

Academia as a Driver of Data-Based Policy-Making: Bibliometric Insights for Sustainable Urban and Regional Development

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Extended abstract

Evidence-informed policy-making increasingly depends on the systematic mobilisation of diverse knowledge sources—statistics, administrative data, evaluation results, and research evidence—to shape public decisions across the full policy cycle (agenda-setting, design, implementation, and revision). In regional development, this requirement becomes especially demanding in settings characterised by weak coordination capacities, fragmented stakeholder landscapes, and limited institutional resources. In such contexts, the “institutional paradox” emerges: the need for intersectoral collaboration and institutional coordination is greatest precisely where institutional capacities are weakest. Against this backdrop, smart specialisation (S3) offers an operational, place-based approach to prioritisation that links research and innovation with economic development through an “entrepreneurial discovery” process—i.e., priority setting by policy-makers in close cooperation with local actors and with outward orientation beyond the region. However, S3 and related sustainable development agendas still face an implementation gap when governance systems lack the analytic routines, trusted intermediaries, and shared evidence infrastructures needed to translate priorities into actionable, sequenced policy measures.

This paper argues that academia can function as a pragmatic driver of data-based regional policy-making by acting as (i) a knowledge intermediary that anticipates emerging development needs before they become institutionally recognised, and (ii) an evidence generator that supports policy intelligence for sustainable urban and regional development. In empirical terms, we demonstrate how a long-running conference ecosystem can be repurposed into a policy-relevant “knowledge sensor” for regional priorities and thematic gaps. The analysis draws on more than 450 scientific papers presented at regional-development-focused conferences organised in Serbia over years, and applies bibliometric mapping methods using VOSviewer (network, overlay, cluster and density analyses). VOSviewer is an established tool for constructing and visualising bibliometric networks and co-occurrence structures (e.g., keywords, authors, sources), enabling interpretable maps of knowledge domains at scale. The paper operationalises data-based policy-making as the structured extraction of thematic trajectories (what topics dominate, which are rising, and which remain peripheral) and their translation into implications for priority setting and stakeholder alignment.

The paper contributes to sustainable urban and regional development debates in three ways. First, it proposes a replicable approach to transform academic outputs (conference proceedings, thematic programmes, and associated paper corpora) into an evidence stream for policy intelligence, complementing conventional sources such as administrative data and evaluations. Second, it provides a data-driven narrative of thematic transition from macro-fiscal crisis management to sustainability-oriented and inclusion-sensitive development themes, which can support policy

sequencing (e.g., aligning basic macro-stability concerns with newer circular/local development priorities rather than treating them as competing agendas). Third, it reframes the role of academia from “external commentator” to “capability builder” for evidence-informed policy systems—particularly where governments require support to strengthen analytic capacity, routines for evidence use, and trusted intermediation between stakeholders.

From a policy perspective, the findings imply that strengthening data-based policy-making for sustainable urban and regional development can be advanced by embedding bibliometric intelligence into S3-related governance cyotures to inform priority-setting workshops; (ii) using overlay trends to identify rising domains for targeted pilot actions; and (iii) using density “gaps” to design mission-oriented calls, capacity-building, or partnerships that deliberately address underexplored but strategic themes. This approach is particularly relevant for regions seeking institutional leapfrogging - accelerating the transition from fragmented agendas to coherent, evidence-guided development pathways—where the academic community can provide continuity, analytical infrastructure, and anticipatory signals aligned with sustainable development objectives.

References

European Commission. (2012). Guide to Research and Innovation Strategies for Smart Specialisation (RIS3). Publications Office of the European Union.

Organisation for Economic Co-operation and Development. (2020). Building capacity for evidence-informed policy-making. OECD Publishing.

Van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523–538.

Organisation for Economic Co-operation and Development. (2025). Strengthening national evidence-informed policymaking ecosystems (full report). OECD Publishing

