 63–72. <https://doi.org/10.1016/j.jrurstud.2009.09.001>
- OECD. (2006) *New rural paradigm: policies and governance*. Paris: OECD Publishing.
- OECD (2009) Investing in trust: leveraging institutions for inclusive policy making. *Background paper*. Paris: OECD Publishing.
- Pappas, I.O. & Woodside, A.G. (2021) Fuzzy-set Qualitative Comparative Analysis (fsQCA): guidelines for research practice in Information Systems and marketing. *International Journal of Information Management*, 58, 102310. <https://doi.org/10.1016/j.ijinfomgt.2021.102310>
- Phillipson, J. & Symes, D. (2015) Finding a middle way to develop Europe's fisheries dependent areas: the role of Fisheries Local Action Groups. *Sociologia Ruralis*, 55(3), 343–359. <https://doi.org/10.1111/soru.12098>
- Pileček, J., Chromý, P. & Jančák, V. (2013) Social capital and local socio-economic development: the case of Czech peripheries. *Tijdschrift Voor Economische en Sociale Geografie*, 104(5), 604–620. <https://doi.org/10.1111/tesg.12053>
- Pisani, E. (2017) Evaluation of social capital in LEADER: from theory to practice. In: Pisani, E., Franceschetti, G., Secco, L. & Christoforou, A. (Eds.) *Social capital and local development: from theory to empirics*. Cham: Springer Nature, pp. 135–173.
- Pisani, E., Franceschetti, G., Secco, L. & Christoforou, A. (Eds.) (2017) *Social capital and local development: from theory to empirics*. Cham: Springer Nature.
- Putnam, R.D. (2000) *Bowling alone: the collapse and revival of American community*. New York: Simon and Schuster.
- Putnam, R.D., Leonardi, R. & Nanetti, R.Y. (1994) *Making democracy work: civic traditions in modern Italy*. Princeton, NJ: Princeton University Press.
- Raagmaa, G. (2016) Social capital and rural development in the knowledge society. *The European Journal of Development Research*, 28(2), 354–356. <https://doi.org/10.1057/ejdr.2015.67>
- Ragin, C.C. (2000) *Fuzzy-set social science*. Chicago: Chicago University Press.
- Ragin, C.C. (2008) *Redesigning social inquiry: fuzzy sets and beyond*. Chicago: Chicago University Press.
- Rihoux, B. & Ragin, C.C. (2009) *Configurational comparative methods: qualitative comparative analysis (QCA) and related techniques*. London: Sage Publications.
- Rostila, M. (2011) The facets of social capital. *Journal for the Theory of Social Behaviour*, 43(3), 308–326. <https://doi.org/10.1111/j.1468-5914.2010.00454.x>
- Sabatini, F. (2009) Social capital as social networks: a new framework for measurement and an empirical analysis of its determinants and consequences. *The Journal of Socio-economics*, 38(3), 429–442. <https://doi.org/10.1016/j.socec.2008.06.001>
- Secco, L. & Burlando, C. (2017) Social capital, network governance and social innovation: towards a new paradigm? In: Pisani, E., Franceschetti, G., Secco, L. & Christoforou, A. (Eds.) *Social capital and local development: from theory to empirics*. Cham: Springer Nature, pp. 83–105.
- Shortall, S. (2008) Are rural development programmes socially inclusive? Social inclusion, civic engagement, participation, and social capital: exploring the differences. *Journal of Rural Studies*, 24(4), 450–457. <https://doi.org/10.1016/j.jrurstud.2008.01.001>
- Tamásy, C. & Diez, J.R. (2016) *Regional resilience, economy and society: globalising rural places*, 2nd edition, London: Routledge.
- Teilmann, K. (2012) Measuring social capital accumulation in rural development. *Journal of Rural Studies*, 28(4), 458–465. <https://doi.org/10.1016/j.jrurstud.2012.10.002>

- Thuesen, A.A. (2010) Is LEADER elitist or inclusive? Composition of Danish LAG boards in the 2007–2013 rural development and fisheries programmes. *Sociologia Ruralis*, 50(1), 31–45. <https://doi.org/10.1111/j.1467-9523.2009.00500.x>
- Triglia, C. (2001) Social capital and local development. *European Journal of Social Theory*, 4(4), 427–442. <https://doi.org/10.1177/13684310122225244>
- van de Walle, G., Gomes da Silva, S., O' Hara, E. & Soto, P. (2015) Achieving sustainable development of local fishing interests: the case of Pays d'Auray FLAG. *Sociologia Ruralis*, 55(3), 360–377. <https://doi.org/10.1111/soru.12097>
- Venn, L., Kneafsey, M., Holloway, L., Cox, R., Dowler, E. & Tuomainen, H. (2006) Researching European 'alternative' food networks: some methodological considerations. *Area*, 38(3), 248–258. <https://doi.org/10.1111/j.1475-4762.2006.00694.x>
- Westlund, H. & Adam, F. (2010) Social capital and economic performance: a meta-analysis of 65 studies. *European Planning Studies*, 18(6), 893–919. <https://doi.org/10.1080/09654311003701431>
- Woodside, A. G. (2013) Moving beyond multiple regression analysis to algorithms: calling for adoption of a paradigm shift from symmetric to asymmetric thinking in data analysis and crafting theory. *Journal of Business Research*, 66(4), 463–472. <https://doi.org/10.1016/j.jbusres.2012.12.021>
- Woodside, A.G. (2014) Embrace•perform•model: complexity theory, contrarian case analysis, and multiple realities. *Journal of Business Research*, 67(12), 2495–2503. <https://doi.org/10.1016/j.jbusres.2014.07.006>
- Woolcock, M. (1998) Social capital and economic development: toward a theoretical synthesis and policy framework. *Theory and Society*, 27(2), 151–208. <https://doi.org/10.1023/A:1006884930135>
- Woolcock, M. & Narayan, D. (2000) Social capital: implications for development theory, research, and policy. *The World Bank Research Observer*, 15(2), 225–249. <https://doi.org/10.1093/wbro/15.2.225>
- Xie, X., Fang, L. & Zeng, S. (2016) Collaborative innovation network and knowledge transfer performance: a fsQCA approach. *Journal of Business Research*, 69(11), 5210–5215. <https://doi.org/10.1016/j.jbusres.2016.04.114>

How to cite this article: Freeman, R., Phillipson, J., Gorton, M. & Tocco, B. (2023) Social capital and short food supply chains: Evidence from Fisheries Local Action Groups. *Sociologia Ruralis*, 1–19. <https://doi.org/10.1111/soru.12455>