CORA Cork Open Research Archive
Cartlann Taighde Oscailte Chorcaí

Title	A geographical analysis of social enterprises: the case of Ireland
Authors	Olmedo, Lucas;O'Shaughnessy, Mary;Holloway, Paul
Publication date	2024
Original Citation	Olmedo, L., Shaughnessy, M.O. and Holloway, P. (2024) 'A geographical analysis of social enterprises: the case of Ireland. Social Enterprise Journal', 20(4), pp. 499-521. https://doi.org/10.1108/SEJ-09-2023-0105
Type of publication	Article (peer reviewed)
Link to publisher's version	10.1108/SEJ-09-2023-0105
Rights	© 2024, the Authors. This work is made available under the CC BY license (https://creativecommons.org/licenses/by/4.0/) - https://creativecommons.org/licenses/by/4.0/
Download date	2026-10-07 16:28:02
Item downloaded from	https://hdl.handle.net/10468/16945

UCC
University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

The current issue and full text archive of this journal is available on Emerald Insight at:
https://www.emerald.com/insight/1750-8614.htm

A geographical analysis of social enterprises: the case of Ireland

Lucas Olmedo and Mary O'Shaughnessy
Department of Food Business and Development, University College Cork, Cork, Ireland, and

Paul Holloway
Department of Geography, University College Cork, Cork, Ireland

Received 1 September 2023
Revised 18 December 2023
Accepted 26 March 2024

Abstract

Purpose – This study aims to conduct a geographical analysis of the distribution and type of activities developed by social enterprises in rural and urban areas of Ireland.

Design/methodology/approach – The study analyses data of more than 4,000 social enterprises against a six-tier rural/urban typology, using descriptive statistics and non-parametric tests to test six hypotheses.

Findings – The study shows a geographical rural–urban pattern in the distribution of social enterprises in Ireland, with a positive association between the remoteness of an area and the ratio of social enterprises, and a lack of capital-city effect related to the density of social enterprises. The analysis also shows a statistically significant geographical rural–urban pattern for the types of activities developed by social enterprises. The authors observe a positive association between the remoteness of the areas and the presence of social enterprises operating in the community and local development sector whereas the association is not significant for social enterprises developing welfare services.

Research limitations/implications – The paper shows the potential of using recently developed rural–urban typologies and tools such as geographical information systems for conducting geographical research on social enterprises. The findings also have implications for informing spatially sensitive policymaking on social enterprises.

Originality/value – The merging of a large national data set of social enterprises with geographical tools and data at subregional level contributes to the methodological advancement of the field of social enterprises, providing tools and frameworks for a nuanced and spatially sensitive analysis of these organisations.

Keywords Rural social enterprises, Urban social enterprises, Quantitative research, Geography, Social economy organisations

Paper type Research paper

1. Introduction

Social and solidarity economy organisations, and especially social enterprises, have recently been brought to the fore by international institutions including the European Commission,

© Lucas Olmedo, Mary O. Shaughnessy and Paul Holloway. Published by Emerald Publishing Limited. This article is published under the Creative Commons Attribution (CC BY 4.0) licence. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this licence may be seen at http://creativecommons.org/licences/by/4.0/legalcode

This study have been funded by the Department of Rural and Community Development, Government of Ireland – NUI Post-Doctoral Fellowship in Rural Development 2022. The authors would like to thank you the funders for their support and three anonymous reviewers and the editors of the journal for their feedback.

Social Enterprise Journal
Vol. 20 No. 4, 2024
pp. 499-521
Emerald Publishing Limited
1750-8614
DOI 10.1108/SEJ-09-2023-0105

the organisation for economic co-operation and development (OECD) and the United Nations (European Commission, 2021; OECD, 2022; United Nations, 2023). These institutions acknowledge the contribution and potential of social enterprises to address complex challenges such as climate change, ageing population and lack of access to employment for vulnerable groups; namely, due to the combination of social and/or environmental aims with an economic activity and democratic decision-making which characterise social enterprises (Galera and Borzaga, 2009; Defourny and Nyssens, 2017).

Social enterprises in Ireland have been traditionally considered relevant actors providing goods and services to disadvantaged communities and enabling work integration of vulnerable groups (O'Hara and O'Shaughnessy, 2021). In 2019, the Irish Government launched the first National Social Enterprise Policy for Ireland, representing a milestone for the recognition and institutionalisation of social enterprises in the country (Olmedo *et al.*, 2021). This policy establishes an official definition of social enterprises as follows:

> An enterprise whose objective is to achieve a social, societal or environmental impact, rather than maximising profit for its owners or shareholders. It pursues its objectives by trading on an ongoing basis through the provision of goods and/or services, and by reinvesting surpluses into achieving social objectives. It is governed in a fully accountable and transparent manner and is independent of the public sector. If dissolved, it should transfer its assets to another organisation with a similar mission (Government of Ireland, 2019, p. 8).

This policy recognises, in line with previous research reports on Irish social enterprises (Hynes, 2016; European Commission, 2020), the contribution of Irish social enterprises to deliver a wide range of goods and services, as well as supporting the attainment of government policy goals in areas such as labour market activation but also in health care, climate action, social cohesion and rural development.

Despite common features shared across social enterprises, previous research has highlighted differences between social enterprises operating in rural and urban areas in terms of their community focus, leadership style and funding sources (Smith and McColl, 2016; Barraket *et al.*, 2019). The geographical context where social enterprises operate has been acknowledged as a relevant factor for explaining the work of these organisations (Steiner and Teasdale, 2019; Olmedo *et al.*, 2023) and their contribution to urban and rural development (Angelidou and Mora, 2019; Olmedo and O'Shaughnessy, 2022). Geographically sensitive research on social enterprises has been developed mainly at the local level (Mazzei, 2017; Jammulamadaka and Chakraborty, 2018; Pinch and Sunley, 2016), with some research also conducted at the regional level (Buckingham *et al.*, 2011; Woo and Jung, 2023); however, less is known about the differences in the distribution and the type of activities that social enterprises develop in different rural–urban areas of a country. Therefore, the aim of this paper is to explore the distribution and type of activities developed by social enterprises in different rural and urban areas in Ireland.

To achieve this, we use a six-tier rural–urban typology developed by the Irish Central Statistics Office (CSO, 2019) combined with data on 4,335 social enterprises collected in Ireland. Using geographical information systems (GIS) we georeferenced social enterprises and tested six hypotheses. The spatially sensitive and quantitative empirical data analysis provided by this study adds knowledge to previous calls for geographical research on social enterprises (Munoz, 2010) and provides relevant evidence for the development of spatially sensitive policies for social enterprises (Mazzei and Roy, 2017).

The rest of the paper is structured as follows, Section 2 presents a literature review on previous geographical research on social enterprises. Section 3 outlines the research framework and the hypotheses of this study. Section 4 explains the methodology used in the research. Section 5 presents the findings of this study, with a subsection presenting descriptive statistics and another presenting the analysis of the hypotheses' tested. Section 6

discusses the findings and Section 7 outlines the conclusions and limitations of this study, ending with some proposals for further research.

2. Literature review – geographical research on social enterprises

The publication in 2010 of a seminal call "Towards a geographical research agenda for social enterprise" (Munoz, 2010) meant a significant milestone for the development of a geographically sensitive perspective towards the study of social enterprises. Within this body of research [1], some authors have adopted a micro-geographical perspective to study social enterprises as spaces of well-being (Munoz *et al.*, 2015). For example, Farmer *et al.* (2020) used GIS to link specific sites within a social enterprise to the well-being experienced by the employees of three Australian Work Integration Social Enterprises. Their findings show how the social enterprises studied acted as "socially-supportive workplaces which focus on deploying, developing and supporting talents and not simply allocating people to one job in one location for all time" (Farmer *et al.*, 2020, p. 9).

Another stream of studies has focused on the local geography of social enterprises (Jammulamadaka and Chakraborty, 2018). Some of these studies have a specific urban focus. For example, Pinch and Sunley (2016) investigated whether social enterprises in four major UK cities benefited from urban agglomeration effects, concluding that agglomeration enables greater demand for social enterprises goods and services and better access to institutional support, funding, knowledge and networks. Similarly, Mazzei (2017) stressed the influence of "place" on the incentives and opportunities for two social enterprises operating within English cities.

Previous research has also taken a geographical perspective to study social enterprises in rural areas. Drawing from social network theory, Richter (2019) showed how social enterprises operating in rural Austria and Poland act as embedded intermediaries between their localities and supra-regional networks. In studies conducted in rural Scotland, Steiner and Steinerowska-Streb (2012) and Steiner and Teasdale (2019) stated that rural areas are a fertile ground for social enterprises due to characteristics associated to rurality, such as reduced market competitors and high levels of social capital. Moreover, these studies further explain how rural social enterprises use advantages of the rural context, such as the skills and knowledge of retired people who moved to rural localities, to develop social entrepreneurial activities. In a study conducted in rural Scotland exploring social enterprises in addressing social isolation and loneliness, Kelly *et al.* (2019) concluded that despite these organisations offer more flexible solutions than statutory services, relying on social enterprises as solutions to these challenges is not realistic. This was posited to features associated with the rural context of the study, such as remoteness, small labour markets and depopulation.

This echoes research on social enterprises in rural Ireland conducted by O'Shaughnessy and O'Hara (2016), who stated that geographic isolation and limited job creation associated to the rural context challenges the development of social enterprises. More recently, Olmedo *et al.* (2023) showed how social enterprises in three Irish rural localities, through a process of "placial substantive hybridity", harness and (re)valorise untapped local resources and complement these with extra-local resources to foster social innovation and contribute to an integrated development of their localities.

Geographical research has also been conducted comparing social enterprises operating in rural and urban localities. Smith and McColl (2016) explored the influence of the context in four social enterprises based in Scottish urban and rural communities. The authors found that rural social enterprises show a great linkage between the geographical characteristics of where they are based, their community identity and ownership and type of business developed. Contrarily in the urban social enterprises they studied, it was a social need rather

than a geographical aspect which drove the organisations' aim. In a study conducted in Australia, Barraket *et al.* (2019) compared 11 locally oriented urban and rural social enterprises resourcefulness strategies. The authors showed the great relevance of community networks within rural based social enterprises to access financial and physical assets; however, those social enterprises based in urban areas were more inclined to leverage public funding related to welfare objectives and resources from corporates.

Despite the plethora of research investigating social enterprises at the urban and rural levels, few studies have researched social enterprises through a regional perspective. In this regard, Buckingham *et al.* (2011) attempted to unmask the "enigmatic regional geography of social enterprises in the UK" using statistical data from different surveys related to social enterprises conducted between 2005 and 2009. The authors concluded that interregional variations (north–south and east–west) were relatively small and without statistical significance; except for high levels of social enterprise activity in London due to its dynamic and innovative business environment and the effect that headquarters location of national social enterprises (mainly in London) might have in the data. More recently, Woo and Jung (2023) have explored the regional determinants of the emergence of social enterprises in South Korea. Combining longitudinal data sets (2012–2019) from the Korea Social Enterprise Promotion Agency and Korea Statistics and using an entrepreneurial ecosystems perspective, the authors concluded that the emergence of social enterprises is especially significant in regions experiencing government or market failure and in regions with greater incidences of start-ups, human capital and financial resources.

At the national (country) and international level, research on social enterprises has been mainly conducted from an institutional perspective, influenced by the seminal work of Kerlin (2013) and the international comparative social enterprise models project (Defourny and Nyssens, 2017; Defourny *et al.*, 2020), with scarce studies adopting a geographical perspective. A notable exception can be found in a study conducted by Douglas *et al.* (2018) exploring social enterprises in Fiji, in which the geography of the country, a small remote island in the Pacific Ocean, is considered (together with its history, social, economic, political and cultural institutions) a determinant factor shaping social enterprises in the country.

In summary (see Table 1), the review of the literature shows how geographical research on social enterprises has been conducted at various levels, from micro-organisational to national level; however, to-date this research has predominantly focused on the influence of local geographical elements in shaping the work of social enterprises. Within the local level, urban and rural localities have been subject to research and some differences have been identified in the ways rural–urban social enterprises operate. Regarding the methodologies used by studies, most geographical research on social enterprises have used qualitative methods, with some exceptions in studies that take a regional perspective. In these instances, studies have predominantly used existing survey data and registers of social enterprises (Woo and Jung, 2023). In terms of theoretical perspectives, some studies are based on economic geography theories such as agglomeration and cluster theory (e.g. Pinch and Sunley, 2016; Jammulamadaka and Chakraborty, 2018) and concepts such as "place" borrowed from human geography (e.g. Mazzei, 2017; Olmedo *et al.*, 2023). However, generally the studies reviewed rather use theories from disciplines such as sociology, e.g. social network theory, and business/entrepreneurship, e.g. entrepreneurial ecosystems, complementing these with spatially sensitive elements such as the use of methodological tools such as GIS in their analysis (Farmer *et al.*, 2020), the multi-scalar analysis of networks (Richter, 2019) or a spatial rural–urban comparison of the cases studied (Barraket *et al.*, 2019).

Despite the significant progress of geographical research on social enterprises in recent years, studies have focused on how geographical elements of the context influence the

Geographical analytical level	Relevant findings	Examples of articles
Micro	Social enterprises and spaces of well-being	Munoz *et al.* (2015); Farmer *et al.* (2020)
Local		
Urban	Agglomeration in cities enables greater demand and better access to institutional support, funding, knowledge and networks for social enterprises Characteristics of place influence in incentives and opportunities for social enterprises	Pinch and Sunley (2016); Mazzei (2017)
Rural	Social enterprises as embedded intermediaries between their localities and supra-regional networks Social enterprises harness and (re)valorise untapped local resources and complement these with extra-local resources for integrated development of localities Rural areas are a fertile ground for social enterprises due to some characteristics associated to rurality	Richter (2019); Steiner and Steinerowska-Streb (2012); Steiner and Teasdale (2019); Olmedo *et al.* (2023)
Urban–rural	Rural social enterprises more attached to geographical needs and community networks; urban social enterprises more focus on social needs and welfare objectives	Smith and McColl (2016); Barraket *et al.* (2019)
Regional	Low interregional variations (UK) in distribution of social enterprises, except for capital Emergence of social enterprises related to regions experiencing government or market failure	Buckingham *et al.* (2011); Woo and Jung (2023)
National	Geographical location of Fiji influence in shaping social enterprises	Douglas *et al.* (2018)

Source: Authors' own creation

Table 1. Summary of literature on geographical research on social enterprises

features and work of social enterprises, rather than exploring the basic and critical question (for research and policy) of how social enterprises are geographically distributed, and why. According to Buckingham *et al.* (2011, p. 90), it "seems likely that the most significant geographical differences in the distribution of social enterprises are to be found at the sub-regional level [. . .] and there is clearly a need for further, more fine-grained investigation", see also Steiner *et al.* (2019). This study aims to fill this gap for the case of Ireland by exploring the distribution and type of activities developed by social enterprises in rural and urban areas. To do so, we draw from a combination of increasingly complex thinking about rural–urban spatial heterogeneity, the advancement of methodological tools for rural–urban spatial classification at sub-regional level and from statistical information gathered on Irish social enterprises.

3. Research framework and hypothesis

3.1 Territorial, rural–urban and classifications

This paper is based on a geographical perspective towards the study of social enterprises in Ireland, and more specifically on the analysis of social enterprises in rural and urban areas. The definition of what constitutes a rural and urban area has been subject to extensive debate (see, for example, Mantino *et al.*, 2023; Eurostat, 2021). Within Europe there is no definitive agreement between Member States of what is considered as a rural/urban area; for example, in Ireland, rural areas are defined in terms of settlements with a population of less than 1,500 persons (CSO, 2019), whereas in Spain rural areas are considered as those

municipalities with less than 5,000 inhabitants but also those with less than 30,000 inhabitants and a density lower than 100 inhabitants/km^2 (Government of Spain, 2007). These definitions classify rural–urban areas mainly in terms of population densities.

With the aim of facilitating international comparisons, the OECD developed an urban–rural typology based on three criteria:

(1) population density;

(2) the percentage of the population of a region living in rural communities; and

(3) the presence of large urban centres in such regions.

According to these criteria, NUTS 3 [2] regions are classified into Predominantly Rural; Intermediate and Predominantly Urban (OECD, 2006) [3]. This methodology has been revised by Eurostat (2021) incorporating finer-grain data at Local Administrative Units Level 2 (LAU2) and grid cells of 1 km^2 to categorised territories into cities, towns, semi-dense areas and rural areas. Eurostat (2021) has also included a further subclassification based on population density and size. Towns and semi-dense areas were sub-divided into dense towns, semi-dense towns and suburban or peri-urban areas. Rural areas were also sub-divided into villages, dispersed rural areas and mostly inhabited rural areas. This finer analysis allows for a more precise analysis of the rural–urban continuum overcoming an abrupt differentiation between urban and rural areas but approaching it rather as a continuum that acknowledges the heterogeneity of rural and urban areas.

Besides the classification of rural–urban areas based on population density and size, classifications based on the functions and relations between areas have also been developed (Mantino *et al.*, 2023). These classifications tend to incorporate indicators related to economic factors, for example, the economic growth/decline, the degree of productive activities (agriculture, forestry, manufacturing and construction) and consumption activities (tourism, recreation, housing and services) (Copus *et al.*, 2011). Environmental indicators, for example, related to ecosystems functions (climate regulation, water supply and regulation, soil retention and formation, biodiversity) are also incorporated to classify rural–urban areas based on their (multi)functionality (Mantino *et al.*, 2023). A key aspect of the relationship between rural–urban areas includes the mobility of workers and the access to services. In this regard indicators of proximity related, for example, to the time needed to access to services and infrastructures have also been considered in the classification of rural–urban areas (Eurostat, 2021).

These functional classifications are usually interlinked with the abovementioned rural–urban classifications based on population density creating increasingly nuanced typologies through the multiple criteria that reflects the complexity of relationships between urban and rural areas (Perpiñá Castillo *et al.*, 2022). In this line, the Central Statistics Office of Ireland (CSO) developed in 2019 a six-tier rural–urban typology (CSO, 2019). This typology was developed using the place of work as a measure of distance to services and amenities, combined with population density from Census 2016. The typology is applied to small area population (SAP), and includes the following six categories: cities, satellite urban towns, independent urban towns, rural areas with high urban influence, rural areas with moderate rural influence and highly rural/remote rural areas (see Table 2).

3.2 Hypothesis development

Our study uses the typology developed by the CSO to conduct a geographical analysis of social enterprises in Ireland. Based on this framework, and some of the characteristics of social enterprises presented in the literature review of this paper, six hypotheses have been developed.

Previous studies have suggested that social enterprises are influenced by their geographical context with differences in the spread of social enterprises in rural and urban

Type	Definition
Urban areas	
Cities	Towns/settlements with populations greater than 50,000
Satellite urban towns	Towns/settlements with populations between 1,500 and 49,999, where 20% or more of the usually resident used population's workplace address is in "Cities"
Independent urban towns	Towns/settlements with populations between 1,500 and 49,999, where less than 20% of the usually resident employed population's workplace address is in "Cities"
Rural areas	
Rural areas with high urban influence Rural areas with moderate urban influence Highly rural/remote areas	Rural areas (themselves defined as having an area type with a population less than 1,500 persons, as per census 2016) are allocated to one of three sub-categories, based on their dependence on urban areas Again, employment location is the defining variable. The allocation is based on a weighted percentage of resident used adults of a rural small area who work in the three standard categories of urban area (for simplicity the methodology uses main, secondary and minor urban area). The percentages working in each urban area were weighted through the use of multipliers. The multipliers allowed for the increasing urbanisation for different sized urban areas. For example, the percentage of rural people working in a main urban area had double the impact of the same percentage working in a minor urban area. The weighting acknowledges the impact that a large urban centre has on its surrounding area The adopted weights for: Main urban areas is 2 Satellite urban communities is 1.5 Independent urban communities is 1 The weighted percentages is divided into tertials to assign one of the three rural breakdowns

Source: CSO (2019)

Table 2.
CSO rural–urban typology

areas (Buckingham *et al.*, 2011; CEIS and Social Value Lab, 2023). Some studies stress that rural areas represent a fertile ground for social enterprises (Steiner and Steinerowska-Streb, 2012) and that social enterprises tend to emerge and develop in regions experiencing government or market failure (Woo and Jung, 2023). However, the studies of Buckingham *et al.* (2011) and Pinch and Sunley (2016) suggest a capital-city effect attraction for social enterprises due to its dynamic and innovative business environment, the presence of headquarters location of national social enterprises, greater demand for social enterprises goods and services and better access to institutional support, funding, knowledge and networks, therefore, more supportive social entrepreneurial ecosystems (see also Diaz Gonzalez and Dentchev, 2020).

Based on this we have developed a set of three hypotheses:

H1. States that the presence of social enterprises is significantly associated with the type of rural–urban areas.

H2. States that the presence of social enterprises is positively associated with areas with lower population density and greater distance to services and amenities (remoteness).

H3. States that the presence of social enterprises within the capital city (Dublin) is significantly higher compared to the national average and to other rural and urban areas of Ireland.

Previous research has also pointed towards the influence of the geographical context in the activities developed by social enterprises (Mazzei, 2017; Smith and McColl, 2016). Looking at rural–urban differences and the sector of activities of social enterprises, research has highlighted the key role of social enterprises in community and local development in (remote) rural areas (van Twuijver *et al.*, 2020; Olmedo *et al.*, 2023) and in providing services related to welfare objectives in urban centres (Barraket *et al.*, 2019).

Based on this we have developed another three hypotheses:

H4. States that there is a significant relationship between the sectors of activities in which social enterprises operate and the type of rural–urban areas in which they are based.

H5. States that there is a positive association between areas with lower population density and greater distance to services and amenities (remoteness) and the presence of social enterprises in the sector of community and local development.

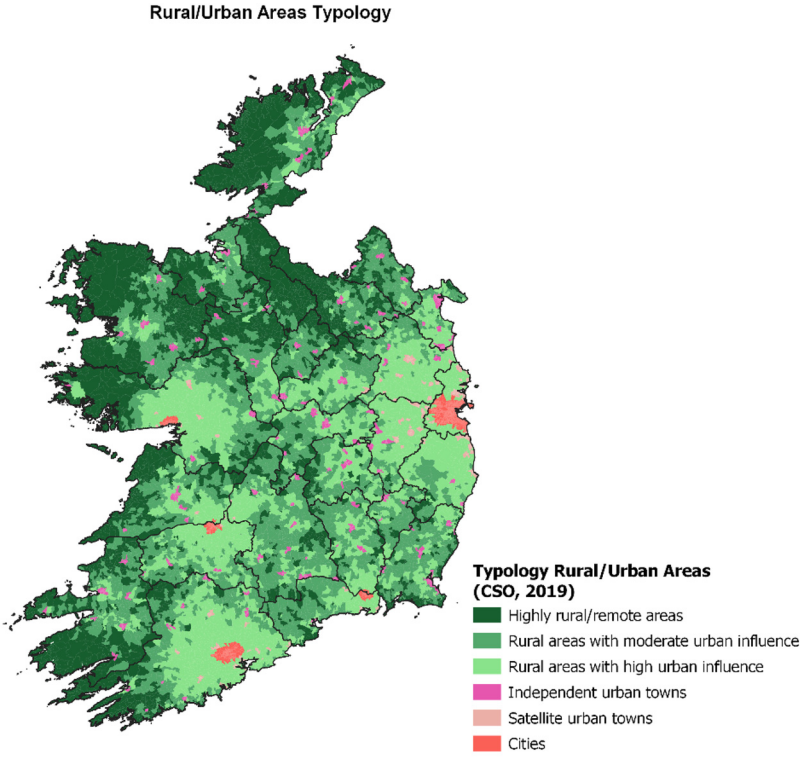
H6. States that there is a negative association between areas with lower population density and greater distance to services and amenities (remoteness) and the presence of social enterprises operating in sectors related to welfare objectives.

4. Methodology

Nationwide data on Irish social enterprises were obtained from a social enterprise baseline data collection exercise conducted in 2022. This baseline data collection exercise followed a bottom-up methodology in which a population of social enterprises for Ireland was built from social enterprises lists provided by 36 intermediary organisations and public institutions delivering social enterprise programmes [4]. The population of social enterprises included 4,335 organisations, geographical-location information was gathered for 4,234 social enterprises and data about their sector of activity was gathered for 4,329 organisations.

Location information of social enterprises was georeferenced using organisation's Eircodes (postal code/zip code equivalent for Ireland), thus allowing for a precise geolocation. The Eircode was either provided by the social enterprises or when not available the address of the organisation was introduced on the website "Eircode finder" to obtain the Eircode. Geographical coordinates for each Eircode were obtained using ArcGIS Online. Once the geographical coordinates were obtained each social enterprise was mapped using the software QGIS [5].

Data related to the CSO rural–urban typology containing information about the type of area (six categories) and population [6] was obtained from the Ordnance Survey Ireland – Open Data Portal [7]. The rural–urban typology developed by the CSO (2019) used in this study was applied to small area levels. Small areas are the lowest level of geography for the compilation of statistics by the CSO in line with data protection guidelines and typically contain between 80 and 120 dwellings (CSO, 2019). A shapefile with small areas ungeneralised – National Statistical Boundaries was used, this contains a subdivision of the territory of the Republic of Ireland into 18,641 small areas. Information of small areas was vectorised and mapped using QGIS. Information about the six rural–urban categories was joined to each small area within QGIS and a choropleth map was created to differentiate between the types of rural–urban areas. Colours from light green (rural areas with high urban influence) to dark green (highly rural/remote areas) were used for rural areas, whereas dark red was used for cities, light red for satellite urban towns and pink for independent urban towns (see Figure 1).



Source: Own reproduction using QGIS, based on Central Statistics Office (CSO, 2019)

Figure 1.
Map rural–urban typology for the Republic of Ireland

The statistical analysis of this study includes three variables: type of rural–urban area, presence of social enterprises and sector of activities of social enterprises. As the aforementioned six-tier typology combines population density with distance to services and amenities, the categories have been ordered according to their level of remoteness, creating a dummy ordinal variable in which cities are converted into 1 (less remote) and highly rural/remote areas into 6 (most remote). The presence of social enterprises was calculated by the ratio of social enterprises divided by 10,000 inhabitants, following international guidelines from previous social enterprises census/baseline studies (see, for example, CEIS and Social Value Lab, 2023). The activities of social enterprises were codified following sectoral categories from the Scottish social enterprise census. This decision was made given the similarities between the countries (Scotland and Ireland) and the long experience of Scotland in constructing this census.

Statistical analysis for this study was conducted using the software R, version 4.2.2, within RStudio. We conducted a descriptive analysis of the variables before undertaking bivariate analysis of the variables to test our hypotheses. Due to the (partially categorical) nature of our data, we used non-parametric statistical tests such as Kruskal–Wallis H test, including post hoc Dunn's test, chi-square test and Jonckheere–Terpstra test to investigate our hypotheses. The specific tests used for testing each hypothesis are explained in the following section.

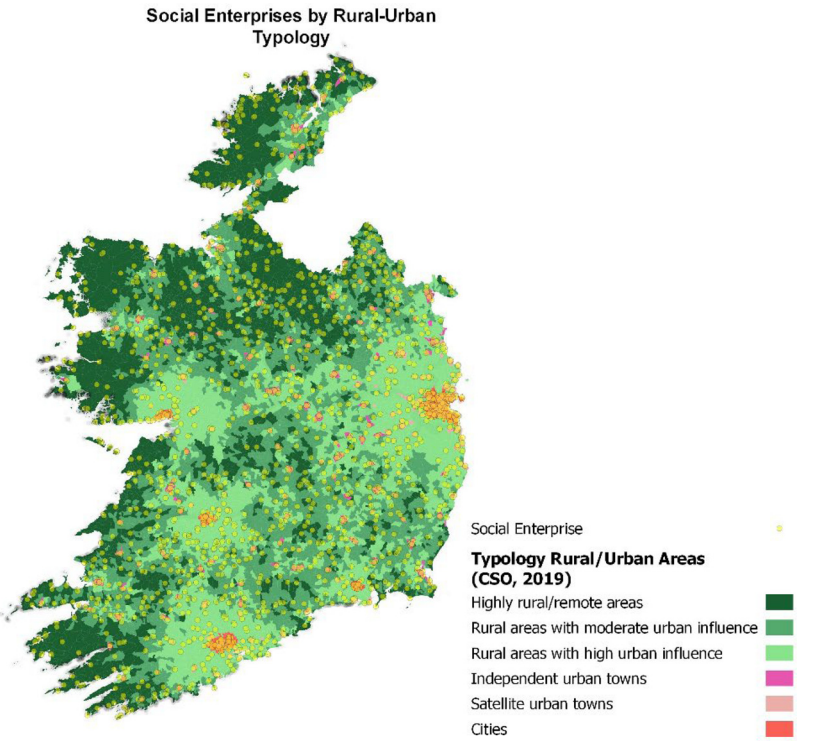
5. Results

5.1 Descriptive statistics

Social enterprises are distributed across rural and urban areas of Ireland (see Figure 2). In terms of total number, social enterprises are often concentrated in counties with the most populated Irish cities, such as Dublin (17.9% of total social enterprises) and Cork (10.5%) (see Figure 3). However, when considering the ratio of social enterprises by population (social enterprises/10,000 inhabitants), higher ratios of social enterprises are found, namely, in the north and northwest of the country (see Figure 4) and in counties with a high density of rural areas, such as Leitrim (26.2 social enterprises per 10,000 inhabitants), Donegal (18.5), Monaghan (17.3) and Mayo (16.5).

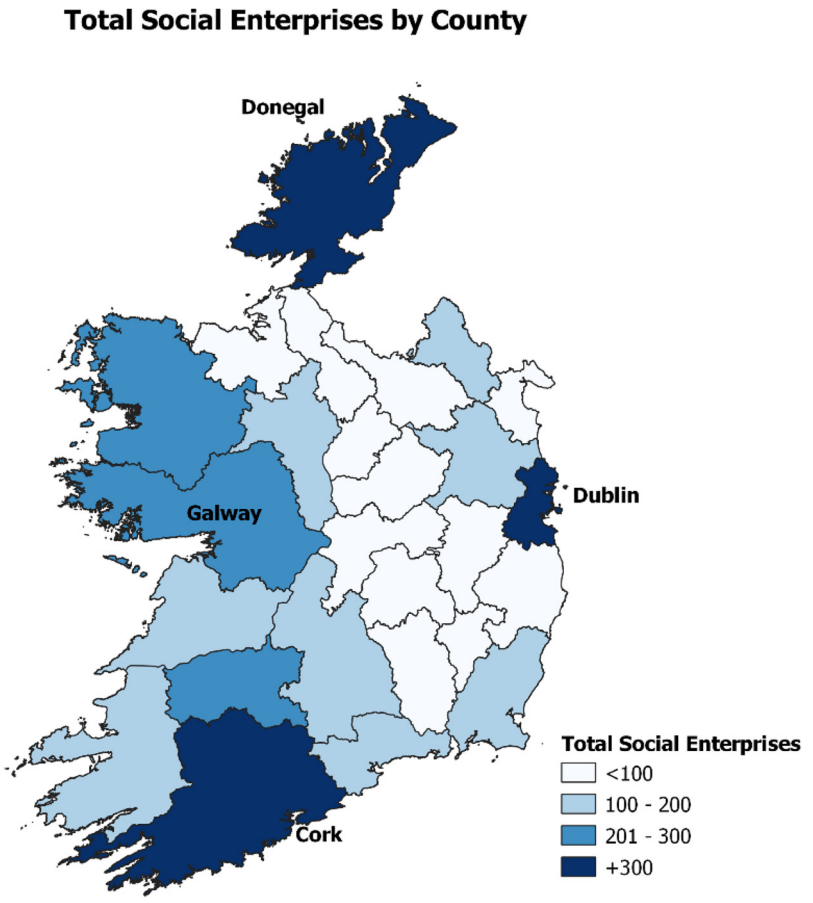
The descriptive analysis of social enterprises in relation to the rural–urban typology (see Table 3), shows that rural areas present a higher ratio of social enterprises (10.8 social enterprises per 10,000 inhabitants) than urban areas (8.0). However, the ratios show important differences when analysing the rural and urban subcategories, with highly rural/remote areas having a ratio of 21.0 social enterprises per 10,000 inhabitants against the 5.9 social enterprises per 10,000 inhabitants of rural areas with high urban influence. Within urban areas, independent urban towns have a higher concentration of social enterprises (12.9), than cities (6.7) and satellite urban towns (4.9).

The descriptive statistical analysis of the sector of activities of Irish social enterprises also shows some differences between rural–urban areas (see Table 4). For example, over



Source: Own elaboration using QGIS

Figure 2.
Map of social enterprises by rural–urban typology



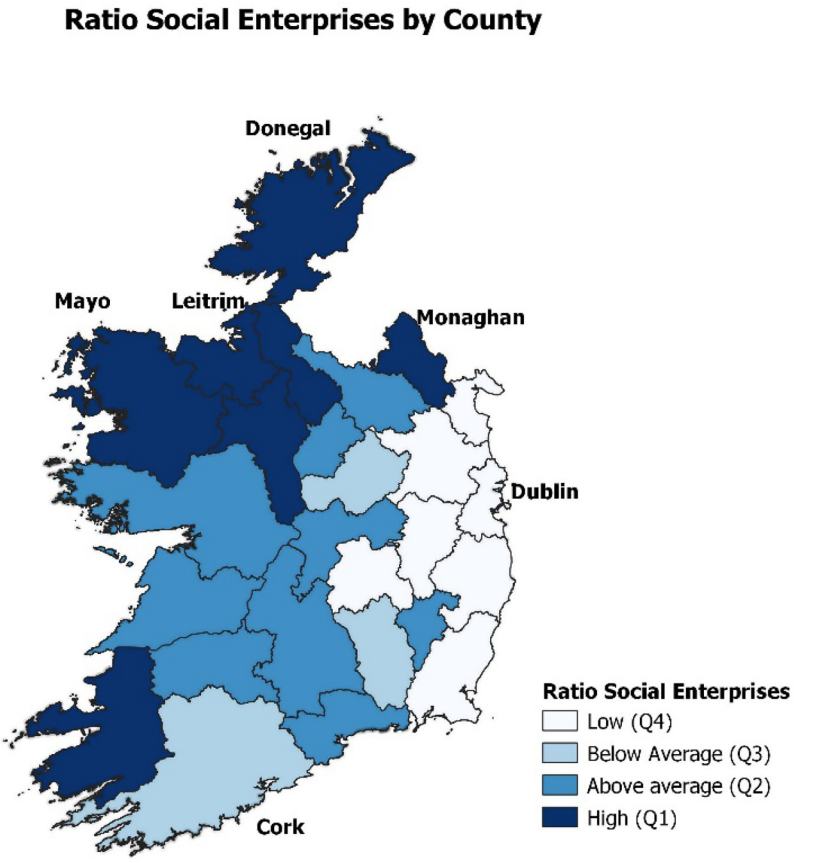
Source: Own elaboration using QGIS

Figure 3.
Map total number of social enterprises by county

20% of social enterprises within each type of rural areas focus on community infrastructure and local development, whereas only 7.9% of social enterprises in cities operate within this sector. On the other hand, approximately 20% of social enterprises in cities and satellite urban towns develop activities related to health, youth services and social care, whereas in rural areas less than 10% of social enterprises operate within this sector. Social enterprises in sectors such as training and work integration, and information and support services are more prominent in cities, approximately 10% of city-based social enterprises operate in these sectors, whereas these sectors represent less than 5% of the total social enterprises based in Irish rural areas.

5.2 Hypothesis testing

Based on previous literature we developed six hypotheses to be tested related to the distribution and sectors of activities of social enterprises in rural and urban areas in Ireland (see Appendix for the results of the statistical test conducted).



Source: Own elaboration using QGIS

Figure 4.
Map ratio of social enterprises by county

Area/Typology	Social enterprises *n*	Social enterprises %	Population *n*	Population %	Ratio (SE/10,000 inhabitants)	
Highly rural/remote areas	865	20.4	412,457	8.8	21.0	10.8 (total rural)
Rural areas with moderate urban influence	580	13.7	587,041	12.5	9.9	
Rural areas with high urban influence	447	10.6	754,794	16.1	5.9	
Independent urban towns	991	23.4	770,329	16.4	12.9	8.0 (total urban)
Satellite urban towns	293	6.9	597,355	12.8	4.9	
Cities	1,058	25.0	1,567,945	33.4	6.7	
Total	4,234	100	4,689,921	100		9.0

Source: Authors' own creation

Table 3.
Ratio of social enterprises by rural–urban area

H1 stated that the presence of social enterprises (measured by the ratio of social enterprises per 10,000 inhabitants) is significantly associated with the type of rural–urban areas (operationalised following the six-tier typology developed by the Irish CSO). To analyse this hypothesis a Kruskal–Wallis H test, a non-parametric version of ANOVA suitable for

Type of area	Childcare (%)	Community infrastructure and local development (%)	Health, youth services and social care (%)	Heritage, festivals, arts and creative industry (%)	Sport and leisure (%)	Training and work integration (%)	Information, support and financial services (%)	Housing (%)	Food, agriculture, catering (%)	Environment, circular economy and renewable energy (%)	Retailing (%)	Transport (%)	Manufacturing (%)	Other (%)
Highly rural/remote areas	28.7	23.8	8.6	15.7	5.3	3.5	3.6	2.9	3.1	2.3	1.4	0.2	0.2	0.6
Rural areas with moderate urban influence	32.2	21.9	9.0	10.5	9.5	3.6	2.4	2.2	3.1	2.4	1.2	0.9	0.2	0.9
Rural areas with high urban influence	23.7	22.4	9.4	10.1	13.4	4.7	5.6	3.4	3.6	2.2	0.4	0.0	0.2	1.1
Independent urban towns	23.8	14.6	14.5	12.7	8.9	5.8	7.1	5.2	2.2	1.3	1.8	0.7	0.4	1.1
Satellite urban towns	23.5	16.4	20.1	8.5	7.5	6.1	4.1	4.4	1.4	2.4	2.7	1.7	0.3	0.7
Cities	28.9	7.9	18.9	5.6	4.3	9.5	9.8	7.0	2.2	4.0	0.6	0.2	0.4	0.7
All Ireland	26.7	16.4	13.7	10.7	7.6	6.1	5.8	4.5	2.7	2.6	1.2	0.5	0.3	0.9

Source: Authors' own creation

Table. 4.
Sectors of activity of social enterprises by rural–urban areas

assessing the differences among three or more groups of a categorical/ordinal variable (rural–urban typology) related to a non-normally distributed continuous variable (social enterprise ratio), was conducted (Vargha and Delaney, 1998). The results from this test show a statistically significant relationship between the variables ($p < 0.01$), supporting *H1*. As the rural–urban areas typology is formed by six categories, a post hoc Dunn test (adjusted with Bonferroni) (Dinno, 2022) was conducted to compare the relationship between each of the pair categories. The results from this test show a significant relationship between all categories except for "cities and satellite urban towns" and "cities and rural areas with high urban".

H2 refers to the positive association between the presence (ratio) of social enterprises and areas with lower population density and greater distance to services and amenities (remoteness). The six rural–urban categories have been ordered into a dummy variable from 1 to 6 according to their degree of "remoteness". To test the (positive) directional association between the ratio of social enterprises and the rural–urban areas according to their degree of "remoteness" a Jonckheere–Terpstra test, a non-parametric test similar to Kruskal–Wallis H test, but preferred when the groups are assumed to be arranged in order (ascendent or descendent), was conducted (Ali *et al.*, 2015). The results show a significant positive association ($p < 0.01$) between the remoteness of the rural–urban areas studied and the presence (ratio) of social enterprises, supporting *H2*.

H3 refers to the significantly higher presence (ratio) of social enterprises within the capital city (Dublin) compared to the national average and to other rural–urban areas of Ireland. To test this hypothesis, first, we calculated the ratio of social enterprises for the specific SAPs belonging to the category "cities" within County Dublin which accounts for 6.2 social enterprises per 10,000 inhabitants. Although social enterprises based in the city of Dublin represent 16.4% of total Irish social enterprises, the ratio of social enterprises in the city of Dublin (6.2) is below the national average (9.0) and lower than in other urban areas, including other Irish cities of more than 50,000 inhabitants (8.3) and independent urban towns (12.9). The ratio of social enterprises in Dublin city is also lower than in rural areas with moderate urban influence (9.9) and highly rural/remote areas (21.0).

Alternatively, the ratio of social enterprises in Dublin city is higher than in satellite urban towns (4.9) and rural areas with high rural influence (5.9). To analyse the statistical significance between the ratios of Dublin city and the categories with lower ratios we used Welch's two-sample *t*-test, suitable for comparing means of groups with unequal variances (Lu and Yuan, 2010). The results show no statistically significant difference between these means ($p > 0.05$), thus *H3* was not supported.

H4 refers to the significant relationship between the sectors of activities in which social enterprises operate and the type of rural–urban areas in which they are based. Due to the categorical nature of both variables, a Pearson chi-square test (test of independence) was conducted (Franke *et al.*, 2012). The results show a statistical significance relationship between the variables ($p < 0.01$), supporting *H4*.

H5 refers to a positive association between areas with lower population density and greater distance to services and amenities (remoteness) and the presence of social enterprises in the community and local development sector and; *H6* refers to a negative association between areas with lower population density and greater distance to services and amenities (remoteness) and the presence of social enterprises operating in sectors associated with welfare objectives such as "childcare" and "health, youth services and social care". We followed the procedure explained in *H2* of using a dummy variable to order the rural–urban categories according to their remoteness. Social enterprises within the category "community infrastructure and local development" were used to test *H5*.

Data of social enterprises from two categories, i.e. "childcare", and "health, youth services and social care", were used to test *H6*.

To test the directional association between the ratio of social enterprises in community and local development (*H5*) and in welfare services (*H6*) with the rural–urban areas according to their degree of "remoteness" a Jonckheere–Terpstra test (Ali *et al.*, 2015) was conducted. The results show a statistically significant relationship ($p < 0.05$) for the variables of *H5*, supporting this hypothesis. However, results for *H6* were not statistically significant ($p > 0.05$), thus this hypothesis was not supported.

In summary, our statistical analysis shows support for four of our six hypotheses (see Table 5). The hypothesis supported by our statistical analysis show a geographical rural–urban pattern in the distribution of social enterprises in Ireland (*H1*) with a positive statistically significant association between the remoteness of the area and the ratio of social enterprises (*H2*). However, our analysis suggests that there is not a capital effect that attracts a higher ratio of social enterprises to Dublin city (*H3*). The statistical analysis also shows a geographical rural–urban pattern between the types of activities developed by social enterprises and the type of areas where they are based (*H4*), with a positive association between the degree of remoteness of the area where social enterprises are based and the ratio of social enterprises in the community and local development sector (*H5*). However, our analysis does not support a negative association between the degree of remoteness of the areas and the ratio of social enterprises in activities related to welfare services such as childcare and health, youth services and social care (*H6*).

6. Discussion

The aim of this paper is to explore the distribution and type of activities developed by social enterprises in different rural and urban areas in Ireland. The results from our analysis show distinctive rural–urban patterns in the distribution of these organisations. Our research advances previous regional analysis of social enterprises (Buckingham *et al.*, 2011) through the provision of fine-grained statistical data at subregional level and with a focus on heterogeneous rural and urban areas instead of following regional/county administrative divisions. The use of the six-tier rural–urban typology and the geo-localisation of social

Hypothesis	Decision
H1: the presence of social enterprises is significantly associated with the type of rural–urban areas	Supported
H2: the presence of social enterprises is positively associated to areas with lower population density and greater distance to services and amenities (remoteness).	Supported
H3: the presence of social enterprises within the capital city (Dublin) is significantly higher compared to the national average and to other rural and urban areas of Ireland	Not supported
H4: there is a significant relationship between the sectors of activities in which social enterprises operate and the type of rural–urban areas in which they are based	Supported
H5: there is a positive association between areas with lower population density and greater distance to services and amenities (remoteness) and the presence of social enterprises in community and local development	Supported
H6: there is a negative association between areas with lower population density and greater distance to services and amenities (remoteness) and the presence of social enterprises operating in sectors related to welfare objectives such as childcare, health and social care	Not supported

Source: Authors' own creation

Table 5. Summary of hypothesis' support

enterprises provides detailed evidence which can be used as a base by regional development actors and public authorities to develop targeted measures for social enterprises in geographically diverse areas (Mazzei and Roy, 2017; Steiner and Teasdale, 2019).

Our results show the positive association between the presence of social enterprises and the degree of remoteness (low density of population and low access to services and amenities). These results align with previous studies that suggested rural areas and regions characterised by state and market failure as fertile grounds for social enterprises. (Steiner and Steinerowska-Streb, 2012; Woo and Jung, 2023). Our study does not support the hypothesis that the capital city, in this case Dublin, with its greater entrepreneurial and innovation ecosystem acts as a significant area of social enterprises development – at least relative to its population. This result contradicts the analysis of Buckingham *et al.* (2011) which stressed the greater presence of social enterprises in London compared to other UK regions due to its capital effect.

Our results show the relevance of social enterprises in "lagged behind areas" and their aim to respond to unsatisfied needs, especially of marginalised people and territories (Olmedo *et al.*, 2023). The great presence of social enterprises in these remote territories has meant the development of a wide range of services and community infrastructure which otherwise would have not been provided to the local population (Aiken *et al.*, 2016; van Twuijver *et al.*, 2020). However, the presence of social enterprises cannot be automatically related to a greater capacity of these areas to overcome their challenges. Previous studies on rural social enterprises have shown their great potential to contribute to a socially inclusive and territorial integrated development when cooperating with other development actors including for-profit businesses and public institutions; however, these previous studies also show the incapacity of rural social enterprises to change, by themselves, structural-exogenous forces affecting marginalised territories (Bock, 2016; Olmedo and O'Shaughnessy, 2022).

Our analysis of social enterprises by sectors of activities in different geographical areas does not show a relationship between social enterprises operating in urban areas and their greater focus on welfare objectives, contrary to the findings of Barraket *et al.* (2019). It is important to note than in Ireland (community) childcares represent an important number of social enterprises (over 25%) and these are spread across the whole territory without a clear distinctive geographical pattern. Descriptive statistics by sectors of activity show that social enterprises focusing on activities related to health, youth services and social care represent over 10% in urban areas and only approximately 5% in rural areas which would be more in line with the results of Barraket *et al.* (2019) in Australia and Smith and McColl (2016) in Scotland when comparing urban and rural social enterprises.

Our results also show a significant focus of social enterprises on remote and rural areas in community and local development activities. This aligns with previous research on rural social enterprises that stress the relevance of community social entrepreneurship in rural territories (Peredo and Chrisman, 2006) and the important role of rural (community-based) social enterprises in local development (O'Shaughnessy *et al.*, 2011; Steiner and Teasdale, 2019; van Twuijver *et al.*, 2020). The significant developmental role of social enterprises in rural areas aligns with a key feature of rural social enterprises, which is their tendency to merge social, economic and/or environmental aims, contributing to an integrated territorial development (Olmedo *et al.*, 2023). However, this significant focus of social enterprises in rural areas on community and local development activities often implies the development of basic infrastructure and services that are usually provided by public administrations in urban areas (Bock, 2016). Thus social enterprises can, in this instance, be interpreted as a substitute arising from the absence and/or retrenchment of the state and public services (Roy and Grant, 2019); this, in turn, can create an overburden to the citizens of these areas

and increase the disparities between those better equipped and vulnerable social groups and territories (Bock, 2016).

7. Conclusions, limitations and further research

This paper explored the distribution and sectors of activity of social enterprises in Ireland against a six-tier rural–urban typology that combines population density and access to services and amenities, adding a timely contribution to the body of geographical research on social enterprises. We suggest that the combination of national data of social enterprises with geographical tools and data at subregional level contributes to the methodological advancement of the field of social enterprises, through the provision of tools and frameworks for a nuanced and spatially sensitive analysis of these organisations. Moreover, this study contributes to testing, through a quantitative analysis, hypotheses developed from the findings of previous geographical research on social enterprises.

Our findings show geographical patterns in the distributions of social enterprises, such as their greater presence in highly rural/remote areas and the lack of a capital city effect in terms of density of social enterprises. Our analysis also shows a geographical rural–urban differentiation in terms of sectors of activity, with social enterprises in the community and local development sector being especially relevant in rural areas. Against this evidence, we conclude that social enterprise policies should incorporate territorially sensitive and place-based measures that account for the diversity of rural and urban areas. To this end, the alignment of social enterprises and rural development policies is a key aspect for harnessing the potential of these organisations in rural areas. However, we also conclude that there is great scope for the development of social enterprises in specific sectors in rural and remote areas, such as the creative industry, sustainable agri-food and the circular economy. The development of social enterprises within these sectors is linked to fostering a more socially and territorially inclusive society, but also to wider aspects related to the twin (digital and green) transitions.

This study is not absent of limitations. Social enterprises are context-specific, and the rural–urban typology used in this study was created by the Irish CSO with specific criteria. This makes international comparability difficult and any generalization of the results from this study to other contexts/countries should be taken with caution. Interestingly the Scottish Social Enterprise Census (latest version is of 2021) also follows a six-tier rural–urban typology, showing an important presence of social enterprises in remote rural areas; however, the use of different indicators for developing the Scottish rural–urban typology does not allow for a rigorous comparison with the data shown in this study. Recently developed methodologies such as the Global Human Settlement Layer by the Joint Research Centre of the European Commission (Dijkstra *et al.*, 2021), which harmonise indicators for urban and rural areas to support consistent international comparisons across countries represent an interesting avenue for further research that compares geographical patterns of social enterprises in different countries. In this regard, the increasing amount of geolocation information and geographically sensitive data collection on social enterprises, and more generally on social economy organisations, can also represent an important advancement for future research.

A final suggestion for further research relates to the combination of geographical and institutional frameworks for the (quantitative) study of spatial patterns in social enterprises that can inform place-based social enterprise policies. This study can be further developed by isolating specific clusters of social enterprises at regional level and exploring their impact on the development of their areas and the critical factors supporting and/or hindering this impact.

Notes

1. The main source for selecting the papers for the literature review was a search on Scopus (conducted in early 2023), with the search string: TITLE-ABSTRACT-KEYWORDS ("geography" OR "rural" OR "urban" OR "regional") AND "social enterprises". From this search only papers where geography was considered an explanatory factor/dimension in the analysis of the features and/or work of social enterprises were selected. The article Douglas *et al.* (2018) was added by the authors.
2. Nomenclature of territorial units for statistics (see Eurostat, https://ec.europa.eu/eurostat/web/nuts/background)
3. The classification of regions into one of the three categories is based on the following criteria:

   Population density. A community is defined as rural if its population density is below 150 inhabitants per km^2 (500 inhabitants for Japan to account for the fact that its national population density exceeds 300 inhabitants per km^2).

   Regions by % population in rural communities. A region is classified as predominantly rural if more than 50% of its population lives in rural communities, predominantly urban if less than 15% of the population lives in rural communities, and intermediate if the share of the population living in rural communities is between 15% and 50%.

   Urban centres. A region that would be classified as rural on the basis of the general rule is classified as intermediate if it has an urban centre of more than 200,000 inhabitants (500,000 for Japan) representing no less than 25% of the regional population. A region that would be classified as intermediate on the basis of the general rule is classified as predominantly urban if it has an urban centre of more than 500,000 inhabitants (1,000,000 for Japan) representing no less than 25% of the regional population.
4. More information about this methodology is available at: "Social Enterprises in Ireland – a Baseline data collection exercise" www.gov.ie/ga/foilsiuchan/b30e5-social-enterprises-in-ireland-a-baseline-data-collection-exercise/#:~:text=In%202022%2C%20the%20Department%20of%20Rural%20and%20Community,sector%2C%20an%20online%20survey%20was%20developed%20and%20published
5. QGIS (Quantum Geographical Information System) is a free and open-source software for spatial analysis. See https://qgis.org/en/site/
6. Now Tailte Éireann, see https://data-osi.opendata.arcgis.com/
7. The more recent data for population at small area level at the time of this study was from Census 2016.

References

Aiken, M., Taylor, M. and Moran, R. (2016), "Always look a gift horse in the mouth: community organisations controlling assets", *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, Vol. 27 No. 4, pp. 1669-1693.

Ali, A., Rasheed, A., Siddiqui, A., Naseer, M., Wasim, S. and Akhtar, W. (2015), "Non-parametric test for ordered medians: the Jonckheere Terpstra test", *International Journal of Statistics in Medical Research*, Vol. 4 No. 2, pp. 203-207, doi: 10.6000/1929-6029.2015.04.02.8.

Angelidou, M. and Mora, L. (2019), "Developing synergies between social entrepreneurship and urban planning", *disP - the Planning Review*, Vol. 55 No. 4, pp. 28-45, doi: 10.1080/02513625.2019.1708068.

Barraket, J., Eversole, R., Luke, B. and Barth, S. (2019), "Resourcefulness of locally-oriented social enterprises: implications for rural community development", *Journal of Rural Studies*, Vol. 70, pp. 188-197, doi: 10.1016/j.jrurstud.2017.12.031.

Bock, B.B. (2016), "Rural marginalisation and the role of social innovation; a turn towards nexogenous development and rural reconnection", *Sociologia Ruralis*, Vol. 56 No. 4, pp. 552-573, doi: 10.1111/soru.12119.

Buckingham, H., Pinch, S. and Sunley, P. (2011), "The enigmatic regional geography of social enterprise in the UK: a conceptual framework and synthesis of the evidence", *Area*, Vol. 44 No. 1, pp. 83-91, doi: 10.1111/j.1475-4762.2011.01043.x.

CEIS and Social Value Lab (2023), "Social enterprise in Scotland. Census 2021", *Scottish Government*, available at: https://socialenterprisecensus.org.uk/wp-content/themes/census19/pdf/2021-report.pdf (accessed 29 August 2023).

Copus, A., Courtney, P., Dax, T., Meredith, D., Noguera, J., Talbot, H. and Shucksmith, M. (2011), "EDORA: European development opportunities for rural areas", Final Report, Luxembourg, ESPON.

CSO (2019), "Urban and rural life in Ireland", *CSO*, available at: www.cso.ie/en/releasesandpublications/ep/p-urli/urbanandrurallifeinireland2019/introduction/ (accessed 22 April 2024).

Defourny, J. and Nyssens, M. (2017), "Fundamentals for an international typology of social enterprise models", *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, Vol. 28 No. 6, pp. 2469-2497, doi: 10.1007/s11266-017-9884-7.

Defourny, J., Nyssens, M. and Brolis, O. (2020), "Testing social enterprise models across the world: evidence from the 'international comparative social enterprise models (ICSEM) project'", *Nonprofit and Voluntary Sector Quarterly*, Vol. 50 No. 2, p. 89976402095947, doi: 10.1177/0899764020959470.

Diaz Gonzalez, A. and Dentchev, N. (2020), "Ecosystems in support of social entrepreneurs: a literature review", *Social Enterprise Journal*, Vol. 17 No. 3, pp. 329-360, doi: 10.1108/SEJ-08-2020-0064.

Dijkstra, L., Florczyk, A.J., Freire, S., Kemper, T., Melchiorri, M., Pesaresi, M. and Schiavina, M. (2021), "Applying the degree of urbanisation to the globe: a new harmonised definition reveals a different picture of global urbanisation", *Journal of Urban Economics*, Vol. 125, p. 103312, doi: 10.1016/j.jue.2020.103312.

Dinno, A. (2022), "Dunn's test of multiple comparisons using rank sums", available at: https://cran.r-project.org/web/packages/dunn.test/dunn.test.pdf (accessed 30 August 2023).

Douglas, H., Eti-Tofinga, B. and Singh, G. (2018), "Contextualising social enterprise in Fiji", *Social Enterprise Journal*, Vol. 14 No. 2, pp. 208-224, doi: 10.1108/SEJ-05-2017-0032.

European Commission (2020), "Social enterprises and their ecosystems in Europe", *Country Report Ireland*. Luxembourg, Publications Office of the European Union.

European Commission (2021), "Building an economy that works for people: an action plan for the social economy", Luxembourg, Publications Office of the European Union.

Eurostat (2021), "Applying the degree of urbanisation—a new international manual for defining cities, towns and rural areas—2021 edition", available at: https://ec.europa.eu/eurostat/web/products-catalogues/-/ks-04-20-676 (accessed 29 August 2023).

Farmer, J., Kamstra, P., Brennan-Horley, C., De Cotta, T., Roy, M., Barraket, J., Munoz, S.-A. and Kilpatrick, S. (2020), "Using micro-geography to understand the realisation of wellbeing: a qualitative GIS study of three social enterprises", *Health and Place*, Vol. 62, p. 102293, doi: 10.1016/j.healthplace.2020.102293.

Franke, T.M., Ho, T. and Christie, C.A. (2012), "The chi-square test: often used and more often misinterpreted", *American Journal of Evaluation*, Vol. 33 No. 3, pp. 448-458, doi: 10.1177/1098214011426594.

Galera, G. and Borzaga, C. (2009), "Social enterprise: an international overview of its conceptual evolution and legal implementation", *Social Enterprise Journal*, Vol. 5 No. 3, pp. 210-228, doi: 10.1108/17508610911004313.

Government of Ireland (2019), *National Social Enterprise Policy for Ireland 2019-2022*, Government of Ireland, Dublin.

Government of Spain (2007), "Ley 45/2007 de 13 diciembre, Para el desarrollo sostenible del medio rural", *Boletín Oficial Del Estado, 14 de Diciembre de 2007, (299)*, pp. 51339-51349.

Hynes, B. (2016), *Creating an Enabling, Supportive Environment for the Social Enterprise Sector in Ireland*, The Irish Local Development Network, Ireland.

Jammulamadaka, N. and Chakraborty, K. (2018), "Local geographies of developing country social enterprises", *Social Enterprise Journal*, Vol. 14 No. 3, pp. 367-386, doi: 10.1108/SEJ-11-2016-0051.

Kelly, D., Steiner, A., Mazzei, M. and Baker, R. (2019), "Filling a void? The role of social enterprise in addressing social isolation and loneliness in rural communities", *Journal of Rural Studies*, Vol. 70, pp. 225-236, doi: 10.1016/j.jrurstud.2019.01.024.

Kerlin, J.A. (2013), "Defining social enterprise across different contexts: a conceptual framework based on institutional factors", *Nonprofit and Voluntary Sector Quarterly*, Vol. 42 No. 1, pp. 84-108, doi: 10.1177/0899764011433040.

Lu, Z. and Yuan, K.-H. (2010), "Welch's *t* test", Salkind, N.J. (Ed.), *Encyclopedia of Research Design*, SageEditors, Thousand Oaks, CA, pp. 1620-1623, doi: 10.13140/RG.2.1.3057.9607.

Mantino, F., Forcina, B. and Morse, A. (2023), "Exploring the rural-urban continuum", Methodological framework to define Functional Rural Areas and rural transitions. RUSTIK. D1.1., available at: https://rustik-he.eu/wp-content/uploads/2023/04/RUSTIK_D-1-1_Methodological_Framework_31.03.23.pdf (accessed 25 August 2023).

Mazzei, M. (2017), "Understanding difference: the importance of 'place' in the shaping of local social economies", *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, Vol. 28 No. 6, pp. 2763-2784, doi: 10.1007/s11266-016-9803-3.

Mazzei, M. and Roy, M.J. (2017), "From policy to practice: exploring practitioners' perspectives on social enterprise policy claims", *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, Vol. 28 No. 6, pp. 2449-2468, doi: 10.1007/s11266-017-9856-y.

Munoz, S.-A. (2010), "Towards a geographical research agenda for social enterprise", *Area*, Vol. 42 No. 3, pp. 302-312, doi: 10.1111/j.1475-4762.2009.00926.x.

Munoz, S.-A., Farmer, J., Winterton, R. and Barraket, J. (2015), "The social enterprise as a space of well-being: an exploratory case study", *Social Enterprise Journal*, Vol. 11 No. 3, pp. 281-302, doi: 10.1108/SEJ-11-2014-0041.

O'Hara, P. and O'Shaughnessy, M. (2021), "'Social enterprise in Ireland. State support key to, the predominance of work integration social enterprise (WISE)", in Defourny, J. and Nyssens, M. (Eds), *Social Enterprise in Western Europe. Theory, Models and Practice*, Routledge, London/New York, NY, pp. 112-130.

O'Shaughnessy, M. and O'Hara, P. (2016), "Towards an explanation of Irish rural-based social enterprises", *International Review of Sociology*, Vol. 26 No. 2, pp. 223-233, doi: 10.1080/03906701.2016.1181389.

O'Shaughnessy, M., Casey, E. and Enright, P. (2011), "Rural transport in peripheral rural areas: the role of social enterprises in meeting the needs of rural citizens", *Social Enterprise Journal*, Vol. 7 No. 2, pp. 183-190, doi: 10.1108/17508611111156637.

OECD (2006), "The new rural paradigm. Policies and governance", OECD Publishing, Paris.

OECD (2022), "Recommendation of the council on the social and solidarity economy and social innovation", OECD/LEGAL/0472.

Olmedo, L. and O'Shaughnessy, M. (2022), "Community-based social enterprises as actors for Neo-Endogenous rural development: a multi-stakeholder approach", *Rural Sociology*, Vol. 87 No. 4, pp. 1191-1218, doi: 10.1111/ruso.12462.

Olmedo, L., van Twuijver, M. and O'Shaughnessy, M. (2023), "Rurality as context for innovative responses to social challenges – the role of rural social enterprises", *Journal of Rural Studies*, Vol. 99, pp. 272-283, doi: 10.1016/j.jrurstud.2021.04.020.

Olmedo, L., van Twuijver, M., O'Shaughnessy, M. and Sloane, A. (2021), "Irish rural social enterprises and the national policy framework", *Administration*, Vol. 69 No. 4, pp. 9-37.

Peredo, A.M. and Chrisman, J.J. (2006), "Toward a theory of community-based enterprise", *Academy of Management Review*, Vol. 31 No. 2, pp. 309-328.

Perpiñá Castillo, C., Heerden, S., Barranco, R., Jacobs-Crisioni, C., Kompil, M., Kučas, A., Aurambout, J.-P., Silva, F. and Lavalle, C. (2022), "Urban-rural continuum: an overview of their interactions and territorial disparities", *Regional Science Policy and Practice*, Vol. 15 No. 4, doi: 10.1111/rsp3.12592.

Pinch, S. and Sunley, P. (2016), "Do urban social enterprises benefit from agglomeration? Evidence from four UK cities", *Regional Studies*, Vol. 50 No. 8, pp. 1290-1301, doi: 10.1080/00343404.2015.1034667.

Richter, R. (2019), "Rural social enterprises as embedded intermediaries: the innovative power of connecting rural communities with supra-regional networks", *Journal of Rural Studies*, Vol. 70, pp. 179-187, doi: 10.1016/j.jrurstud.2017.12.005.

Roy, M. and Grant, S. (2019), "The contemporary relevance of Karl Polanyi to critical social enterprise scholarship", *Journal of Social Entrepreneurship*, Vol. 11 No. 2, doi: 10.1080/19420676.2019.1621363.

Smith, A.M. and McColl, J. (2016), "Contextual influences on social enterprise management in rural and urban communities", *Local Economy: The Journal of the Local Economy Policy Unit*, Vol. 31 No. 5, pp. 572-588, doi: 10.1177/0269094216655519.

Steiner, A. and Steinerowska-Streb, I. (2012), "Can social enterprise contribute to creating sustainable rural communities? Using the lens of structuration theory to analyse the emergence of rural social enterprise", *Local Economy: The Journal of the Local Economy Policy Unit*, Vol. 27 No. 2, pp. 167-182, doi: 10.1177/0269094211429650.

Steiner, A. and Teasdale, S. (2019), "Unlocking the potential of rural social enterprise", *Journal of Rural Studies*, Vol. 70, pp. 144-154, doi: 10.1016/j.jrurstud.2017.12.021.

Steiner, A., Farmer, J. and Bosworth, G. (2019), "Rural social enterprise–evidence to date, and a research agenda", *Journal of Rural Studies*, Vol. 70, pp. 139-143, doi: 10.1016/j.jrurstud.2019.08.008.

United Nations (2023), "Promoting the social and solidarity economy for sustainable development", *United Nations, Inter-Agency Task on Social and Solidarity Economy Force*, available at: https://unsse.org/wp-content/uploads/2023/05/A_RES_77_281-EN.pdf (accessed 28 August 2023).

Van Twuijver, M.W., Olmedo, L., O'Shaughnessy, M. and Hennessy, T. (2020), "Rural social enterprises in Europe: a systematic literature review", *Local Economy: The Journal of the Local Economy Policy Unit*, Vol. 35 No. 2, pp. 121-142, doi: 10.1177/0269094220907024.

Vargha, A. and Delaney, H.D. (1998), "The Kruskal-Wallis test and stochastic homogeneity", *Journal of Educational and Behavioral Statistics*, Vol. 23 No. 2, pp. 170-192, doi: 10.2307/1165320.

Woo, C. and Jung, H. (2023), "Exploring the regional determinants of the emergence of social enterprises in South Korea: an entrepreneurial ecosystem perspective", *Nonprofit and Voluntary Sector Quarterly*, Vol. 52 No. 3, pp. 723-744, doi: 10.1177/08997640221110211.

Appendix

Table A1.
H1. Kruskal–Wallis H test

H1	X^2	df	*p*-value	Decision
SEs ratio – rural/urban area	309.17	5	$2.2e^{-16}$**	Supported

Note: $^{**}p < 0.01$
Source: Authors' own creation

Table A2.
H1. Kruskal–Wallis post hoc Dunn test (pairwise group comparison)

Comparison (pairwise)	Z	P. unadj	P. adj (Bonferroni)
Highly rural/remote areas – Rural areas with moderate urban influence	6.432	1.26E-10	1.89E-09**
Highly rural/remote areas – Rural areas with high urban influence	9.694	3.21E-22	4.81E-21**
Highly rural/remote areas – Independent urban towns	3.866	0.000111	0.0017**
Highly rural/remote areas – Satellite urban towns	12.304	8.65E-35	1.308E-33**
Highly rural/remote areas – Cities	−14.341	1.21E-46	1.81E-45**
Rural areas with moderate urban influence – Rural areas with high urban influence	−3.256	0.001129	0.0169*
Rural areas with moderate urban influence – Independent urban towns	3.007	0.002637	0.0396*
Rural areas with moderate urban influence – Satellite urban towns	6.11	9.98E-10	1.50E-08**
Rural areas with moderate urban influence – Cities	−6.657	2.79E-11	4.19E-10**
Rural areas with high urban influence – Independent urban towns	6.491	8.55E-11	1.28E-09**
Rural areas with high urban influence – Satellite urban towns	2.979	0.002889	0.0433*
Rural areas with high urban influence – Cities	−2.772	0.005563	0.0834
Independent urban towns – Satellite urban towns	9.378	6.74E-21	1.01E-19**
Cities – Independent urban towns	−11.05	2.19E-28	3.28E-27**
Cities – Satellite urban towns	0.879	0.379665	1

Notes: $^{*}p < 0.05$; $^{**}p < 0.01$
Source: Authors' own creation

Table A3.
H2. Jockeenhera–Terpstra test

H2	Alternative hypothesis	JT	*p*-value	Decision
Positive association area remoteness and ratio social enterprises	Increasing	73161607	0.001**	Supported

Note: $^{**}p < 0.01$
Source: Authors' own creation

Table A4. *H3*. Welch two sample *t*-test

Pairs (categories) compared	t-test (Welch Two Sample t-test) t	df	p	ci (95%)	Decision
Dublin City – satellite urban towns	1.6129	5,163.3	0.1068	(−0.22, 2.24)	Not supported
Dublin City – rural areas with high urban influence	1.1337	6,491.1	0.2569	(−0.46, 1.75)	Not supported

Source: Authors' own creation

Table A5. *H4*. Chi-square test (test of independence)

H4	X^2	df	p-value	Decision
Association between sector of activity SEs and rural–urban typology	445.99	70	$2.2e^{-16}$**	Supported

Note: ** $p < 0.01$
Source: Authors' own creation

Table A6. *H5* and *H6*. Jockheenhere–Terpstra test

H5 and *H6*	Alternative hypothesis	JT	p-value	Decision
H5: Positive association rural–urban remoteness and ratio social enterprises in community local development	Increasing	13	0.02778*	Supported
H6: Negative association rural–urban remoteness and ratio social enterprises in welfare services	Decreasing	3	0.06806	Not supported

Note: * $p < 0.05$
Source: Authors' own creation

Corresponding author
Lucas Olmedo can be contacted at: lucas.olmedo@ucc.ie

For instructions on how to order reprints of this article, please visit our website:
www.emeraldgrouppublishing.com/licensing/reprints.htm
Or contact us for further details: **permissions@emeraldinsight.com**