

Expanded abstract

Local narratives on rural depopulation and territorial development: the case of the Sierra de Montánchez (Extremadura)

Objectives

Rural depopulation is one of Spain's major territorial challenges, especially in areas marked by low population density, population ageing, and dependence on traditional economic activities. The Sierra de Montánchez, in the province of Cáceres and comprising twenty-one municipalities, provides a relevant case study for analyzing how rural communities respond locally to a structural process affecting public services, economic activity, generational renewal, and territorial cohesion. This study examines the alignment between local strategies in the Sierra de Montánchez, regional public policy frameworks, and the Sustainable Development Goals. It identifies the main areas of action present in local narratives on depopulation, assesses their correspondence with the strategic sectors of the Provincial Council of Cáceres' Digital Province Master Plan, and evaluates the extent to which these initiatives reflect municipalities' real scope for intervention. The analysis addresses a gap in the literature: while rural depopulation in Spain has been widely studied from demographic, economic, and territorial perspectives, less attention has been given to how municipal initiatives are communicated, interpreted, and connected to supra-municipal strategies. The study therefore analyses media narratives as expressions of local priorities, institutional capacities, and structural constraints.

Design, methodology, and approach

The research adopts a multiple-case study design, focusing on three municipalities in the Sierra de Montánchez: Alcuéscar, Montánchez, and Valdefuentes. The methodology for selecting the cases considered criteria such as population size, the presence of distinct territorial profiles, and media visibility. Thus, this selection allows for the comparison of patterns of action and communication in municipalities that share the same regional context but exhibit specific local dynamics. The data used are drawn from a set of 47 journalistic texts published between 2021 and 2022 in local and regional media outlets, such as *El Periódico Extremadura*, *Sierra y Llano*, *elDiario.es*, and *Canal Extremadura*. Local and regional press serve as the primary source of information, as they provide access to public narratives concerning depopulation, institutional priorities, and the most prominent initiatives for the community. These sources are complemented by government reports, strategic documents, and regional databases, in order to triangulate the information and situate local initiatives within broader public policy frameworks. The analytical procedure implemented integrates software-assisted qualitative

methodologies and natural language processing tools. First, a systematic coding of the corpus is carried out using MAXQDA software, employing categories linked to the Sustainable Development Goals and the strategic sectors of the Digital Province Master Plan. This coding procedure integrates predefined and emergent codes to identify areas of action, discursive priorities, and relevant omissions. Second, natural language processing methodologies are implemented, such as tokenization, lemmatization, sentiment analysis, and topic modeling using Latent Dirichlet Allocation. These tools enable the detection of lexical, thematic, and emotional patterns in the corpus, without replacing the authors' qualitative interpretation. Finally, a cross-case analysis is conducted to identify common patterns, divergences, and relationships among local initiatives, the Sustainable Development Goals (SDGs), and regional priorities.

Research Findings and Limitations

The results show that the local initiatives reported focus primarily on sectors where municipalities have greater capacity for direct intervention and greater public visibility. There is a marked trend toward rural tourism, the promotion of cultural and natural heritage, and activities linked to agri-food production. These areas account for the majority of the identified references and are clearly related to SDG 8, concerning decent work and economic growth. Tourism initiatives are associated with the appreciation of heritage, attracting visitors, and building a positive territorial identity. Agri-food initiatives, for their part, play a dual role in the context of local development. First, they contribute to revitalizing the local economy, and second, they strengthen community cohesion through the organization of fairs, the promotion of quality products, the protection of designations of origin, and the hosting of events that promote the region. The analysis identifies relevant references to SDG 3, linked to health and well-being, particularly through initiatives related to social services, leisure, quality of life, and care for an aging population. In this regard, SDG 7 is linked to sustainable energy initiatives and energy communities, although the implementation of these actions is significantly influenced by programs at the supra-municipal level. This circumstance demonstrates that certain strategic sectors, despite their relevance to rural revitalization, transcend the autonomous capacity of local governments. In contrast, advanced digitalization, social innovation, productive transformation, and information and communication technologies are underrepresented in local narratives. This asymmetry constitutes one of the study's main findings: the most visible sectors are those over which municipalities can act directly, while areas requiring external investment, specialized technical expertise, or supra-municipal coordination have a much smaller presence. Sentiment analysis also reveals a significant presence of negative narratives, associated with vulnerability, population loss, youth emigration, and a scarcity of opportunities.

The main limitations of the research stem from its exploratory nature and its territorial focus. The study focuses on three municipalities and a selection of local and regional press, so its results should not be interpreted through the lens of statistical generalization. However, it is possible to conduct an analytical generalization based on the identification of patterns, action criteria, and structural limits that can be transferred to other rural environments with similar characteristics. For future research, we propose incorporating interviews with local

stakeholders, minutes of municipal plenary sessions, additional administrative documents, and geospatial tools, with the aim of broadening our understanding of territorial dynamics.

Practical conclusions and original value

The study has relevant implications for the design of public policies addressing rural depopulation. Its findings suggest that responses should reinforce institutional coordination while recognizing the role of municipalities in areas consistent with their competencies and resources. Regional and national policies should support local capacity without transferring structural responsibilities to local governments beyond their effective scope of action. In the Sierra de Montánchez, local strategies rely mainly on endogenous resources, including cultural heritage, rural tourism, and agri-food production. These initiatives may foster economic revitalization, community cohesion, and a positive territorial image, but their capacity to reverse population loss remains limited without coordinated investment in digitalization, innovation, energy, connectivity, employment, and public services. The article's originality lies in combining local media narrative analysis, public policy frameworks, and natural language processing tools. This approach moves beyond aggregate demographic diagnoses to examine how local responses are constructed, communicated, and prioritized. It also proposes a replicable heuristics-based framework for identifying intervention areas, strategic gaps, and the real scope of municipal action.