

BIBLIOMETRIC ANALYSIS ON CORE RESEARCH RELATED TO SUSTAINABLE DEVELOPMENT AND REVITALIZATION OF RURAL AREAS

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ABSTRACT

This study represents the first stage of a larger research covered by a doctoral thesis on the sustainable development and revitalization of rural areas. The intention was to conduct a quantitative analysis on the publications related to the topic identified in Web of Science database in order to extract research cores to further enable thematic-qualitative analysis. Analysis was performed by means of VOSViewer application and maps generated underlined the interest of authors for articles published 2012-to-2023 (first quarter). Four main themes were outlined for qualitative analysis.

KEYWORDS: *bibliometric analysis, revitalization, rural sustainable development, VOSViewer, Web of Science Core Collection.*

DOI: [10.24818/IMC/2024/01.03](https://doi.org/10.24818/IMC/2024/01.03)

1. INTRODUCTION

Sustainable local and rural development is increasingly becoming one of the main priorities for countries that understood that a clear vision over the future needs to be rooted in a responsible attitude towards resources available and must be translated into public policies and strategies and appropriate interventions and programs to support the former (Balaban et al., 2019).

Rural area revitalization practically means the opposite of degradation/deterioration and, as such, it is important to analyze which were the causes determining degradation and what can be done to remove them.

Revitalization is a long-term process involving an integrated approach and commitment on the part of many factors for economic growth and life-quality improvement. Among main components revealed by literature for a holistic approach that connects rural transformation/revitalization and sustainable development, local economy, social environment, cultural heritage, physical environment and policy frameworks are listed. Other essential components are represented by a healthy system of local governance and institutional/administrative capacity improvement. (Diaz-Sarachaga, 2020).

Economically speaking, for the revitalization of rural areas there were often mentioned solutions like diversification of economic activities, technology and innovation, multi-functional agricultural activities, agro-tourism or public-private partnerships.

Socio-demographically speaking, often mentioned are solutions like re-population of rural areas, gentrification – re-location/attraction of rich families in poorer / more degraded area, better social and educational services assured, etc.

Territorially speaking, planning, greening and infrastructure are mentioned.

No matter the aspects considered, human resource represents one of the main drivers of change – out of two perspectives: on one hand as beneficiary and on the other hand as promoter-activator-actor.

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For such initiatives of rural revitalization to be successful, all stakeholders must be aware of some critical aspects (Castro-Arce & Vanclay, 2020), namely: (a) interests of local communities (needs, aspirations, wishes of fulfillment) and social context (conflicts, crises, opportunities, challenges) – which will change in time; (b) local action may only deliver sustainable results by scale-up and multiplication at various levels; (c) formal/public institutions should allow and sustain transformation and (d) in a healthy governance, distribution of power and distribution / delegation of decision-making are required.

Human resource represents a sustainable competitive advantage as long as it is difficult to be replaced. For capacity building, individual dynamics seem to gain interest (critical and creative thinking, capacity and motivation to accomplish the task/s, etc.), alongside with other human resources management practices related to knowledge, competences, skills, but also motivation and opportunity. (Banks & Kepes, 2015)

Other researchers underlined that “rural areas risk being left even further behind and marginalized during the next stage of technological innovation, since technologies are framed within an urban and neo-liberal approach to development” (Wang et al., 2022). Challenges like “shrinking populations, ageing, and uncertain economic futures” (Tent et al., 2021) represent, on the other hand important impediments in providing quality services of general interest (education, health, social services).

Considering the abovementioned and need to allocate funds for rural development and revitalization, in the European Community, light was shed on Structural Funds whose aim was to help decrease disparities between member states and regions. According to studies, “results show that the institutions located in disadvantaged regions had less access to community funds, which can compromise the process of training human capital and knowledge and therefore, the processes of regional convergence and national territorial cohesion” (Sequeira & Diniz, 2020).

In this context, the interest of the present paper and of the first stage of research for the doctoral thesis proposed regarding – *Sustainable Development and Revitalization of Rural Areas* – was to identify the research cores according to articles published during 2012-2023 (2023 first quarter) and extract some thematic aspects that would represent the basis of the qualitative analysis afterwards.

For this purpose, bibliometric analysis was considered the most appropriate as it is a “rigorous method for exploring and analyzing large volumes of scientific data” (Donthu et al., 2021).

The so-called science mapping enables generating maps related to citation analysis, co-citation analysis and bibliographic coupling, co-word analysis, and co-authorship analysis, etc. Network metrics are also important as it enriches understanding on connections between authors, institutions and countries.

For the present paper, maps were generated for the occurrence of keywords found in article titles and abstracts, for keywords assigned by authors and for connections between countries.

2. METHODOLOGY

Quantitative analysis conducted was based on Web of Science accessed by means of e-nformation. In order to identify research articles on the selected topic, a set of keywords were tested with variations of search terms and keyword combinations, such as: rural (rural, rurality), sustainability (sustain, sustainable), revitalization (revital, revitali, revitalization), human resources (resources, human), services (service, services, general services), capacity, administration (public administration, administration, admin), etc. The search was based on Web of Science Core Collection – all fields. Relevant data were revealed by the search with the combination of terms “rural” (and „sustain*” or „revital*”). The search was refined by applying filters for publication years (selected period was 2012-2023), type of document (“articles”) and category – Web of Science „Regional Urban Planning”, thus resulting a selection of 1315 documents.

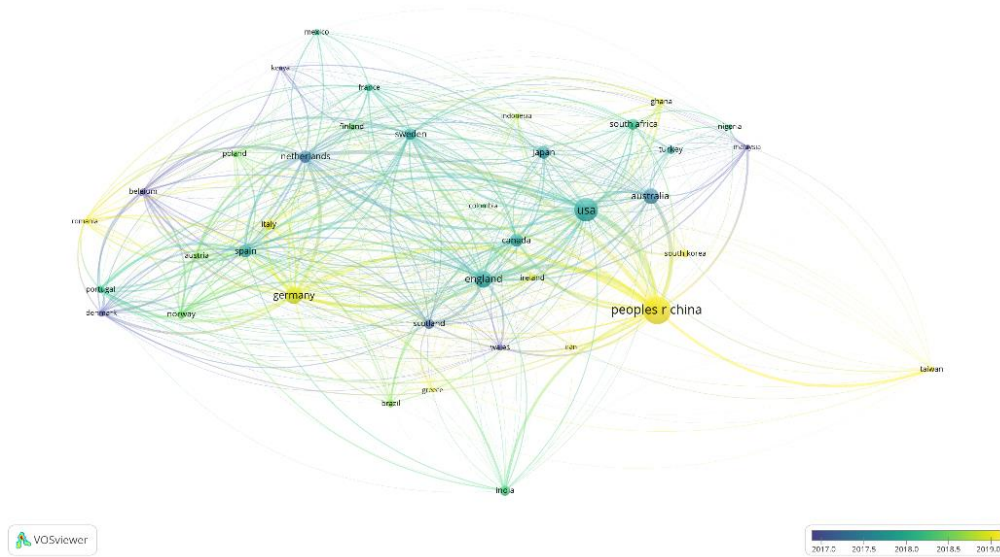


Figure 5. Clusters - bibliographic links by country
Source: Authors' own research

According to the map of bibliographic sources, Romania has a good representation in the European space, with good international connectivity (see Figure 6):

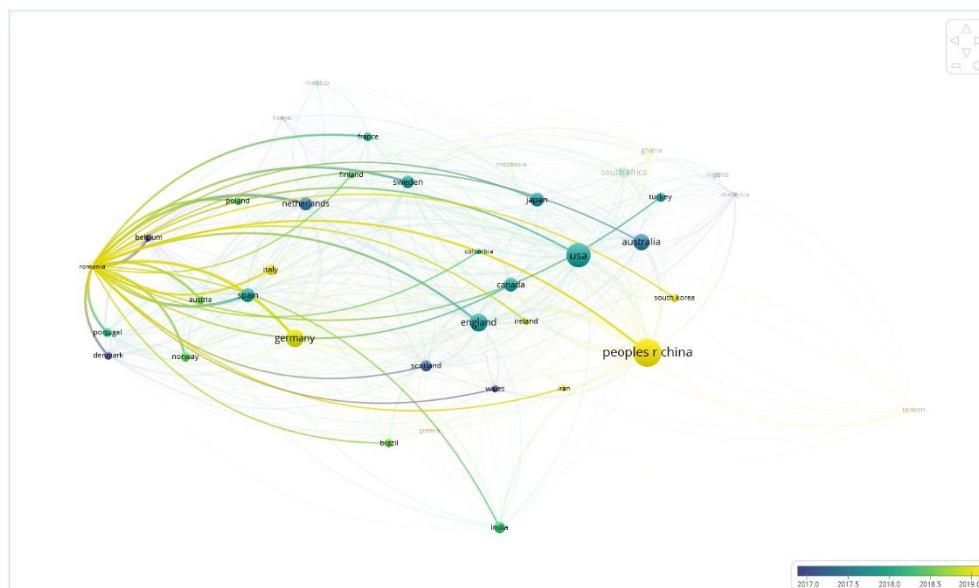


Figure 6. Clusters - bibliographic links by country – Romania
Source: Authors' own research

3.4 Graphic representation per publishing year

In an attempt to see the evolution in time for the interest on the topic, data was analyzed and is graphically presented below for selected period – 2012-2023 (see Figure 7). According to data, there was a constant increase in interest for the topic, except for 2014 which shows a slight decrease and for 2017 which shows a pick.

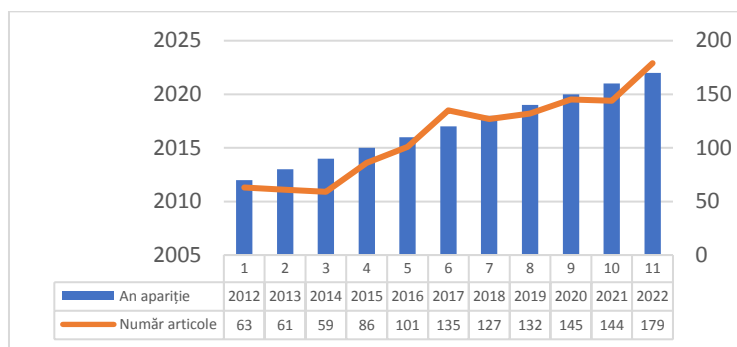


Figure 7. Distribution of articles per years

Source: Authors' own research

For 2023, a number of 33 articles were identified to which 44 articles add on the category “early access”. The analysis limited to the first quarter of the year, which means that the positive trend may be sustained in the following period. In other words, the interest for rural development and sustainable development increased year by year.

Among most cited articles in the selection, no matter the region/country, the most common themes address major aspects of sustainable rural development, such as: (a) sustainable agriculture and sustainable use of resources; (b) material deprivation / poverty, social inclusion and need to decrease disparities by economic development/revitalization; (c) challenges (demographic, economic, geographic, etc.) and extant resources (human, natural, cultural, historical, etc.), like two sides of the coin that can be considered problems versus solutions for sustainable rural development; (d) environment and ecology/green environment; (e) planning and public policies.

Also, among publishing houses with a great number of articles published, most prolific are: Pergamon-Elsevier Science LTD (see also Elsevier Science INC and Elsevier); Routledge Journals, Taylor & Francis Ltd (see also Routledge); WILEY; Springer International Publishing AG (see also Springer); Taylor & Francis Inc; Asce-Amer Soc Civil Engineers, Sage Publications LTD/INC.

4. CONCLUSIONS

Results of the bibliometric analysis shows that the topic is addressed in a very compact and homogeneous manner – elements are strongly inter-connected, representing a sphere in the maps generated by VOSViewer application (see topic keywords and keywords assigned by authors).

Attention of authors is mainly focused on aspects like sustainable development, rural development and sustainability and main country research cores are found in England, Germany, Netherlands and Sweden (alphabetically ordered) in the European area, to which strong research centers are to be found in economically developed states like USA and China. Romania has a good representation in the European space, with good international connectivity.

According to data regarding the publication year, there was a constant increase in interest for the topic, except for 2014 which shows a slight decrease and for 2017 which shows a pick.

The four thematic classes underlined by the analysis are: (a) the need and importance to analyze data from the real context; (b) key element of the study – rural sustainable development; (c) analysis for internal and external context, and (d) the importance of individualization and of intervention magnitude.

Further qualitative analysis will be conducted having as a starting point the four thematic classes identified. “The thematic clusters created using co-citation analysis and bibliographic coupling shed light on the major themes underpinning the intellectual structure” (Donthu et al., 2021), yet these need to be backed by an explanatory analysis related to each theme and the drivers or influencing factors that, on one hand, determined the interest in the topic and, on the other hand, determine change regarding sustainable development and revitalization of rural areas.

ACKNOWLEDGMENT

This paper was co-financed by The Bucharest University of Economic Studies during the PhD program.

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