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Social entrepreneurial ecosystems in Euroregions

Herman Theodoor Wevers and Cosmina Lelia Voinea
Department of Strategic Management, Open Universiteit, Heerlen, The Netherlands, and

Petru Lucian Curseu
Department of Organization, Open Universiteit, Heerlen, The Netherlands and Department of Psychology, Babeș – Bolyai University, Cluj-Napoca, Romania

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Abstract

Purpose – The purpose of this paper is to extend the knowledge of social entrepreneurial ecosystems and test their effect on social entrepreneurial activity in a cross-border context.

Design/methodology/approach – The current research used the fuzzy set Qualitative Comparative Analysis method on a sample of 4,357 cross-border cooperation (CBC) projects implemented between 2014 and 2020, spread over 40 Euroregions.

Findings – Single ecosystem elements can be sufficient conditions but with a limited effect on cross-border social entrepreneurship. Configurations of ecosystem elements can be necessary conditions with synergetic effects. A geographical pattern was identified in the spread of configurations across Europe.

Research limitations/implications – Geographical, quantitative and project data constraints exist. The authors call for research into synergies between ecosystem elements in cross-border contexts and ecosystem patterns across Europe.

Practical implications – Policymakers, their cross-border counterparts and Euroregions could coordinate their efforts to improve ecosystems' impact and involve social entrepreneurs to scale impact in neighboring countries.

Social implications – Involving social entrepreneurs in CBC projects will show how social impact in one country can be valuable for solving issues in the neighboring country. This will increase the valuation of innovative solutions, create opportunities for scaling social impact and contribute to the European (EU) Cohesion Policy.

Originality/value – The study uses a novel approach by investigating the effect of social entrepreneurial ecosystems in Euroregions on social entrepreneurial activity in a cross-border context. The study shows that the impact of social entrepreneurial ecosystems does not stop at the country's borders.

Keywords Social entrepreneurial ecosystems, Social enterprises, Euroregions, Cross-border cooperation

Paper type Research paper

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1. Introduction

Implementing the EU Cohesion Policy is a key objective for the European Commission (EC). One of the vital instruments to implement the EU Cohesion Policy is the Interreg A program for CBC (Durà *et al.*, 2018; Interreg, 2023; Meideros, 2018). Cooperative approaches initiated by public and private partners aim to tackle shared issues between neighboring countries in Euroregions. To address these shared issues, stakeholders in border regions prioritize policy objectives in the social, environmental and economic domains. CBC projects address these policy priorities that cover issues such as social inclusion, health, education, resource efficiency and climate change (Meideros, 2018). According to Wevers *et al.* (2020), CBC policy priorities, but also the drivers and characteristics of CBC, connect with the fields of play and approaches of social entrepreneurship (Wevers *et al.*, 2020).

The Interreg program can be regarded as a game changer for the development of social enterprises (Borzaga *et al.*, 2020). Social entrepreneurship[1] represents "the process of combining resources in innovative ways to pursue opportunities for the creation of social and economic value evident in new initiatives, services, products, programs, or organizations" (Mair and Martí, 2006, p. 37). However, the involvement of social entrepreneurship in CBC projects has always been rather limited. We have examined 4,357 CBC projects enrolled between 2014 and 2020 in 40 Euroregions and found that less than 2% of the budget was allocated to social enterprises. Although policymakers increasingly value social entrepreneurship to find innovative solutions to address societal issues (Arabadzhieva and Vutsova, 2021; Borzaga *et al.*, 2020; Diaz Gonzales and Dentchev, 2021; Murzyn, 2021), often this seems not to permeate into the CBC projects.

An underlying and structural cause of the low participation of social enterprises in CBC projects could be found in the absence of a supportive environment. Social entrepreneurial ecosystems could give substance to this supportive environment (Borzaga *et al.*, 2020). Entrepreneurial ecosystems are "interdependent actors and factors coordinated to enable productive entrepreneurship within a particular territory" (Stam and Spigel, 2016: p. 1). Recently, a need for research from the perspective of integrative entrepreneurial ecosystems has arisen (Stam and Spigel, 2016). Within such research, the focus falls on the interaction between the ecosystem elements and how configurations of elements relate to increased productive entrepreneurship (Spigel, 2017; Stam and Van de Ven, 2021). Stam and Van de Ven (2021) recommend further research to identify the presence of combinations of ecosystem elements in geographical areas. Case studies reported by Arabadzhieva and Vutsova (2021) and Murzyn (2021) investigated the impact of single ecosystem elements in specific geographical contexts. Therefore, the aim of our current research is to investigate the effect of social entrepreneurial ecosystems on social entrepreneurial activity in an EU cross-border context.

To advance knowledge about the supportiveness of ecosystems in the cross-border setting of Euroregions we will use fuzzy set Qualitative Comparative Analysis (fsQCA) to test the effect of ecosystem elements (and their combination) on social entrepreneurial activity. As reported by different authors (Borzaga *et al.*, 2020; Hazenberg *et al.*, 2016), a great variance between EU Member States' ecosystems can be found due to regional disparities in economic development, cultural differences and historical backgrounds. As such, ecosystem measures in one EU Member State might hinder unintentionally its supportiveness in another Member State (Stam and van de Ven, 2021). By conducting a comparative study, we expect to find territorial disparities in the presence of ecosystem elements, but we will also investigate possible synergies between ecosystem elements in Euroregions. Our findings will contribute to the work of policymakers and practitioners committed to Euroregions and the social economy. As Arabadzhieva and Vutsova (2021) recommended, we will provide further insights into the functioning of ecosystem elements and how synergies between ecosystem elements can increase their supportiveness.

2. Literature review

2.1 An integrative social entrepreneurial ecosystem

Entrepreneurial ecosystems structure institutional and resource-related elements that support entrepreneurial activity in geographically demarcated areas (Harmaakorpi and Rinkinen, 2020; Spigel and Kitagawa, 2020; Stam and Van de Ven, 2021). By modeling the environment into entrepreneurial ecosystems, ecosystem elements can be analyzed on social, cultural and economic aspects (Spigel, 2017; Spigel and Kitagawa, 2020). Rather than taking ecosystem elements in isolation, Stam and Van de Ven (2021) analyze an integrative ecosystem model where synergies between institutional arrangements and resource endowments result in productive entrepreneurship (Stam and Van de Ven, 2021). An integrative ecosystem approach is also acknowledged to be the most supportive of social entrepreneurial ecosystems (Arabadzhieva and Vutsova, 2021; Biggeri *et al.*, 2017). This interdependency between ecosystem elements is essential to unlock material and immaterial resources for social entrepreneurship as access to resources can be challenging for social entrepreneurs. On the one hand, due to their dual mission, financial and institutional barriers constrain social entrepreneurial activity (Biggeri *et al.*, 2017; Davies *et al.*, 2019, Doyle Corner and Kearins, 2021). On the other hand, social capital can be instrumental in accessing resources but takes time to be created (Davies *et al.*, 2019; Mair and Martí, 2006; Mohiuddin and Yasin, 2023).

The development of entrepreneurial ecosystems can be regarded as an evolutionary process (Cobben *et al.*, 2022; Stam and Van de Ven, 2021). The interdependency between the ecosystem elements impacts social entrepreneurship and to explain these effects on social entrepreneurial activity as an output, Stam and Van de Ven (2021) distinguish between necessary, contingent and institutional ecosystem conditions. Other factors at stake are the roles of ecosystem leaders or orchestrators actively engaging in the development of ecosystems and aiming at individual or collective benefits (Cobben *et al.*, 2022). The time required to build such a supportive social entrepreneurial environment might constrain social entrepreneurship. Regarding our current research, by comparing the functioning of ecosystems between Euroregions, we assume the presence of equal evolutionary interdependent processes for each ecosystem, conditions and outputs.

Our current research originates from the ecosystem model that Borzaga *et al.* (2020) applied for their mapping study on social enterprises and their ecosystems in Europe. This ecosystem model was developed for analytical, comparative and explanatory purposes rather than testing and theory building. To structure the ecosystem elements, Borzaga *et al.* (2020) categorized the elements into four pillars: (1) visibility and recognition, (2) capacity to self-organize, (3) resources and (4) research, education and skills development. The model used by Borzaga *et al.* (2020) differs from the integrative entrepreneurial ecosystem model of Stam and Van de Ven (2021), both in purpose and design. To test and compare the impact of ecosystem elements on the social enterprise sector in Euroregions, we will align this analytical model with the integrative ecosystem model of Stam and Van de Ven (2021). Table 1 presents how the layers/elements by Stam and Van de Ven (2021) have been aligned with the pillars/elements of Borzaga *et al.* (2020).

2.2 Integrative elements of social entrepreneurial ecosystems

2.2.1 Visibility and recognition. Ecosystem element visibility and recognition is envisioned to improve the understanding of policymakers and the public and to support the social enterprise sector. A better understanding will foster further development and reduce the risk of discontinuation of existing social businesses (Arabadzhieva and Vutsova, 2021; Folmer *et al.*, 2018; Murzyn, 2021; Nyssens *et al.*, 2023).

Table 1. Integrative entrepreneurial ecosystem versus social enterprise ecosystem

Integrative entrepreneurial ecosystem (Stam and Van de Ven, 2021)		Social enterprise ecosystem (Borzaga *et al.*, 2020)	
Institutional arrangements	Formal institutions	Political recognition Legal recognition	Visibility and recognition
	Culture	Civic engagement	Capacity to self-organize
	Networks	Networks and mutual support mechanisms	
Resource endowments	Physical infrastructure	Not included in the social enterprise ecosystem	
	Demand	Private recognition Self-recognition	Visibility and recognition
	Intermediaries	Not included in the social enterprise ecosystem	
	Talent	Education on social enterprises and social entrepreneurship	Research, education and skills development
	Knowledge	Research	
	Leadership	Skills development	
	Finance	Access to financial resources: - Non-repayable resources for start-up and consolidation - Resources from income-generation activities - Repayable resources - Tax breaks and fiscal benefits	Resources
Outputs	Productive entrepreneurship	Social enterprise sector	Social enterprise sector

Sources: Authors' own construct built on Stam and Van de Ven (2021) and Borzaga *et al.* (2020). No third-party permission required. *Own elaboration based on* Stam and Van de Ven (2021) and Borzaga *et al.* (2020)

Political recognition is mostly perpetuated through establishing policy frameworks and implementing strategies and action plans (Borzaga *et al.*, 2020; Diaz Gonzales and Dentchev, 2021). Legal recognition and formal legal statuses are important in making a shift in short-term functioning toward longer-term perspectives and business continuation (Arabadzhieva and Vutsova, 2021). A potential downside of institutionalization might be too complex legal frameworks because of difficulties in grasping what social entrepreneurship aims to achieve (Diaz Gonzales and Dentchev, 2021; OECD, 2022).

Private recognition comprises systems of private marks, labels or certifications. These types of schemes signal the specificity of social enterprises in the absence of legal forms and might provide a competitive advantage (Borzaga *et al.*, 2020).

2.2.2 Network support. Social entrepreneurs rank networks as prevailing in enabling favorable conditions in both the start-up and growth phases (Folmer *et al.*, 2018). Networks connect social entrepreneurs with different ecosystem elements and forms of institutionalization (Svensson and Nordlund, 2015; Frątczak-Müller and Mielczarek-Żejmo, 2020). This results in flows of information about knowledge and resources and creates legitimacy through partnerships or community building (Folmer *et al.*, 2018; Stam and van de Ven, 2021). Underdeveloped networking skills are still reported as a major challenge for social entrepreneurs (Diaz Gonzales and Dentchev, 2021) and may also hamper growth (Davies *et al.*, 2019).

From an institutional perspective, Borzaga *et al.* (2020) distinguish between transversal and activity field-based network principles on three levels: (1) EU/international level, (2) national/federal level and (3) regional level. The transversal and activity field-based networks enable social entrepreneurs to better connect with public and private organizations at the institutional level (Folmer *et al.*, 2018).

2.2.3 Research, education and skills development. Research and education accomplish central roles in developing social entrepreneurial skills (Borzaga *et al.*, 2020). Academic research is a main pillar for creating a better understanding of the thematic fields of social enterprises among citizens and policymakers. Academic efforts contribute to the exchange between practitioners and policymakers (Borzaga *et al.*, 2020; Murzyn, 2021). Providers of education are seen as key actors in the social enterprise ecosystem (Murzyn, 2021). They develop skills enhancements and business support, creating networks and incubators (Durà *et al.*, 2018). This kind of activity leads to new knowledge that can be effectively shared within bilateral cross-border partnerships and contributes to processes of innovation (Nave and Franco, 2021).

2.2.4 Financial resources. Financial resources include repayable and nonrepayable resources as well as resources from income-generating activities (Borzaga *et al.*, 2020). In-kind resources, such as voluntary workers, business support or incubators are also valuable for social entrepreneurship (Borzaga *et al.*, 2020; Folmer *et al.*, 2018). In addition to these, social enterprises need to generate income from goods or services in competing markets to secure business continuation.

Access to financial resources is seen as complex for social entrepreneurs and requires specific skills, such as building social capital and networking (Davies *et al.*, 2019; Folmer *et al.*, 2018; Mohiuddin and Yasin, 2023). Due to the dual mission of social enterprises, investors consider insecure funding and less income from market resources as a risk of discontinuity (Arabadzhieva and Vutsova, 2021; Borzaga *et al.*, 2020; Davies *et al.*, 2019; Diaz Gonzales and Dentchev, 2021; Nyssens *et al.*, 2023).

2.2.5 Fiscal measures. Fiscal measures will be treated as a separate ecosystem element due to their institutional character and relationship with legal frameworks (Borzaga *et al.*, 2020; OECD, 2022). Fiscal measures are at the monopoly of national governments and

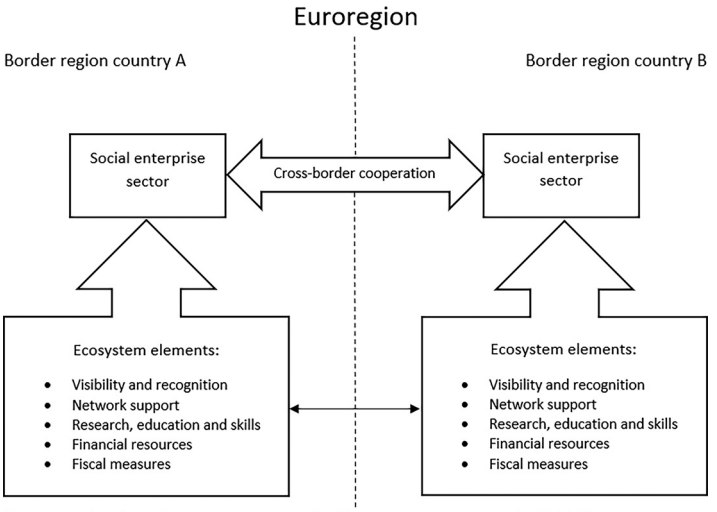
include institutional and legal aspects, whereby different territorial or regional circumstances require an individual approach (Lester, 2018; Bondarenko *et al.*, 2023).

The efficacy of fiscal measures to stimulate economic development, entrepreneurship or innovation is still subject to academic discussion (Long and Liao, 2021; Bondarenko *et al.*, 2023). This is reflected by the complex and fragmented fiscal frameworks for social enterprises in EU Member States (Borzaga *et al.*, 2020). Social enterprises benefit from general corporate tax exemptions, the most widely used fiscal measure (Borzaga *et al.*, 2020). Fiscal measures also include incentives for natural persons who financially support social enterprises.

2.3 Social entrepreneurial engagement in cross-border cooperation

Similarities and complementarities exist between the drivers and characteristics of CBC and social entrepreneurship (Wevers *et al.*, 2020). CBC aims to respond to daily life problems in the economic, environmental and social domains. This is achieved by addressing regionally, bottom-up determined policy priorities, such as social inclusion, poverty, education, health or biodiversity (Meideros, 2018). The prevailing focus of CBC on solving shared issues also creates business opportunities (De Sousa, 2013; Durà *et al.*, 2018), whereas social entrepreneurs are searching for these kinds of opportunities (Borzaga *et al.*, 2020; Belz and Binder, 2017). Characteristics such as local embeddedness and social capital can be attributed to cross-border cooperation and social entrepreneurship (Biggeri *et al.*, 2017; Mohiuddin and Yasin, 2023; Wevers *et al.*, 2020).

Figure 1 shows the ecosystem elements in the context of Euroregions. Geographical demarcated Euroregions can be seen as part of the social entrepreneurial ecosystems in border regions. The coordinating role of the Euroregions within these ecosystems fosters intensified connections between the stakeholders of cross-border cooperation (Perkmann, 2003; De Sousa, 2013; Frątczak-Müller and Mielczarek-Żejmo, 2020). Although well-coordinated cross-border cooperation requires the active engagement of a broad range of regional and local ecosystem actors, such as politicians, universities, businesses and citizens,



Source: Authors' own construct built on Borzaga et al. (2020)

Figure 1. Elements and configurations of social entrepreneurial ecosystems in Euroregions

due to the different interests of regional and local stakeholders, supportiveness of ecosystem elements might be hindered as well (Howaniec and Lis, 2020).

3. Methodology

We used a two-step analytic approach. First, we examined how the presence of social entrepreneurial ecosystems affected the social enterprise sector size in a country and Euroregion using fsQCA. Second, we listed the fsQCA membership Euroregions and analyzed the participation of social enterprises in CBC projects.

3.1 Sample and data

Data for this study were provided by the mapping study Social Enterprises and their Ecosystems in Europe (Borzaga *et al.*, 2020), the associated country reports and the KEEP.eu database. Borzaga *et al.* (2020) systematically collected qualitative and quantitative data on social entrepreneurial ecosystems in 35 European countries. Extended country reports were only provided for the 28 EU Member States. These 28 Member States participated in 50 Interreg programs running between 2014 and 2020. Nine programs were excluded due to insufficient data in the KEEP.eu database. From the remaining 41 programs, we took a full sample of 4,443 approved CBC projects. Granular data on evaluating non-approved project proposals per Euroregion was not readily available and excluded from our analysis. In the approved projects, 5,970 private organizations were participating as project partners. By scanning the organizational websites, we evaluated all 5,970 private organizations on the entrepreneurial, economic and social dimensions taken from the dimensions by Borzaga *et al.* (2020: pp. 158–159). The available data on the website did not allow testing the inclusive governance-ownership dimension (Borzaga *et al.*, 2020: p. 160). During the data analysis, we excluded Malta and the program Italy–Malta due to missing details from the mapping study, which left us with 4,357 approved projects and 5,948 private organizations.

3.2 Variables and measurement

3.2.1 Independent variables. We included five ecosystem elements as independent variables: (1) visibility and recognition, (2) network support, (3) research–education–skills, (4) financial resources and (5) fiscal measures. In fsQCA, these ecosystem elements are referred to as conditions. Combinations of conditions are reported as configurations. We deviated from the social entrepreneurial ecosystem model of Borzaga *et al.* (2020) in two ways. First, we did not include civic engagement under the capacity to self-organize. The findings for this attribute were highly descriptive and quantifying these findings would have reduced the validity of our outcomes. Furthermore, we decided to split resources into financial resources and fiscal measures. In line with the literature (Long and Liao, 2021; Bondarenko *et al.*, 2023), fiscal measures are often reported separately from other resources due to specific territorial circumstances and law issues. Another argument is that public and private parties can provide financial resources, while fiscal measures are at the monopoly of country governments.

We controlled for two variables outside the ecosystem elements: (1) the Interreg co-funding rates and (2) the social and environmental policy priorities. Both were tested, but no significant correlations or relationships were found regarding social enterprises' participation in CBC. Borzaga *et al.* (2020) assessed the Interreg funding opportunities also as part of the financial resources.

3.2.2 Dependent variables. The dependent variable for the fsQCA analysis was the social enterprise sector size. The unit of measurement was the number of social enterprises denominated in millions of inhabitants (Borzaga *et al.*, 2020). Borzaga *et al.* (2020) indicated

degrees of data reliability of the 28 EU Member States between very low and very high (very low 1, low 7, average 13, high 5, very high, 2). Regarding the participation of social enterprises in CBC projects, we assumed an equal geographical spread of social enterprises over a country and within a Euroregion.

Second, we assessed the participation of social enterprises in EU cross-border cooperation projects. The unit of measurement was the Euroregions and the percentage of the project budget allocated for social enterprises between 2014 and 2020. Taking the share of the budget allocated to social enterprises puts their participation in perspective in relation to the investments in Interreg as an EU Cohesion Policy instrument and the ability and willingness of social enterprises to have own investments.

Tables 2 and 3 provide detailed descriptions of the operationalization and scoring of the variables.

3.3 Analytical approach

We applied the fuzzy-set variant of the Qualitative Comparative Analysis method (fsQCA). While QCA normally works with binary scoring, the fsQCA method uses a scale approach of calibrated data combining qualitative and quantitative methodologies (Mello, 2021; Ragin, 2017). fsQCA is a case-based method with a minimum requirement of 25 cases (Mello, 2021). In our analyses, the cases were represented by 40 Euroregions.

In fsQCA, causal relationships are established in terms of necessary and sufficient conditions, whereby the term causal refers to the presence of an association between a condition and an outcome rather than the estimation of statistically significant relationships among variables (Pickernell *et al.*, 2019). A condition or configuration (set of conditions) is deemed necessary if it is always present when the outcome of interest occurs (Mello, 2021). A condition or configuration of conditions is deemed sufficient when their presence generates the outcome of interest (Mello, 2021). We apply a consistency threshold of 0.75 for sufficient conditions and configurations, and a threshold of 0.90 for necessary conditions and configurations (Emmenegger *et al.*, 2014; Torres and Godinho, 2021). Next to the consistency, fsQCA analysis reports the coverage as a comparable indicator to the R-square of regression analysis (Pappas and Woodside, 2021). The coverage indicates the proportion of the outcome covered by the specific configuration of conditions. With regard to the reported configurations of ecosystem elements, the raw coverage and unique coverage both evaluate how much of the empirical outcome is accounted for by a given condition or configuration of conditions (Mello, 2021). Thereby, in our model the raw coverage reports the proportion of social enterprise sector size that is explained by each ecosystem element as part of the solution (Ragin, 2017). The unique coverage reports the social enterprise sector size proportion explained solely by each solution term (Ragin, 2017).

The fsQCA method distinguished between core and peripheral conditions. Core conditions indicate a strong relationship with the outcome, while peripheral conditions indicate a weaker relationship (Pappas and Woodside, 2021). Moreover, core solutions are necessary conditions as part of the configurations, while peripheral conditions are sufficient conditions (Fiss, 2011).

The fsQCA method required the collected data to be calibrated for comparability purposes. We scored each social entrepreneurial ecosystem element and ran the calibration process to conform to the direct method (Mello, 2021; Ragin, 2005; Pappas and Woodside, 2021). The calibrated scorings were transposed for each Euroregion on a five-value scale between 0 and 1. The presence of ecosystem elements in a Euroregion up to and including 0.05 is a non-membership. Ecosystem elements with a presence of 0.95 or above is a full-membership. In between 0.05 and 0.95, we used thresholds of 0.33 (more a disagreement than an agreement), 0.50 (crossover membership) and 0.67 (more an agreement than a

Table 2. Operationalization of the variables

Ecosystem element	What will be tested?
Visibility and recognition	– Policy frameworks *Source:* Borzaga *et al.* (2020*: p55; fig. 3)* – Legal frameworks *Source:* Borzaga *et al.* (2020*: p58, fig. 4)* – Private labels and marks *Source:* Borzaga *et al.* (2020*: p67, Table 9)*
Networks support	– National/federal and regional transversal and activity field-based networks *Source:* Borzaga *et al.* (2020*: p51-52, Table 7)*
Research, education and skill development	– Social entrepreneurship as part of research, education and skills development *Source:* Borzaga *et al.* (2020*) and the associated individual country reports*
Financial resources	– Measures for start-up and scaling social enterprises *Source:* Borzaga *et al.* (2020*: p73, Table 10; p168-169, appendix 4)* – Resources from income-generating activities *Source:* Borzaga *et al.* (2020*: p78, Table 11)* – Loans and funds available for social entrepreneurs *Source: (*Borzaga *et al.*, 2020*: p172-176, appendix 5)*
Fiscal measures	– Fiscal benefits to support the consolidation of enterprises and reduce production costs *Source:* Borzaga *et al.* (2020*: p92, Table 12; p177-182, appendix 6)*
Ecosystem output	*What will be tested?*
Social enterprise sector size	– The number of social enterprises per country between 2014–2020 (Ireland, 2009; Sweden, 2009–2016; U.K., 2007–2017) *Source:* Borzaga *et al.* (2020*: p106–107, Table 14)*
Participation CBC projects	– Criteria for social enterprises based on economic/entrepreneurial and social dimensions. *Source:* Borzaga *et al.* (2020*:p29, Table 2)* Budget share in CBC projects allocated for social enterprises between 2014 and 2020. *Source: KEEP.eu database (https://KEEP.eu)*

Source: Authors' own construct built on Stam and Van de Ven (2021) and Borzaga *et al.* (2020). No third-party permission required

Table 3. Scoring of the variables

Ecosystem element	How was the scoring done?
Visibility and recognition	– Implemented frameworks per Member State weighted by (1) the period of implementation, e.g. before 2014 and between 2014 and 2020, and (2) the presence of multiple frameworks – Average scoring per Euroregion
Networks support	– Presence of transversal and activity field-based networks per member state – Average scoring per Euroregion
Research, education and skill development	– Presence of research-, educational- and skill-related activities per member state – Activities are equally scored except for "university education" and "incubator programs"; these were weighted twice – All scorings were corrected with the percentage of the population between 25 and 34 with tertiary education [*Source: Eurostat (2022), tables on EU policy, Sustainable development indicators, Goal 4 Quality education*] – Average scoring per Euroregion
Financial resources	– Presence of financial resources per member state; differentially weighted by non-repayable, repayable and own income resources and limitations non-repayable resources – Average scoring per Euroregion
Fiscal measures	– The presence of fiscal measures per member state – Average scoring per Euroregion
Ecosystem output	*How was the scoring done?*
Social enterprise sector size	– Social enterprise sector size per Member State denominated per million inhabitants (Borzaga *et al.*, 2020) – The total was calculated per Euroregion by adding the member states' social enterprise sector sizes
Participation CBC projects	– Budget share allocated to social enterprises as a percentage of the total program funding per Interreg program in a Euroregion

Source: Authors' own construct built on Stam and Van de Ven (2021) and Borzaga *et al.* (2020). No third-party permission required

disagreement). To avoid the exclusion of exact 0.50 scores, we added a constant of 0.001 to the calibrated scores below 1.00 (Fiss, 2011; Pappas and Woodside, 2021).

Next to the fsQCA analysis, we also ran a correlations check to have additional insights into the relationships between the ecosystem elements and their relation with the social enterprise sector size. We also included the participation of social enterprises in CBC projects as a variable in the correlation check. To verify our two-step approach, this check allows us to compare the relationships between the ecosystem elements, the social enterprise sector and the participation in CBC projects. Here, we expect to find higher correlations between the ecosystem elements and the social enterprise sector compared to correlations between the ecosystem elements and the participation in CBC projects.

3.4 Robustness checks

To test the structural validity of our results, we conducted two robustness checks. First, we adapted the consistency threshold from 0.80 to 0.77 to test the effect of a drop in the raw consistency (Chen and Tian, 2022; Emmenegger *et al.*, 2014). In addition, we also tested the results at a consistency threshold of 0.75 (Chen and Tian, 2022). Second, we randomly removed ten percent of the 40 cases in two runs (Chen and Tian, 2022) and checked consistency in results. Both tests showed similar results for the first runs and minor effects for the second runs, respectively. These, however, did not affect our results and analysis.

4. Results

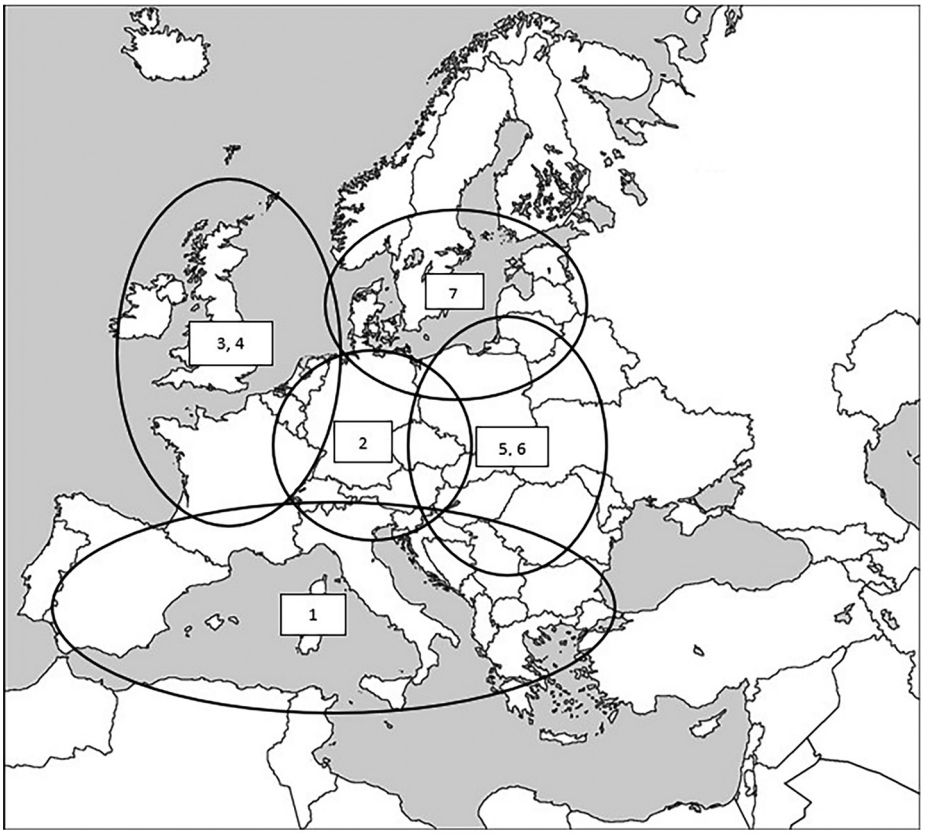
4.1 Ecosystem elements and configurations

We identified a pattern in the geographical distribution of the seven ecosystem element configurations across Euroregions. This pattern reflects the varied contexts of countries in terms of history, culture and institutionalization (Borzaga *et al.*, 2020; Hazenberg *et al.*, 2016; Stam and Van de Ven, 2021). Figure 2 shows the allocation of configurations between Northern, Eastern, Southern, Western and Central Europe. Our findings align with previous research findings indicating that entrepreneurial ecosystems differ by their territorial contexts (Borzaga *et al.*, 2020; Diaz Gonzalez and Dentchev, 2021; Stam and Van de Ven, 2021).

According to Roy *et al.* (2015), institutionalization is deeply rooted in the history of countries. Institutionalization is mostly associated with ecosystem element visibility and recognition. This is reflected in the allocation of configurations 1, 5, 6 and 7 in former Soviet states and Balkan countries where socialistic regimes had different priorities compared to more liberal regimes (Arabadzhieva and Vutsova, 2021; Roy *et al.*, 2015). The allocation of configurations 2, 3 and 4 in Central and Western Europe demonstrates how combining core conditions of visibility and recognition, financial resources complemented by research–education–skills, and network support effectively strengthens the social enterprise sector and the participation in CBC projects.

Finally, configurations 6 and 7 have a stronger focus on policy frameworks and legal frameworks and are clustered in Eastern and Northern European Euroregions. This allocation cannot be fully explained for the Euroregions in Northern Europe. A possible explanation could be that the cooperation in the South and Central Baltic Euroregions is between Northern and Eastern European Member States.

Table 4 provides the results of the tested relationships between the single social entrepreneurial ecosystem elements and the social enterprise sector size. All ecosystem elements report a consistency < 0.90, meaning that none of the ecosystem elements qualify as a necessary condition. The ecosystem elements of financial resources, fiscal measures, research–education–skills and visibility and recognition are reported as sufficient conditions with a coverage ≥ 0.75, meaning that these single conditions explain more than 75% of the social enterprise sector size.



Source: Authors' own construct

Figure 2. Ecosystem configurations across Euregions

Table 4. Consistency and coverage per ecosystem element

Ecosystem elements	Consistency	Coverage	Output
Visibility and recognition	0.75	0.75	Social enterprise sector size
Network support	0.74	0.71	
Education, research, skills	0.76	0.75	
Financial resources	0.82	0.79	
Fiscal measures	0.79	0.78	

Source: Authors' own construct. No third-party permission required

Table 5 presents the outcomes of the fsQCA analysis by configuration. These combinations of conditions are synergetic by nature (Pappas and Woodside, 2021). The presence of core conditions visibility and recognition and financial resources, is most prominent here. The consistency level reported for configuration 2 achieves 0.94, indicating that configuration 2 is a

Table 5. Solution paths social enterprise sector in Euroregions (40 cases, intermediate solution)

	Configuration						
Ecosystem element	1	2	3	4	5	6	7
Visibility and recognition	X	X		o	o	X	X
Network support	x			x			
Education, research, skills development		x	x		o	o	
Financial resources		X	X	X		o	o
Fiscal measures	X		o		X		o
Consistency	*0.89*	*0.94*	*0.87*	*0.88*	*0.85*	*0.83*	*0.81*
Raw coverage	*0.55*	*0.56*	*0.57*	*0.57*	*0.55*	*0.54*	*0.51*
Unique coverage	*0.02*	*0.00*	*0.03*	*0.03*	*0.04*	*0.00*	*0.02*
Euroregions with membership (out of 40)	*9*	*8*	*8*	*7*	*7*	*7*	*8*
Solution consistency	0.76						
Solution coverage	0.91						

Notes: *X or x indicates the presence of a condition; O or o indicates the absence of a condition. X or O indicates a core condition; x or o indicates a peripheral condition. Blank space indicates that a condition is not relevant*
Source: Authors' own construct. No third-party permission required

necessary condition for having a social enterprise sector. All other configurations reach a consistency of ≥ 0.80, indicating that the configurations qualify as sufficient conditions.

Table 6 presents the descriptive statistics and the correlations between the social entrepreneurial ecosystem elements and the ecosystem output. Correlations vary between weak and strong. The highest significant correlations can be found in relation to visibility and recognition. As expected and the argument for having a two-step approach, the correlations between the ecosystem elements and the social enterprise sector are higher compared to the correlation between ecosystem elements and the level of participation in CBC projects.

4.2 Results per configuration

4.2.1 Configuration 1: visibility and recognition – network support – fiscal measures. The synergies between legal frameworks and fiscal measures explain the high consistency level of configuration 1. Countries use these synergies to overcome financial barriers to social

Table 6. Descriptive statistics and correlations, $n = 40$

Ecosystem element/output	*MEAN*	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
1. Visibility and recognition	0.46	0.31	1.						
2. Network support	0.49	0.33	0.44**	1					
3. Research–education–skills	0.50	0.29	0.67**	0.35*	1				
4. Financial resources	0.50	0.34	0.41**	0.33*	0.35	1			
5. Fiscal measures	0.46	0.33	−0.31	0.33*	−0.32*	0.33*	1		
6. Social enterprise sector size	0.47	0.32	0.25	0.25	−0.27	0.40*	0.43**	1	
7. Participation in CBC projects	0.48	0.31	0.15	−0.23	0.07	0.29	0.21	0.19	1

Notes: **Correlation is significant at the 0.01 level (two-tailed); *correlation is significant at the 0.05 level (two-tailed)
Source: Authors' own construct. No third-party permission required

entrepreneurship (Arabadzhieva and Vutsova, 2021; Borzaga *et al.*, 2020; Davies *et al.*, 2019; OECD, 2022). The role of networks can be seen in the light of informing social entrepreneurs about fiscal measures (Folmer *et al.*, 2018).

The participation in the Manche-Channel program between France and the UK is outstanding. Both countries have well-developed social entrepreneurial ecosystems but with fundamental differences. France provides distinctive fiscal measures for legal entities and natural persons, while the UK implemented multiple policy frameworks before 2014. Regarding networks, France and the UK both report a relatively strong presence but a different setup. In France, networks are centralized and activity field-based, while in the UK networks are transversal and regional organized. The program between Spain-France-Andorra also shows an above-average participation of social enterprises in CBC projects. France and Spain both established legal frameworks before 2014 and provide tax exemptions for retained profits. But Spain is less well equipped when it comes to networks compared to France and the UK.

The other seven Euroregions report below-average participation. The consistent participation of social enterprises in the two programs between Italy and France indicates equally impacting ecosystems in different geographical areas. Italy has the largest social enterprise sector of all Member States. This, however, does not result in an above-average participation in CBC projects. A possible explanation might be south-west Italy's relatively long coastline. An equal spread of social enterprises would leave a relatively large share of them in regions without Interreg programs.

In Table 7 the membership Euroregions are ranked from the highest to the lowest level of participation.

4.2.2 Configuration 2: visibility and recognition, education–research–skills, financial resources. Configuration 2 achieves the level of a necessary condition. As reported by Borzaga *et al.* (2020), the combination of financial resources with policy frameworks and legal frameworks has a positive impact on social entrepreneurship. Academic research and education are needed to create knowledge and awareness among stakeholders, e.g. policymakers and financial institutions (Borzaga *et al.*, 2020; Murzyn, 2021). Moreover, vocational training programs and incubators are present in many Euroregions (Durà *et al.*, 2018).

Table 7. Membership Euroregions configuration 1

Euroregion (INTERREG V-A 2014–2020 program)	SE sector size per million inhabitants (average 1,739)	Participation SE in CBC projects (average 1.88%)
France–United Kingdom (Manche–Channel)	1,878	9.27%
Spain–France–Andorra (POCTEFA)	1,622	2.36%
Slovakia–Austria	861	1.85%
Italy–Slovenia	2,368	1.56%
Italy–France (Maritime)	3,108	1.25%
France–Italy (ALCOTRA)	3,108	1.23%
Slovenia – Croatia	802	1.21%
Italy – Croatia	1,822	0.93%
Greece – Bulgaria	632	0.54%

Source: Authors' own construct. No third-party permission required

Again, the participation in the Manche-Channel program is outstanding. But unlike the role of networks in configuration 1, various types of financial resources complemented by embedded research and educational programs create an impact. Germany and Poland have similar ratings for the underlying elements of configuration 2. The same accounts for the ecosystem elements implemented by France and Spain. This indicates a potential positive effect of the coordination of measures to stimulate social entrepreneurship on participation in CBC projects. Also, the program between Austria and Slovenia has an above-average participation, but this is mainly due to extensive financing programs in Austria.

The program between Lithuania and Poland reports no social entrepreneurial participation in CBC projects, which might be due to a low population density in this border region (Kurowska-Pysz, 2023) and hence, a challenging environment to establish a social business.

In Table 8 the membership Euroregions are ranked from the highest to the lowest level of participation.

4.2.3 Configuration 3: education–research–skills, financial resources, [fiscal measures]. Under configuration 3, an absence of fiscal measures is reported. This might indicate that too complex legal frameworks, in combination with fiscal measures, can be a constraining factor for the development of social enterprises and might scare social initiatives away (Diaz Gonzales and Dentchev, 2021; OECD, 2022).

The program between Belgium and the Netherlands has well-implemented ecosystems for research–education–skills and financial resources. In both countries, education focuses on supporting practitioners through universities of applied sciences, e.g. incubators and skill development. The ecosystem element financial resources also shows similarities between both countries. This might indicate a certain degree of coordination between the countries.

While the Euroregion Belgium-The Netherlands shows a relatively high participation, the Euroregions Germany-The Netherlands and Belgium-Germany-the Netherlands are deviating. This effect might be due to lower ratings for research–education–skills and financial resources in Germany compared to Belgium and the Netherlands. Moreover, given the size of Germany as a country, the spread of social enterprise across the country might be less concentrated in border regions.

In Table 9 the membership Euroregions are ranked from the highest to the lowest level of participation.

Table 8. Membership Euroregions configuration 2

Euroregion (INTERREG V-A 2014–2020 program)	SE sector size per million inhabitants (average 1,739)	Participation SE in CBC projects (average 1.88%)
France–United Kingdom (Manche–Channel)	1,878	9.27%
Germany/Mecklenburg–Western pomerania/Brandenburg–Poland	1,707	2.81%
France–Belgium–Germany–Luxembourg (grande région/ großregion)	5,426	2.60%
Spain–France–Andorra (POCTEFA)	1,622	2.36%
Slovenia–Austria	848	2.14%
Poland–Germany/saxony	1,704	1.10%
Austria–Germany/Bavaria (Bayern–Österreich)	1,110	0.83%
Lithuania–Poland	2,005	0.00%

Source: Authors' own construct. No third-party permission required

Table 9. Membership Euroregions configuration 3

Euroregion (INTERREG V-A 2014–2020 program)	SE sector size per million inhabitants (average 1,739)	Participation SE in CBC projects (average 1.88%)
Belgium–The Netherlands (Vlaanderen–Nederland)	1,850	2.97%
Germany/Mecklenburg–Western pomerania/Brandenburg–Poland	1,707	2.81%
France–Belgium–Germany–Luxembourg (grande région/ großregion)	5,426	2.60%
Poland–Germany/saxony	1,704	1.10%
Spain–Portugal (POCTEP)	979	1.03%
Germany–The Netherlands	1,256	0.86%
Belgium–Germany–The Netherlands euregio Meuse-Rhin/euregio Maas-Rijn/euregio Maas-Rhein	2,786	0.56%
Lithuania–Poland	2,002	0.00%

Source: Authors' own construct. No third-party permission required

4.2.4 Configuration 4: network support, financial resources, [visibility and recognition]. Configuration 4 shows the potential synergetic effects between ecosystem elements network support and financial resources. The absence of policy frameworks and legal frameworks might indicate that networks evolve outside institutionalized boundaries and in more informal ways (Frątczak-Müller and Mielczarek-Żejmo, 2020; Svensson and Nordlund, 2015). Spillover effects of networks might occur between local stakeholders and business communities, for instance, about interesting opportunities for collaboration and funding (Folmer *et al.*, 2018).

Social enterprise participation in the program between Belgium–France–The Netherlands–the UK benefits from well-developed supportive ecosystems in these countries. Another contributing factor might be the longstanding cooperation and levels of exchange between these four countries. The program between Austria and Hungary also reports above-average participation due to high ratings for financial resources. Networks are less developed

Table 10. Membership Euroregions configuration 4

Euroregion (INTERREG V-A 2014–2020 program)	SE sector size per million inhabitants (average 1,739)	Participation SE in CBC projects (average 1.88%)
France–Belgium–The Netherlands–United Kingdom (les deux mers/two seas/twee zeeën)	3,728	5.52%
Belgium–France (France–Wallonie–Vlaanderen)	2,944	3.62%
Belgium–The Netherlands (Vlaanderen–Nederland)	1,850	2.97%
Austria–Hungary	1,795	2.72%
Spain–Portugal (POCTEP)	979	1.03%
Austria–Czech Republic	530	0.84%
Italy–Austria	3,390	0.37%

Source: Authors' own construct. No third-party permission required

in Hungary. Although the social enterprise sector size in Austria is far below average, the participation in CBC projects in this program is relatively high.

In Table 10 the membership Euroregions are ranked from the highest to the lowest level of participation.

4.2.5 Configuration 5: fiscal measures, [visibility and recognition], [education–research–skills]. In configuration 5, synergetic effects are missing, and the ongoing debate about the ambiguous role of fiscal measures can be seen here (Long and Liao, 2021; Bondarenko *et al.*, 2023).

The program between Austria and Hungary has an above-average participation. As a common denominator, Austria and Hungary implemented specific fiscal benefits for social entrepreneurship. This might indicate coordination of fiscal measures to a certain degree.

The other membership Euroregions are geographically clustered around Austria and Hungary. Slovakia and Italy are both cooperating in cross-border cooperation programs with Austria and/or Hungary. Indeed, Slovakia and Italy have comparable ratings for fiscal measures compared to Austria and Hungary. This does, however, not result in higher levels of participation.

In Table 11 the membership Euroregions are ranked from the highest to the lowest level of participation.

4.2.6 Configuration 6: visibility and recognition, [education–research–skills], [financial resources]. In configuration 6, ecosystem element visibility and recognition predominates. Indeed, a supportive institutional environment is fundamental (Borzaga *et al.*, 2020; Murzyn, 2021). But as a single condition it fails the synergetic effect with financial resources and research–education–skills as found in configuration 2.

A positive effect of having legal acts implemented before 2014 can be found in the cooperation between Slovenia and Hungary. Underlying structures here are supportive fiscal measures in Hungary and policy frameworks implemented before 2014 in Slovenia. Despite the absence of financial resources and research–education–skills, there is an above-average participation in CBC. The cooperation between Germany/Bavaria and Czech Republic solely relies on legal acts implemented before 2014, resulting in an above-average participation in CBC. Institutionalization in Poland is well advanced compared to other Member States. The participation of social enterprises in CBC projects, however, remains low. In the case of the program Poland-Slovakia, it is only public organizations that participate, similar to the reported cooperation between Poland and Lithuania under configurations 2 and 3.

Table 11. Membership Euroregions configuration 5

Euroregion (INTERREG V-A 2014–2020 program)	SE sector size per million inhabitants (average 1,739)	Participation SE in CBC projects (average 1.88%)
Austria–Hungary	1,795	2.72%
Slovakia–Austria	861	1.85%
Romania–Hungary	1,944	1.53%
Estonia–Latvia	195	1.32%
Slovakia–Hungary	2,308	0.66%
Latvia–Lithuania	1,340	0.54%
Italy–Austria	3,390	0.37%

Source: Authors' own construct. No third-party permission required

Table 12. Membership Euroregions configuration 6

Euroregion (INTERREG V-A 2014–2020 program)	SE sector size per million inhabitants (average 1,739)	Participation SE in CBC projects (average 1.88%)
Slovenia–Hungary	2,295	3.44%
Germany/Bavaria–Czech Republic	1,292	2.66%
Italy–Slovenia	2,368	1.56%
Romania–Bulgaria	648	1.30%
Greece–Bulgaria	632	0.54%
Czech Republic–Poland	1,124	0.32%
Poland–Slovakia	1,455	0.00%

Source: Authors' own construct. No third-party permission required

In Table 12 the membership Euroregions are ranked from the highest to the lowest level of participation.

4.2.7 Configuration 7: visibility and recognition, [financial resources], [fiscal measures]. Configuration 7 includes the presence of core element visibility and recognition but is now combined with the absence of financial resources and fiscal measures. Similar to configuration 6, the results reveal that ecosystem elements are less supportive as a single condition.

The cooperation between Germany/Bavaria and Czech Republic seems to be less affected by the absence of financial resources and fiscal measures. This might be due to legal frameworks in both countries implemented before 2014.

A main finding for configuration 7 is that the absence of core conditions, financial resources and fiscal measures, is hindering the participation of social enterprises in CBC projects. The programs between the UK, Wales, Scotland and Ireland evidence this. The differences with the well-developed ecosystem elements in the UK seem to be counter-productive for participation in CBC projects. For instance, Ireland reports no activities for research–education–skills. Another explanation might be the unequal allocation of social enterprises in the UK. Moreover, supportive ecosystems in Belgium, France and the

Table 13. Membership Euroregions configuration 7

Euroregion (INTERREG V-A 2014–2020 program)	SE sector size per million inhabitants (average 1,739)	Participation SE in CBC projects (average 1.88%)
Germany/Bavaria–Czech Republic	1,292	2.66%
Germany–Denmark	1,007	1.31%
Romania–Bulgaria	848	1.30%
Greece–Cyprus	129	1.18%
Poland–Denmark–Germany–Lithuania–Sweden (South Baltic)	3,308	0.40%
United Kingdom-Ireland (Ireland–Northern Ireland–Scotland)	1,163	0.40%
Czech Republic–Poland	1,124	0.32%
United Kingdom–Ireland (Ireland–Wales)	1,163	0.00%

Source: Authors' own construct. No third-party permission required

Netherlands will also affect here. Finally, the cooperation between Romania and Bulgaria shows that higher levels of institutionalization, e.g. policy frameworks and legal frameworks as a single condition combined with a relative small social enterprise sector size, do not achieve an above-average participation in CBC projects.

In Table 13 the membership Euroregions are ranked from the highest to the lowest level of particiaption.

5. Discussion and conclusions

5.1 Social entrepreneurial ecosystem elements, configurations and cross-border cooperation

Our findings show that supportive social entrepreneurial ecosystems lead to higher levels of social enterprises' participation in CBC projects.

Bearing in mind the effect of interdependency between ecosystems and their actors on ecosystem evolution (Stam and Van de Ven, 2021), our results show the importance of fostering synergetic effects between ecosystem elements rather than implementing isolated supportive measures. Thereby, financial resources (Arabadzhieva and Vutsova, 2021; Borzaga *et al.*, 2020; Davies *et al.*, 2019; Diaz Gonzales and Dentchev, 2021), visibility and recognition (Arabadzhieva and Vutsova, 2021; Borzaga *et al.*, 2020; Folmer *et al.*, 2018; Murzyn, 2021) and fiscal measures (Borzaga *et al.*, 2020; Long and Liao, 2021; Bondarenko *et al.*, 2023) are reported as core elements for achieving such synergies. Configurations 1 and 2 show how the three core elements are complemented by the two peripheral elements network support and research–education–skills. Given the importance social entrepreneurs pay to networks (Folmer *et al.*, 2018), we would have expected a more prominent role of ecosystem element network support. The peripheral status might be explained by the focus of Borzaga *et al.* (2020) on institutional networks instead of the personal networks of the social entrepreneur.

Except for network support, single ecosystem elements did achieve the level of sufficient conditions, meaning that they positively impact the social enterprise sector size. Given the reported consistency and weak correlations between the single ecosystem elements and the participation in CBC projects, the impact at the Euroregion level is expected to be low. Regarding configurations of ecosystem elements, the combination of visibility and recognition, research–education–skills and financial resources in configuration 2 is reported as a necessary condition for having a social enterprise sector. This supportive effect also permeates the participation of social enterprises in CBC projects. Our findings show how higher levels of consistency per configuration are commensurate with higher levels of participation.

Configuration 2 reports five out of eight Euroregions with above-average participation. Aligned with the level of consistency, configurations 4, 3 and 1 also show permeating effects. Indeed, for configurations 5, 6 and 7, permeating effects of single ecosystem elements are less present.

In general, Euroregions in Western Europe show higher levels of participation in social entrepreneurship CBC projects with outstanding programs between France and the UK and between France, Belgium, the Netherlands and the UK. Indeed, these countries do have supportive social entrepreneurial ecosystems, but a longer history of cross-border cooperation also had a positive effect here.

In a few Euroregions, we find similar ratings for specific ecosystem elements leading to above-average levels of participation of social enterprises. This might indicate a certain degree of coordination of supportive measures between countries.

5.2 Limitations

Our study also has several limitations. The first limitation was the inclusion of data only from approved project proposals. Social entrepreneurs participating in non-approved project proposals reveal their wish to engage in CBC projects as well. Granulating data from non-approved proposals would have required a request per Euroregion to allow access to the data, which was not feasible within the timeframe of the research.

Another limitation stems from controlling the relationship between policy priorities and social entrepreneurial participation. Rather than ecosystem elements, policy priorities are considered outcomes of regional stakeholder consultations. An in-depth analysis could reveal underlying mechanisms and intersections between policy priorities on social entrepreneurial engagement in CBC. This was, however, outside the scope of the current research. The same accounts for a profound analysis of evolutionary ecosystem processes in which the ecosystem's inhabitants engage (Stam and Van de Ven, 2021). This involves a complexity of interdependencies, which can be observed within the geographical clustering of configurations across Europe, as presented in Section 4.1, Figure 2.

Geographical and territorial data constraints also limited our study. We combined regional-level data from CBC projects with country-level data for ecosystems (Borzaga *et al.*, 2020). This could be justified, given that ecosystem elements are implemented for a country as a whole. However, we did not take into account specific measures at the regional or local level. In addition, we assumed an equal geographical spread of social enterprises across countries. In densely populated areas and conurbations, social entrepreneurial density and activity will differ from rural areas. As indicated by Borzaga *et al.* (2020), the reliability of the social sector size per country was ranging from very low to very high. Considering the scarcity of quantitative data on social enterprises, this reliability indication is a limitation of our research.

5.3 Theoretical implications

Our study contributes to the research agenda on entrepreneurial ecosystems in three ways. First, as suggested by Stam and Van de Ven (2021), we applied the fsQCA method to identify the most impactful configurations of ecosystem elements. Our focus was on social entrepreneurial ecosystems, yet our results provide insights into the effects of single versus configurations of ecosystem elements. We recommend further in-depth studies into synergetic effects between ecosystem elements, specifically in ecosystems that span country borders.

Second, our findings show the importance of supportive social entrepreneurial ecosystems for social entrepreneurship to scaling outside the geographical context, e.g. across the nearby country border. Supportive ecosystems are indispensable for managing dissimilarities between the start-up and scale-up contexts (Doyle Corner and Kearins, 2021). For example, adapting social services or products to enter cross-border markets involves institutional networks, technological or market knowledge and innovative financial resources.

Third, we identified geographical patterns in the spread of ecosystem element configurations across Europe. This underlines the cultural and historical determinism of entrepreneurial ecosystems (Borzaga *et al.*, 2020; Stam and Van de Ven, 2021). With a perspective on the future, we argue that social entrepreneurship could be beneficial to the EU Cohesion Policy. Hence, we encourage in-depth case studies investigating Euroregions to analyze further the relationship between (1) the policy priorities addressed and the engagement of social entrepreneurship and (2) the mechanisms behind geographical patterns of ecosystems in the Member States.

5.4 Policy and practitioners implications

We derive three main implications for policymakers or practitioners. First, the EC increasingly recognizes the beneficial role of social entrepreneurship in successfully addressing societal issues (Arabadzhieva and Vutsova, 2021; Borzaga *et al.*, 2020; Diaz Gonzales and Dentchev, 2021; Murzyn, 2021). Because complementarities between actors and factors are an important feature of ecosystems (Cobben *et al.*, 2022), Euroregions could be a fruitful ground to employ complementarities between social entrepreneurship and CBC (Wevers *et al.*, 2020). Therefore, Euroregions, in their role as supportive units (De Sousa, 2013), could take a more orchestrating position in the cross-border social entrepreneurial ecosystems. The focus should be on modifiable features of ecosystem elements such as visibility and recognition, financial resources, research–education–skills and network support rather than elements regulated at the national level. Second, policymakers must be aware of the limited effects of isolated ecosystem elements and the importance of creating synergies between ecosystem elements. For instance, isolated fiscal measures will not be used effectively without sufficiently implemented policy frameworks or supportive networks. Given the cross-border context, policymakers must also reconcile measures to strengthen the ecosystem elements with their cross-border counterparts. Third, the awareness of cross-border cooperation among social entrepreneurs needs to be improved. The low participation of social enterprises in CBC seems to be structural by nature, yet we observed a positive deviation under specific conditions. Social entrepreneurs who are better informed about the policy priorities addressed, the funding provided and the knowledge of how to get involved with the support of Euroregions could break this pattern.

Note

1. The terms “social entrepreneurship,” “social enterprise, ” “social entrepreneurial activity” and “social businesses” are interchangeably used in this paper.

References

Arabadzhieva, M. and Vutsova, A. (2021), “Social enterprises’ ecosystem – status quo and its auspicious development”, *REVESCO. Revista De Estudios Cooperativos*, Vol. 137, pp. 1-18, doi: 10.5209/reve.71864.

Belz, F.M. and Binder, J.K. (2017), “Sustainable entrepreneurship: a convergent process model”, *Business Strategy and the Environment*, Vol. 26 No. 1, pp. 1-17.

Biggeri, M., Testi, E. and Bellucci, M. (2017), “Enabling ecosystems for social enterprises and social innovation: a capability approach perspective”, *Journal of Human Development and Capabilities*, Vol. 18 No. 2, pp. 299-306, doi: 10.1080/19452829.2017.1306690.

Bondarenko, I., Schulga, T., Kapustnyk, V., Hotsuliak, S. and Duravkin, P. (2023), “Directions for the implementation of regulatory means for the application of tax benefits in the general system of regulatory regulation of technology support means”, *Eastern-European Journal of Enterprise Technologies*, Vol. 1 No. 13(121), pp. 125-131, doi: 10.15587/1729-4061.2023.274061.

Borzaga, C., Galera, G., Franchini, B., Chiomento, S., Nogales, R. and Carini, C. (2020), European Commission. Social enterprises and their ecosystems in Europe. Comparative synthesis report. Luxembourg: Publications Office of the European Union.

Chen, H. and Tian, Z. (2022), “Environmental uncertainty, resource orchestration and digital transformation: a fuzzy-set QCA approach”, *Journal of Business Research*, Vol. 139, pp. 184-193, doi: 10.1016/j.jbusres.2021.09.048.

Cobben, D., Ooms, W., Roijakkers, N. and Radziwon, A. (2022), "Ecosystem types: a systematic review on boundaries and goals", *Journal of Business Research*, Vol. 142, pp. 138-164, doi: 10.1016/j.jbusres.2021.12.046.

Davies, I.A., Haugh, H. and Chambers, L. (2019), "Barriers to social enterprise growth", *Journal of Small Business Management*, Vol. 57 No. 4, pp. 1616-1636, doi: 10.1111/jsbm.12429.

De Sousa, L. (2013), "Understanding European cross-border cooperation: a framework for analysis", *Journal of European Integration*, Vol. 35 No. 6, pp. 669-687, doi: 10.1080/07036337.2012.71 1827.

Diaz Gonzales, A. and Dentchev, N.A. (2021), "Ecosystems in support of social entrepreneurs: a literature review", *Social Enterprise Journal*, Vol. 17 No. 3, pp. 321-352, doi: 10.1108/SEJ-08-2020-0064.

Doyle Corner, P. and Kearins, K. (2021), "Scaling-up social enterprises: the effects of the geographical context", *Journal of Management and Organization*, Vol. 27 No. 1, pp. 87-105, doi: 10/0.1017/jmo.2018.38.

Durà, A., Camonita, F., Berzi, M. and Noferini, A. (2018), *Euroregions, Excellence and Innovation across EU Borders. A Catalogue of Good Practices*, Department of Geography, UAB, Barcelona, p. 254.

Emmenegger, P., Schraff, D. and Walter, A. (2014), "QCA, the truth table analysis and Large-N survey data: the benefits of calibration and the importance of robustness tests", *COMPASSS Working Paper*, Vol. 2014 No. 79, pp. 1-36.

Fiss, P.C. (2011), "Building better causal theories: a fuzzy set approach to typologies in organization research", *Academy of Management Journal*, Vol. 54 No. 2, pp. 393-420.

Folmer, E., Nederveen, C. and Schutjens, V. (2018), "Network importance and use: commercial versus social enterprises", *Social Enterprise Journal*, Vol. 14 No. 4, pp. 470-490, doi: 10.1108/SEJ-01-2018-0007.

Frątczak-Müller, J. and Mielczarek-Żejmo, A. (2020), "Networks of cross-border cooperation in Europe – the interests and values. The case of Spree–Neisse–Bober Euroregion", *European Planning Studies*, Vol. 28 No. 1, pp. 8-34, doi: 10.1080/09654313.2019.1623972.

Harmaakorpi, V. and Rinkinen, S. (2020), "Regional development platforms as incubators of business ecosystems: case study: the Lahti urban region, Finland", *Growth and Change*, Vol. 51 No. 2, pp. 626-645, doi: 10.1111/grow.12375.

Hazenberg, R., Bajwa-Patel, M., Mazzei, M., Roy, M.J. and Baglioni, S. (2016), "The role of institutional and stakeholder networks in shaping social enterprise ecosystems in Europe", *Social Enterprise Journal*, Vol. 12 No. 3, pp. 302-321, doi: 10.1108/SEJ-10-2016-0044.

Howaniec, H. and Lis, M. (2020), "Euroregions and local and regional development – local perceptions of cross-border cooperation and Euroregions based on the Euroregion Beskydy", *Sustainability*, Vol. 12 No. 18, p. 7834, doi: 10.3390/su12187834.

Interreg (2023), "Interreg programmes portal", available at: https://interreg.eu/

Kurowska-Pysz, J. (2023), "The assessment of partnerships and projects being developed under the touristic cross-border functional area in the Lithuanian-Polish borderland and the Ełk subregion, with regard to financing by the interreg Lithuania-Poland programme 2021–2027", *Luxembourg*: *Publications Office of the European Union*, 2023.

Lester, J. (2018), "Business subsidies in Canada: comprehensive estimates for the government of Canada and the four largest provinces", *The School of Public Policy Publications*, Vol. 11 No. 1, doi: 10.11575/sppp.v11i0.43144.

Long, S. and Liao, Z. (2021), "Are fiscal policy incentives effective in stimulating firms' eco-product innovation? The moderating role of dynamic capabilities", *Business Strategy and the Environment*, Vol. 30 No. 7, pp. 3095-3104, doi: 10.1002/bse.2791.

Mair, J. and Martí, I. (2006), "Social entrepreneurship research: a source of explanation, prediction, and delight", *Journal of World Business*, Vol. 41 No. 1, pp. 36-44.

Meideros, E. (2018), "Should EU cross-border cooperation programmes focus mainly on reducing border obstacles?", *Documents D'Anàlisi Geogràfica*, Vol. 64 No. 3, pp. 467-491, doi: 10.1080/09654313.2011.531920.

Mello, P.A. (2021), *Qualitative Comparative Analysis – An Introduction to Research Design and Application*, Georgetown University Press,Washington, DC.

Mohiuddin, F. and Yasin, I. (2023), "The impact of social capital on scaling social impact: a systematic literature review", *Social Enterprise Journal*, Vol. 19 No. 3, pp. 277-307, doi: 10.1108/SEJ-07-2022-0060.

Murzyn, D. (2021), "Social entrepreneurship and selected elements of the entrepreneurship ecosystem", *Entrepreneurship – Education*, Vol. 17 No. 1, pp. 165-176, doi: 10.24917/20833296.171.13.

Nave, E. and Franco, M. (2021), "Cross-border cooperation to strengthen innovation and knowledge transfer: an Iberian case", *Innovation: The European Journal of Social Science Research*, doi: 10.1080/13511610.2021.1964354.

Nyssens, M., Defourny, J. and Adam, S. (2023), "A 20-year intellectual journey with 'EMES' through the land of social enterprise", *Social Enterprise Journal*, Vol. 19 No. 5, pp. 481-501, doi: 10.1108/SEJ-05-2023-0065.

OECD (2022), *Designing Legal Frameworks for Social Enterprises: Practical Guidance for Policy Makers, Local Economic and Employment Development (LEED), OECD Publishing, Paris*, doi: 10.1787/172b60b2-en.

Pappas, I.O. and Woodside, A.G. (2021), "Fuzzy-set qualitative comparative analysis (fsQCA): guidelines for research practice in information systems and marketing", *International Journal of Information Management*, Vol. 58 No. 2021, pp. 2-22, doi: 10.1016/j.ijinfomgt.2021.102310.

Perkmann, M. (2003), "Cross-border regions in Europe: significance and drivers of regional cross-border co-operation", *European Urban and Regional Studies*, Vol. 10 No. 2, pp. 153-171.

Pickernell, D., Jones, P. and Beynon, M.J. (2019), "Innovation performance and the role of clustering at the local enterprise level: a fuzzy-set qualitative comparative analysis approach", *Entrepreneurship and Regional Development*, Vol. 31 No. 1-2, pp. 82-103, doi: 10.1080/08985626.2018.1537149.

Roy, M.J., McHugh, N., Huckfield, N., Kay, A. and Donaldson, C. (2015), "'The most supportive environment in the world'? Tracing the development of an institutional 'ecosystem' for social enterprise", *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, Vol. 26 No. 3, pp. 777-800, doi: 10.1007/s11266-014-9459-9.

Spigel, B. (2017), "The relational organization of entrepreneurial ecosystems", *Entrepreneurship Theory and Practice*, Vol. 41 No. 1, pp. 49-72, doi: 10.1111/etap.12167.

Spigel, B. and Kitagawa, F. (2020), "A manifesto for researching entrepreneurial ecosystems", *Local Economy: The Journal of the Local Economy Policy Unit*, Vol. 35 No. 5, pp. 482-495, doi: 10.1177/0269094220959052.

Stam, E. and Spigel, B. (2016), "Entrepreneurial ecosystems", Utrecht School of Economics Tjalling C. Koopmans Research Institute. Discussion Paper Series 16-13.

Stam, E. and Van de Ven, A. (2021), "Entrepreneurial ecosystem elements", *Small Business Economics*, Vol. 56 No. 2, pp. 809-832, doi: 10.1007/s11187-019-00270-6.

Svensson, S. and Nordlund, C. (2015), "The building blocks of a Euroregion: novel metrics to measure cross-border integration", *Journal of European Integration*, Vol. 37 No. 3, pp. 371-389, doi: 10.1080/07036337.2014.968568.

Torres, P. and Godinho, P. (2021), "Levels of necessity of entrepreneurial ecosystems elements", *Small Business Economics*, pp. 29-45, doi: 10.1007/s11187-021-00515-3.

Wevers, H.T., Voinea, C.L. and De Langen, F. (2020), "Social entrepreneurship as a form of cross-border cooperation: complementarity in EU border regions", *Sustainability*, Vol. 12 No. 20, p. 8463, doi: 10.3390/su12208463.

Further reading

European Commission (2024), "EU regional and urban environment", available at: https://ec.europa.eu/regional_policy/policy_en

Eurostat (2023), available at: https://ec.europa.eu/eurostat/databrowser/view/sdg_04_20/default/table?lang=en

OECD (2016), *Policy Brief on Scaling the Impact of Social Enterprises-Policies for Social Entrepreneurship*, Publications Office of the European Union, Luxembourg, pp. 1-20, doi: 10.2767/45737.

Ragin (2017), "User's guide to Fuzzy-Set/qualitative comparative analysis", University of California, Irvine.

Corresponding author
Herman Theodoor Wevers can be contacted at: hans.wevers@ou.nl