Generative Artificial Intelligence and Social Entrepreneurship: Rethinking Collaborative Ecosystem Innovation for Sustainable Development

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Abstract

Generative artificial intelligence (GenAI) is increasingly conceptualised within social entrepreneurship as a socio-technical resource embedded in collaborative ecosystems. Empirical and theoretical developments remain fragmented, particularly in explaining how ecosystem configurations shape socio-technical innovation beyond isolated tool adoption. This study synthesises peer-reviewed scholarship through a bibliometric–systematic literature review to map the intellectual structure and thematic evolution of the field. Four research streams are identified: design and knowledge creation, stakeholder engagement, ethics and accountability, and sustainable entrepreneurship. Integrating institutional, governance, capability-based, and open innovation perspectives, the study develops an ecosystem-level framework that articulates boundary conditions under which GenAI is associated with collaborative value creation. Three analytically derived mechanisms are specified for future empirical inquiry: algorithmic legitimacy, relational dynamic capabilities, and distributed sustainability capability. The review highlights enduring gaps, including limited treatment of participatory oversight, power asymmetries, and digitally marginalised contexts. By advancing a theoretically integrated and mechanism-oriented account, the study contributes to cumulative research on GenAI-enabled social innovation and provides a structured basis for context-sensitive governance deliberation.

Keywords: Generative Artificial Intelligence; Social Entrepreneurship; Collaborative Ecosystems; Governance; Open Innovation; Dynamic Capabilities; Sustainable Development

Introduction

In recent years, with the rising tensions between socio-economic inequality, climate change disruptions, and policy failures, social entrepreneurship has been on the rise. It blends entrepreneurial efforts with social missions to tackle pressing issues like poverty, environmental degradation, and unequal access to education (Saebi et al., 2019; George et al., 2021). In addition to aiming to create social impact, social entrepreneurship engages collaborative ecosystems comprised of non-profit organisations, academic institutions, public agencies and local communities to create locally intelligent solutions built on trust and common goals (Austin & Seitanidi, 2012; Tracey & Stott, 2017).

These ecosystems are innovation systems which allow for collective learning by doing, experimentation and adaptation as well as bridging resources from across institutional spheres. However, these types of partnerships can be tenuous and lack resources; especially when centred in community-, youth-, or marginalised-led initiatives (Littlewood & Holt, 2018; Stenholm et al., 2013). Factors like stakeholder misalignment, institutional voids, and limited access to sophisticated technologies may hamper long-term impact and scale. Against this challenge, digitalization - and particularly Generative Artificial Intelligence (GenAI) - has grown more prominent for social entrepreneurship.

Emerging literature starts examining generative AI tools (large language models like ChatGPT and multimodal systems like DALL-E or Midjourney) as socio-technical infrastructures that could influence entrepreneurs' imagination, stakeholder relationships and social innovation processes with opportunities and risks that should be explored with caution (Giuggioli & Pellegrini, 2023; Dwivedi et al., 2021). GenAI could facilitate not just transactional work but also knowledge work like strategic storytelling, curating learning material, building prototypes and messaging stakeholders (Graham & Bonner, 2024). If so, GenAI may hold particular promise for ventures facing resource-constrained settings since it could mitigate some of the coordination frictions associated with distributed organizations. The impact may depend on governance structures, institutional factors, and endowment of capabilities (Fossen et al., 2024).

Academic discourse on GenAI in social entrepreneurship is still nascent and fragmented. While some articles have concentrated on technical affordances or presented single-case depictions of the application of GenAI, there has been limited effort to theorise on ecosystem-level patterns and boundary conditions (Dwivedi et al., 2021; Graham & Bonner, 2024). Little attention has been given to exploring how GenAI could transform governance structures, ethics, and power dynamics involved in co-innovation, specifically in digitally underserved communities and resource-limited contexts characterized by institutional voids and infrastructure deficits (Aparicio et al., 2016; Graham & Bonner, 2024). Consequently, scholarship does not offer a systematic explanation of when GenAI relates to collaboration on scalable solutions versus individual tool uptake and when/if institutional or governance contexts weaken those relationships or lead to perverse outcomes.

To fill these gaps, we use bibliometric mapping alongside systematic review to map the profile of the field and interpret key themes. We analyse characteristics that drive structure within the literature, such as prominent authors, outlets, institutions and countries. We also explore thematic clusters that influence conceptualisations of GenAI in social entrepreneurship. Crucially, the review approach allows the authors to both summarize trends in published research, but also to create conceptual mechanisms and boundary conditions informed by analysis of the literature – these are not empirically tested causal claims. Combining structural mapping with interpretation, this research both summarizes the field coherently, and points out tensions, methodological limitations, and empirical gaps.

Our analysis contributes to research on resource-limited and/or locally embedded social enterprises, such as grassroots organisations and student social entrepreneurship. Local knowledge and social embeddedness characterise these organisations, which frequently operate in contexts where organisations need to be adaptable to community needs that change over time. Therefore, exploring their use of digital technology can shed light on potential intersections with GenAI for inclusive innovation, responsible entrepreneurship, and social resilience while attending to challenges with fragility and exclusion (Tracey & Stott, 2017; Valdez & Richardson, 2013).

The research article aims to achieve three goals. Initially, it conducts a review of how GenAI is framed within the realm of social entrepreneurship literature while paying specific attention to value conceptualisations surrounding cocreation and social innovation. Next, it maps and thematically synthesizes prevalent research streams focused on stakeholder engagement, resource

integration, ecosystem building, and responsible governance. Third, it highlights theoretical gaps (conceptual, empirical, and methodological) that allows us to outline a research agenda. In particular, by carving out scope conditions at the ecosystem level in resource-constrained and digitally marginalised contexts and providing specification of unit of analysis, the study advances theoretical rigor.

Social entrepreneurship implications of GenAI include both empirical and normative considerations, which warrant nuanced and context-dependent exploration. Rather than assuming positive or negative impacts, this paper treats GenAI as a socio-technical system, whose effects will depend on how institutional frameworks, governance structures, and distributions of capabilities are configured. Its contribution is both integrative and explanatory: it brings together fragmented literatures, frames literatures-grounded mechanisms and boundary conditions within an overarching theoretical structure, and develops an agenda for future research to enable cumulative knowledge development and practice. The remainder of the paper provides an overview of the field and its main thematic areas followed by presentation of an integrative framework and discussion of research and governance implications.

Theoretical Framework

Ideas to understand GenAI-social entrepreneurship intersections can benefit from a more nuanced understanding of digital innovation in relation to collective systems, institutional logics, governance, and the co-production of social value. Research illustrates that social entrepreneurship goes beyond organisations' actions and represents an institutionalised practice with context-dependent embeddedness and dynamics (e.g., resource scarcity, stakeholder diversity, fragmented governance) (Al-Qudah et al., 2022; Ko & Liu, 2021; Littlewood & Holt, 2018; Saebi et al., 2019). In this convergence point, another layer is also added by GenAI itself. GenAI is being sold/pitched/talked about as a socio-technical asset with the potential to be unleashed upon society for creativity, collaboration, mobilisation of resources and participation, but also ethical risks amplified, algorithmic asymmetries entrenched and digital divides exacerbated (Giuggioli & Pellegrini, 2023; Dwivedi et al., 2021).

To tackle this issue, this article positions GenAI in entrepreneurship ecosystems by integrating Institutional Theory (DiMaggio & Powell, 1983), Governance Theory (Van de Ven & Teece, 2004), RBV (Penrose, 1959), and Open Innovation (Chesbrough, 2003). They are used conjointly

because each lens foregrounds distinct yet complementary dynamics. Institutions affect the conditions of legitimacy that shape how and why GenAI is adopted and authorised. Governance modes affect accountability, inclusivity, and data justice; access and benefits determined by relative resource endowments and capabilities; and knowledge flows and problem-solving shaped by open innovation dynamics. In short, the framework considers GenAI predominantly as infrastructure and intermediary socio-technical systems, instead of assigning agency to GenAI.

Institutional Theory and digital institutional voids

Institutional theory conceptualises entrepreneurial agency as deriving from regulative, normative and cultural-cognitive sources of institutions that constitute frameworks for action and legitimacy (Scott, 1995; Graham & Bonner, 2024). Entrepreneurship activity embedded in less institutionalised contexts (e.g. in many settings across the Global South or amongst marginalised populations) tends to face constraints as a result of institutional voids like limited governance, coordination among stakeholders, or lack of equitable access to entrepreneurial opportunities (Aparicio et al., 2016; Schiavi et al., 2024). The spread of GenAI can exacerbate these issues if adoption is unequal in terms of access, expertise, and enabling resources, allowing those actors with more advantage to appropriate greater value from GenAI, further entrenching algorithmic divides (Fossen et al., 2024; McDonald et al., 2025).

GenAI also has implications for the cultural-cognitive pillar as it can influence sense-making, storytelling, and interpretation practices through which social entrepreneurs construct needs, rationalize interventions and communicate impact (Chalmers et al., 2021). This can affect how legitimacy is built and challenged in digitally mediated ecosystems; however, the extent and direction of these changes will depend on context and governance.

Governance Theory: ethical adoption and multi-stakeholder collaboration

Governance theory offers a framework for understanding how authority, accountability and coordination mechanisms are structured and operationalised in multi-actor contexts where innovation processes are jointly produced by a range of actors across organisational and sectoral boundaries (Chhotray et al., 2009; George et al., 2021; Bacq & Aguilera, 2022). Applied to social entrepreneurship, GenAI can be conceptualised as one element of the socio-technical assemblages that inform operational processes, as well as the ethical and institutional infrastructure underpinning innovation.

GenAI governance is intertwined with how citizens engage with, co-create and access services through online intermediaries. When implemented, GenAI governance will likely encompass co-governance mechanisms, data governance, algorithmic accountability, and citizen-centric deliberation. Another perspective considers responsible governance through risk management mechanisms such as checks and balances that align incentives for research and experimentation with public interest protections, bias reduction and authentic participation for impacted communities and settings of scarcity/digital deprivation (Dwivedi et al., 2021; Zuiderwijk et al., 2021). Crucially, this frame also places emphasis on the risk of governance failure including non-transparency, accountability voids, and dependence on proprietary infrastructures.

Resource-Based View: digital capabilities and ecosystem resource mobilisation

RBV has described sustained advantage as being produced by resources that are valuable, rare, inimitable and non-substitutable (Barney, 1991). GenAI can also be related to social entrepreneurship-relevant resources like social legitimacy, stakeholder networks, and digital affordances, which will likely be increasingly GenAI-mediated. From this lens, GenAI itself can be conceptualized as a kind of complement good that is dependent on organizational routines and dynamic capabilities that facilitate learning, adaptation and cooperation (Helfat et al., 2023). Social enterprises may also want to use GenAI for sense-making, strategic storytelling, solution prototyping and rapid iteration of stakeholder engagement loops (Zachrison, 2023). Each of these use cases will likely require supplementary human skillsets as well as data quality and governance assurances.

RBV scholarship also highlights how asymmetric capabilities can become stabilised over time (Littlewood & Holt, 2018). Without inclusive capacity-building and greater opening of access, GenAI threatens to enshrine advantage for those already positioned to benefit. It is vital to theorize GenAI as not only a resource but also as an ecosystem-level capability distribution challenge, in which the access to skills, infrastructure and organisational learning conditions who benefits.

Open Innovation and collaborative ecosystem innovation

Open Innovation has become a widely embraced concept among innovation management practitioners and scholars. It highlights the permeable nature of organisational boundaries and the importance of external knowledge flows, inter-organisational collaboration, and co-creation, and experimentation (Chesbrough, 2003). In the realm of social entrepreneurship, where cross-sector collaboration is essential to address social challenges, GenAI has the potential to act as a boundary-

spanning enabler that could facilitate knowledge sharing, participatory design, and distributed problem-solving among a diverse set of actors (Chalmers et al., 2021; Ogink et al., 2023).

At the same time, open innovation in AI-enabled ecosystems raises tensions around data access, control of model outputs, intellectual property, and the integration of community values into co-designed solutions. These tensions point to the importance of ecosystem-level governance models that institutionalise transparency, reciprocity, and trust, linking open innovation to governance principles to support both effectiveness and fairness (George et al., 2021; Broekhuizen et al., 2023).

Scope conditions, unit of analysis, and boundary assumptions

Building on these lenses, we frame at ecosystem level as our unit of analysis (nesting organisations/projects within ecosystems). Scope is characterised by contexts of resource constraint/digital marginalisation where institutional voids are applicable. We make the boundary assumptions that GenAI will not reach its potential unless there are minimum baselines for digital access, data stewardship, and voice. If not, projected positive impacts are lowered and potential for exclusion is heightened.

Cross-level mechanisms

To move from description to explanation, the framework organises review-derived insights into three mechanisms that are intended as analytical propositions for future testing.

1. **Algorithmic legitimacy**

   GenAI may influence how evidence, narratives, and procedural transparency are produced and evaluated in ecosystem settings. This mechanism links institutional pillars and governance safeguards to perceptions of fairness, credibility, and accountability in co-created solutions.

2. **Relational dynamic capabilities**

   GenAI-enabled sense-making, rapid prototyping, and feedback loops may strengthen the formation and renewal of inter-organisational relationships, supporting coordinated action under uncertainty. The mechanism is expected to be strongest where capabilities are distributed through training, inclusion, and supportive intermediaries.

3. **Distributed sustainability capability**

   GenAI could potentially aid distributed monitoring, learning, and adaptation in service of environmental and social goals. It may allow local actors and initiatives to connect and

calibrate action to sustainability priorities. This will depend on data quality, governance safeguards, and ecosystems' ability to put results into practice.

Toward an integrated theoretical contribution

Synthesising these views, this study proposes a multi-dimensional framework for understanding how the role of GenAI in social entrepreneurship and related technology-based ventures may be shifting over time. The framework helps explain how institutional voids and algorithmic asymmetries may influence GenAI use within marginalised or digitally informal ecosystems; how GenAI may be more accurately understood as a complement to (rather than substitute for) dynamic capabilities that underpin creativity, learning, and strategic agility under resource constraints; why inclusive, participatory, and ethically grounded governance mechanisms are required to legitimate AI use and mitigate unintended effects; and how GenAI may support open innovation through co-creation and cross-sector knowledge exchange, contingent on governance arrangements that uphold fairness, transparency, and local adaptation.

This integration contributes to the literature by:

1. situating GenAI within a broader configuration of institutions, governance, and resources rather than treating it as a neutral tool;
2. connecting work on AI affordances, responsible innovation, and stakeholder co-production through an ecosystem-level lens; and
3. proposing a generalisable framework for studying technology-enabled entrepreneurship and innovation in weak-institutional, high-informality, and equity-focused settings.

Propositions for cumulative testing

P1. Perceived legitimacy of GenAI-generated social innovations will be more positively associated with algorithmic legitimacy in ecosystem contexts where participatory governance and data stewardship are more prevalent than contexts where these safeguards are not prevalent.

P2. Where ventures have higher levels of relational dynamic capabilities, GenAI usage will lead to reduced co-design cycle times and longer lasting cross-industry collaborations net of resource holdings and access to complementary assets.

P3. Organizations that build ecosystems of distributed sustainability capability will demonstrate higher levels of local project alignment with sustainability objectives, with GenAI serving as the orchestration platform instead of a singular application.

By that, the study aims to answer recent calls for reflexive, context-aware and theory-guided research on digital transformation, entrepreneurship, and sustainable development (Chalmers et al., 2021; Graham & Bonner, 2024; George et al., 2021).

Methodology

This study used a bibliometric mapping systematic review research method to identify emerging research insights about GenAI, collaboration and ecosystems for innovation in social entrepreneurship. This research method allows us to map knowledge domains, identify thematic clusters and explain theory and empirical gaps within this nascent area of inquiry (Donthu et al., 2021). Combining objective bibliometric indicators and subjective thematic categorization affords structural mapping together with reflective interpretation of ideas, governance trends and concerns at the field-level (Giuggioli & Pellegrini, 2023; Dwivedi et al., 2021). Aligning with the review-based nature of our design, therefore, we characterize inferences as patterns detected in literature rather than caused by our analysis, and refer to the developed framework as analytical rather than empirical.

Research design and rationale

The review utilised a three-phased design: (1) data identification and extraction phase, (2) bibliometric mapping phase, and (3) systematic thematic synthesis phase. The design promotes validity and transparency as well as reflexive analysis consistent with established reporting criteria for management and innovation reviews (Snyder, 2019). An underpinning pragmatic philosophy advocated methodological triangulation at the intersection of digital technology–social entrepreneurship. Guidance from bibliometric outcomes, while not prescriptive of themes for interpretive coding, mitigated against reifying the network results as explanatory artifacts per se. Combined methods aimed to be reflexive of network structure and theoretically-driven interpretation, yet open to patterns observed in the corpus.

Data source and justification

Records were obtained from Scopus because of its wide coverage and standardized metadata fields, making it amenable for bibliometric analysis (Donthu et al., 2021; Graham & Bonner, 2024). We acknowledge the extended reach of Web of Science and Google Scholar; however, Scopus ensured consistency of records and replicability in mapping procedures. Sentinel studies

were used to ensure coverage as well as backward citation chasing to reduce the risk of omitting foundational works.

Search strategy and query formulation

The search strategy was developed iteratively through scoping and keyword testing. Searches were run in Scopus using the TITLE-ABS-KEY fields to ensure conceptual relevance and reduce false positives. The final Scopus query string was:

(TITLE-ABS-KEY("generative artificial intelligence" OR "ChatGPT" OR "large language model*" OR "transformer model*"))

AND (TITLE-ABS-KEY("social entrepreneur*" OR "social enterprise*" OR "social innovation" OR "impact venture*"))

AND (TITLE-ABS-KEY("collaboration" OR "co-creation" OR "stakeholder engagement" OR "network*"))

The search was executed on 15 April 2025, and records were exported on the same date in CSV format with full bibliographic metadata (authors, affiliations, year, source title, author keywords, index keywords, abstracts, citations).

Inclusion and exclusion criteria

Inclusion criteria consisted of peer reviewed journal articles, reviews, and conference papers published in English from 2013–2024 that discussed GenAI (or synonymous generative-model terminology) utilized to support social entrepreneurship and ecosystems collaboratively. Articles were excluded if they: (i) focused on Artificial Intelligence not linked to generative AI; (ii) focused on social innovation not linked to entrepreneurship/venture creation; (iii) did not mention collaboration/co-creation/ecosystem involvement; or (iv) were unpublished/non-peer reviewed literature (e.g., editorials, blogs, practicing professionals reports/notes).

Time window justification: Visible diffusion of GenAI began post-2022, but the window was kept at 2013-2024 to include earlier work on generative models and conceptual antecedents discussed in entrepreneurship/innovation literature, plus earlier texts that discuss the foundations of algorithmic systems upon which later GenAI would be built. To avoid retroactively broadening the scope of "GenAI," pre-2022 records were included only when abstracts or keywords indicated explicit generative-model relevance (e.g., generative models, LLMs, transformer-related terminology) rather than generic AI references.

Screening and selection procedure

Identification, de-duplication, screening and inclusion were conducted according to the PRISMA protocol (Moher et al., 2009). Two reviewers independently screened titles and abstracts, and then the full-texts. Discussion resolved disagreements, with an additional check used where necessary to ensure procedural consistency.

Cohen's kappa was used to calculate inter-rater reliability. At title/abstract phase, kappa indicated substantial agreement (k = 0.82). Resolution through consensus discussion resolved the 29 articles with initial coding disagreement at this phase. At full text phase, near perfect agreement was found (k = 0.88), with 11 disagreements resolved through consensus discussion. Following resolution, a final agreed inclusion set remained. PRISMA counts and full screening results can be found in Figure 1.

Insert Figure 1 here

Bibliometric analysis

VOSviewer was used to visualise keyword co-occurrence, co-authorship, and citation networks (Kota et al., 2021). For consistency across VOSviewer maps, the following thresholds were applied and reported alongside each figure caption with the resulting node counts:

• Keyword co-occurrence (author keywords): minimum occurrences = 3; after cleaning synonyms and harmonising spelling, this yielded 52 keywords included in the final map.

• Co-authorship (authors): minimum documents per author = 2 and minimum citations = 5, yielding 41 authors included in the co-authorship network (with isolated nodes retained to illustrate field fragmentation).

• Country collaboration: minimum documents per country = 2, yielding 28 countries included.

• Citation network (sources/journals): minimum documents per source = 2 and minimum citations = 10, yielding 33 sources included.

• Co-citation (references): minimum co-citations = 15, yielding 45 references included in the co-citation map.

Analyses covered annual publication trends, conceptual clusters, collaboration networks, and citation and co-citation patterns. These network outputs were treated as descriptive indicators of structural features and were used to inform, rather than predetermine, subsequent thematic interpretation.

Systematic thematic synthesis

A thematic synthesis followed Braun and Clarke's (2006) six-step approach: familiarisation, initial coding, theme development, review, definition, and interpretive integration. Two coders independently analysed full texts and iteratively refined a shared codebook to enhance consistency and transparency.

The coding scheme was theoretically-influenced by Institutional Theory, Governance Theory, Resource-Based View, and Open Innovation literature (Giuggioli & Pellegrini, 2023; Graham & Bonner, 2024). These lenses acted as sensitising rather than being set in stone as pre-specified codes. Codes were kept open to identify inductive themes that were not part of the initial coding structure. Comments that did not naturally fit within the four lenses were noted during codebook revision. There was back-and-forth movement between deductive and inductive coding to help guard against confirmatory bias and to allow the lenses to be shaped by the patterns emerging from the corpus.

The synthesis identified dominant research streams, conceptual tensions, and blind spots, which informed the integrated framework and the specification of mechanisms advanced for future empirical examination.

Quality assurance and limitations

Employing one database increases consistency and replicability at the cost of excluding regional, non-English, and practitioner-facing research not covered by Scopus. This represents a limitation of the extant evidence base, not of the construct itself. The strengths of this approach include the transparency afforded by the combination of bibliometric mapping with interpretive description and coding precautions taken herein. However, we acknowledge that this resulting framework represents trends in literature rather than exhaustive analysis of the field.

Results and Analysis

This section presents findings from the bibliometric mapping of research on Generative Artificial Intelligence (GenAI) and ecosystem collaboration for innovation in social entrepreneurship. Using Scopus data and VOSviewer visualisations, the analysis describes the field's intellectual structure, geographic distribution, temporal development, and collaboration patterns. The results are reported as observed patterns in the literature rather than as evidence of causal relationships between GenAI and ecosystem outcomes.

Intellectual foundations and key contributions

Authorship is widely dispersed (shown in Figure 2), which is consistent with an emerging interdisciplinary field. No author has more than four publications, and most appear once, indicating that the evidence base is still distributed across diverse contributors rather than consolidated around a small number of leading research groups. Prominent contributors addressing technology-enabled entrepreneurship and stakeholder engagement include Abhinav Vardhan Reddy, T., Akatsu, M., Alexandru, A., and Hidayatullah, A. N.

Network of co-authorships (shown in Figure 3) suggests that works are seldom the outcome of collaborations between scholars from different research centres, small cliques of more tightly interconnected groups. This is a sign of, to a certain extent, fragmented structure of collaboration networks, which, in its turn, could to some extent hinder the processes of cumulative theorisation and coordinated agenda-setting that transcend specific disciplinary settings. In this regard, it concurs with the governance-oriented approaches that stress the need for more multi-actor coordination (George et al., 2021; Dwivedi et al., 2021) and could open up a path for more dedicated cross-cutting endeavours in this area in the future.

Figure 2 here

Figure 3 here

Geographical distribution and collaboration patterns

Country-level output (shown in Figure 4) is focused in few countries, with the United States first (11 publications), followed by Germany and the United Kingdom (7 each). Visible contributions from China (5 documents), India (5 documents), and Italy (4 documents) also start to appear. The total output is low, which supports the general reading of this as an early-stage domain with a distribution of contribution yet to take shape.

In the country-wise collaboration network (shown in Figure 5), a link among nodes (Countries) indicates a cross-country co-authorship. It is evident from Figure 5 that the collaboration linkages are dense among United States, Germany, United Kingdom and Switzerland and are also developing among China, India and European Countries. Thus, International collaboration is present, but not uniformly distributed. In light of the study's emphasis on institutional constraints and inclusion, the observed concentration also underlines the need for more diverse regional representation in the evidence base from contexts in which institutional voids, infrastructure constraints, and governance capacity are likely to impact how GenAI is talked about and used in practice (George et al., 2021; Dwivedi et al., 2021).

Figure 4 here

Figure 5 here

Temporal evolution of research

The low publication output (shown in Figure 6) continued to increase after 2017, and started to take off from 2021, at a significantly higher growth rate after 2020. The number of publications is expected to reach 22 documents in 2024. Although this might suggest more maturation in the research area, this should not be seen as a sign of theoretical convergence but rather of a broadening in activity while the authorship and collaboration remain diffuse. The longitudinal growth can be correlated to increased policy and academic discussions around AI and Responsible Innovation (Chalmers et al., 2021; Graham & Bonner, 2024).

Figure 6 here

Synthesis and implications

Overall, the field is expanding, but patterns across authorship, collaboration, and geography remain dispersed and uneven. These results suggest three priorities for future scholarship. First, greater interdisciplinary collaboration is needed to strengthen integration across entrepreneurship, governance, and AI research communities. Second, the evidence base should extend beyond its current concentration by incorporating more research from digitally marginalised and resource-constrained contexts. Third, there is a clear need for more explicit theory-led inquiry, using perspectives such as Governance Theory, Institutional Theory, and Open Innovation to specify the conditions under which GenAI is likely to support, or undermine, collaborative ecosystem processes.

These structural patterns provide the empirical motivation for the study's conceptual focus on mechanism-based explanation. Specifically, the proposed mechanisms (algorithmic legitimacy, relational dynamic capabilities, and distributed sustainability capability) are advanced as literature-grounded analytical pathways intended to guide future empirical testing and cumulative theorisation on inclusive, ethical, and sustainable GenAI-enabled social entrepreneurship (George et al., 2021; Dwivedi et al., 2021; Chalmers et al., 2021; Graham & Bonner, 2024).

Thematic Clusters of Generative AI and Collaborative Ecosystem Innovation in Social Entrepreneurship

Keyword co-occurrence analysis in VOSviewer identified four major clusters underpinning research on GenAI and social entrepreneurship (as shown in Figure 7). Together, these clusters map technology-oriented discussions, ethical and governance concerns, stakeholder interaction processes, and research approaches, drawing on Governance Theory, Institutional Theory, the Resource-Based View (RBV), and Open Innovation. The interpretation below synthesises how the literature organises these themes. The constructs introduced are analytical categories derived from recurring patterns across the reviewed studies and are offered to support cumulative theorising and future empirical operationalisation, rather than presented as validated scales.

Figure 7 here

Stream 1: Design Methodology, Knowledge Creation, and Research Approaches (Blue Cluster)

This theme foregrounds how the field is studied and how knowledge claims are constructed. Work on design methodology, co-creation, adoption, and review approaches indicates movement from conceptual reflection toward more theory-informed and empirically grounded inquiry (Donthu et al., 2021; Dwivedi et al., 2021). Contributions in this cluster frequently advocate plural and pragmatic designs that combine quantitative and qualitative approaches, enable longitudinal analysis, and incorporate participatory practices, particularly in low-resource settings where digital tools may introduce both opportunities and constraints (Chalmers et al., 2021). Institutional Theory is relevant here because epistemic norms, incentives, and publication conventions may legitimise certain methods while marginalising alternative ways of knowing in socially situated innovation (Graham & Bonner, 2024). Governance concerns also extend to research practice when GenAI is used for data handling or text generation, implying the need for transparent disclosure of GenAI use, attention to dataset bias, and accountability for intellectual property and authorship practices (Dwivedi et al., 2021).

Key constructs and definitions*:* In this cluster, a participatory design protocol refers to a documented process through which community actors contribute to research questions, instruments, and validation points, with auditable records of decision stages. A method pluralism index denotes the extent to which a study combines complementary methodological families (e.g., bibliometric mapping plus qualitative synthesis) with an explicit rationale linking method choice to the research question. Epistemic accountability refers to procedural disclosures regarding

GenAI use in the research workflow (e.g., whether GenAI supported coding, summarisation, or writing), together with basic bias checks and documentation of data provenance where relevant.

Future direction: Consolidate meta-method frameworks that capture non-linear innovation processes, specify operational steps for co-creative research designs, and develop ethical reporting standards for GenAI use in research while supporting epistemic diversity (Donthu et al., 2021; Dwivedi et al., 2021; Chalmers et al., 2021; Graham & Bonner, 2024).

Stream 2: Communication, Creativity, Social Interaction, and Stakeholder Engagement (Green Cluster)

This cluster examines relational and communicative processes associated with GenAI-enabled collaboration. For this strand, claims about efficiency and effectiveness are often superseded by those more closely observing discursive, creative, and social practices and their mediations through AI-supported workflows (Giuggioli and Pellegrini, 2023; Dwivedi et al., 2021). In RBV, both communication and creativity are considered as strategic intangibles that need to be embedded in routines and relationships to create long-term value; in this context, GenAI should be seen as a complementary input, perhaps useful in augmenting and accelerating the processes of content creation, scenario modelling and story-telling, while value is dependent on complementary human skills, local knowledge, and organizational routines (Barney, 1991; Teece, 2007; Chesbrough, 2003). Open Innovation assumes permeable boundaries and multi-stakeholder engagement, which is particularly prevalent in social entrepreneurship with its resource scarcity and expectation multiplicity (Chesbrough & Bogers, 2014; Chalmers et al., 2021). The literature also cautions the risks of homogenised messaging, perceived loss of authenticity and agency that could adversely impact trust in spaces where local context and relational capital matter (Graham & Bonner, 2024). Beyond these theories, Governance Theory posits that openness about AI use, human control, and mechanisms for stakeholder feedback are key conditions for responsible adoption (Ansell & Gash, 2008; Dwivedi et al., 2021). Moreover, Institutional Theory provides insight into how norms related to privacy, authenticity, and appropriate language affect adoption (Scott, 1995; Graham & Bonner, 2024).

Key constructs and definitions*:* AI-mediated narrative building is understood to be GenAI used to aid in collective framings of problems, stories, and value propositions that help coordinate action among stakeholders (such as collaboratively drafting proposals, communications, or learning materials). Relational authenticity reflects the extent to which AI-enabled products align with

community-held expectations and can be evaluated through stakeholder trust, perceived sense of agency, and willingness to accept co-produced output. Engagement permeability refers to how open the channels of engagement are for outside actors to input knowledge, feedback, and governance directives (for example: advisory committees, town halls, citizen science initiatives) including who is granted or barred from doing so.

Future direction: Explore the tension between efficiency-driven uses of GenAI and practices of relational authenticity; what disclosure, oversight and inclusion protocols help foster trust and responsibility in interactions mediated by AI (Giuggioli and Pellegrini, 2023; Dwivedi et al., 2021; Graham & Bonner, 2024).

Stream 3: AI Systems, Ethics, Accountability, and Responsible Consumption (Red Cluster)

Ethical governance and accountability cluster focuses on when GenAI-enabled systems are implemented in social enterprise organizations and those involved with the public interest. Themes throughout the articles focus less on potential operational improvements and more on the normative dilemmas faced when implementing AI technologies within vulnerable populations and mission-driven initiatives (Dwivedi et al., 2021). Governance Theory defines legitimacy and accountability as shared processes that weave together organisational behaviours, norms and standards, stakeholder voice, and oversight (Ansell & Gash, 2008; Fossen et al., 2024; Graham & Bonner, 2024). Institutional Theory addresses how rules, norms, and common cognitive understandings influence responsible innovation and constructions of acceptable risk (Scott, 1995). The authors expand definitions of responsible consumption to include accountability measures around data use and value-sensitive design as well as precautions to prevent manipulation, surveillance, or disenfranchisement from AI-enabled goods and services (Chalmers et al., 2021). The literature also identifies inconsistent governance and capacity gaps as environments likely to exacerbate risks of unfairness and discrimination when operating in contexts with institutional vulnerability (Dwivedi et al., 2021; Graham & Bonner, 2024). For example, risks identified include bias, lack of transparency, privacy violations, and automation that reduces substantive activity; these types of risks further support needing accountability systems that outline requirements for explainability, auditability, and redress (Fossen et al., 2024; Dwivedi et al., 2021).

Key constructs and definitions*:* Algorithmic legitimacy describes the extent to which people perceive AI-enhanced decisions or advice as fair and legitimate. It can be measured through three

dimensions: transparency of the use of models, the provision of explanations that are intelligible to people, and the meaningful oversight of stakeholders. Algorithmic accountability. This concept refers to the structure of roles, regulations, checks, and redress systems that assign, oversee, and enforce responsibility for the impacts of AI systems within and across organisations, communities, and governments. Consumer protection attitudes. This term encompasses an organisation's stated commitments and actual practices in place to safeguard individuals from manipulation, monitoring, and unfair treatment when AI is integrated into products or services.

Future direction: For instance, ask how initiatives reconcile efficiency-driven adoption with privacy and equity safeguards; how participatory oversight mechanisms can function in low-resource environments; and how standards and policy instruments can facilitate fairer GenAI practice across contexts (Dwivedi et al., 2021; Fossen et al., 2024; Graham & Bonner, 2024).

Stream 4: Sustainable Entrepreneurship, Ecosystem Transformation, and Environmental Governance (Brown Cluster)

Connecting GenAI-enhanced analytics and modelling to sustainable entrepreneurship and ecosystem transformation across the three dimensions of economic viability, environmental stewardship and social equity, this cluster weaves together research activities from the seven communities. The extant literature maps the many potential applications of such techniques for decision support, eco-design, resource optimisation, and impact assessment while also recognising that impacts are context-dependent and the outcomes of specific governance arrangements (Belz & Binder, 2017; Dwivedi et al., 2021). Governance Theory underscores enabling policy frameworks, intersectoral collaboration, and adaptive co-governance among public, private and civic actors, including urban applications such as energy-efficient infrastructure planning and circular economy modelling (Benington & Moore, 2011; George et al., 2021). Institutional conditions remain decisive: regulatory fragmentation, low trust and infrastructure gaps can constrain implementation where sustainability policy and digital capacity are weak (Graham & Bonner, 2024). Included empirical work in this cluster reports on contributions to environmental management and entrepreneurial strategy through scenario planning and sustainable business model design (García-Muiña et al., 2021). Critical included readings warn that narratives of optimisation can occlude inequities, enable greenwashing or displace people-centred approaches based in indigenous knowledge and community practice (Chalmers et al., 2021). Open Innovation emphasizes knowledge pluralism and democratic participation as preconditions for sustainable

transitions; GenAI may facilitate participatory forecasting or citizen science initiatives where accessibility and transparency are ensured (Chesbrough & Bogers, 2014). From an RBV perspective, capabilities for circular design, renewable integration, and regulatory compliance need to be developed and disseminated; GenAI can aid in discovery and reporting, yet results depend on absorptive capacity, managerial dedication, and institutional frameworks (Teece, 2007).

Key constructs and definitions*:* Distributed sustainability capability, an ecosystem's ability to monitor, learn, and act toward environmental and social goals, can be channeled through common data infrastructures, analytic toolkits, and orchestrated routines in which GenAI might serve as an enabling infrastructure. Transition governance fit characterizes the extent to which policy instruments, community values, and AI-enabled solutions align across place-specific systems, or if digital interventions displace local priorities. Circular design readiness denotes organisational capability to incorporate lifecycle analytics and regenerative principles into products and services using AI-assisted insights, contingent on absorptive capacity and supportive institutional arrangements.

Future direction: Investigate how GenAI supports systemic, place-based transition strategies rather than incremental optimisation, which governance architectures enable inclusive green entrepreneurship, and how local institutional dynamics shape pathways to resilience (Belz & Binder, 2017; Dwivedi et al., 2021; George et al., 2021; Graham & Bonner, 2024; García-Muiña et al., 2021; Chesbrough & Bogers, 2014; Teece, 2007).

Discussion

A Bibliometric–Systematic Literature Review (BSLR) was used to integrate knowledge generation. Emerging perspectives at the intersection of Generative Artificial Intelligence (GenAI) and social entrepreneurship are synthesized in this study. Four thematic strands were identified using quantitative bibliometric mapping and qualitative thematic synthesis, which show how GenAI is talked about becoming embedded within collaborative ecosystem innovation. Grounded in a conceptual framework that synthesizes Governance Theory (Ansell & Gash, 2008), Institutional Theory (Scott, 1995), Resource-Based View (Barney, 1991) and Open Innovation (Chesbrough, 2003), we conceptualize GenAI as socio-technical enabling infrastructure in ecosystems that shapes rather than assuming it as a neutral tool or independent actor. We discuss observed trends in the literature and propose analytically informed mechanisms for future research.

Theoretical contributions and emerging insights

Ecosystem reframing of GenAI adoption: The review moves the focus away from efficiency-driven adoption at firm-level to an ecosystems view where adoption is influenced by decentralised actors, multilevel governance and institutional norms. While previous studies often highlight enhancements to operational processes (Fossen et al., 2024), the review indicates that ecosystem-level factors; moral diversity, inclusion in governance, and collaborative development connected to societal value generation (George et al., 2021) influence how GenAI is conceptualised and enacted. This reframe identifies the ecosystem as the unit of analysis and delineates scope conditions under which GenAI associations may hold or fail, rather than as empirically validated results of this review.

Stream 1: Design methodology and knowledge creation: To overcome this fragmentation, the literature suggests employing a recursive approach where GenAI is embedded into iterative loops of problem-framing, stakeholder input, and refinement. This paves the way from single-shot showcases to mid-range theorisation of how learning dynamics may change over time in contexts where time and money are scarce (Donthu et al., 2021; Chalmers et al., 2021; Graham & Bonner, 2024). The contribution is making connections between epistemic practices and notions from governance literature like transparency and bias which illuminates under what conditions cumulative epistemic endeavors become possible. For example, works in this area detail GenAI-assisted drafting, translation, rapid prototyping as well as arguments for disclosure and auditability when these tools are deployed for knowledge work.

Stream 2: Communication, creativity, and stakeholder engagement: Building on the Resource-Based View, the review defines relational dynamic capabilities as ecosystem-level resources including storyline consistency, trust development, and joint sense-making. Research indicates GenAI could potentially enhance these dynamics capabilities by creating content, simulation and visualisation where local norms, legitimacy beliefs, and histories of prior cooperation allow integration (Teece, 2007; Dwivedi et al., 2021). Conversely, these same capabilities risk undermining trust if they damage perceptions of authenticity or meaningfulness. Examples you may have seen above include stakeholder-facing documents written with GenAI assistance (e.g. grant applications, outreach materials) that require human editing and local knowledge to realize their value.

Stream 3: AI ethics, accountability, and responsible consumption: In this flow, the algorithmic governance rationality finds its articulation through the lens of Institutional Theory. When GenAI

is adopted into public-interest sectors, legitimacy is brokered among regulators, civil society stakeholders, peer groups, and transnational standards (Zuiderwijk et al., 2021; Graham & Bonner, 2024). Existing work has argued that transparency measures, oversight and mechanisms of participation, and adaptation to situational factors co-produce legitimacy (Dwivedi et al., 2021). This helps account for why two seemingly identical deployments may be received differently. Questions of ethics (bias, opacity, privacy issues, and accountability) gain weight when harm to vulnerable populations is likely and lend further support to the demand for clear governance frameworks and avenues for redress.

Stream 4: Sustainable entrepreneurship and environmental governance: Evidence around this stream is fragmented. As such, the review develops the idea of distributed sustainability capability as an organizational level capacity which GenAI was discussed to support interoperable data standards, multi-actor accountability, and place-based integration (García-Muiña et al., 2021; Morales & Belmonte-Ureña, 2021). Ideally, we should think of sustainability impacts as emergent features of coordinated portfolios, not outcomes of standalone projects. For example, one review highlighted GenAI-assisted MRV and scenario modelling of sustainability targets, but noted this is highly dependent on how things are governed, institutionalized, and implemented.

In sum, GenAI is found to have implications for both opportunity and tension across streams in the literature. Patterns from observations are that results depend on institutional design, governance architecture, and allocation of complementary assets. This contribution is therefore intended to be theory-developing rather than theory-confirming: identifying mechanisms and boundary conditions for mid-range theory building and empirical comparisons.

Implications for theory and practice

Theoretical implications: Our framework positions GenAI within institutions, governance arrangements, and resource bundles. Governance Theory explains stakeholder facilitation and co-production behaviors affecting uptake (Ansell & Gash, 2008). Institutional Theory describes negotiation of legitimacy across rules, norms, and beliefs (Scott, 1995). Resource-Based View explains how GenAI may augment dispersed relational dynamic capabilities (Barney, 1991; Helfat et al., 2023). Conceptually, Open Innovation has served as a perspective through which enabling or impeding boundary-spanning knowledge flows have been understood (Chesbrough & Bogers, 2014). Bringing together these ideas, this paper presents three mechanismes (algorithmic legitimacy, relational dynamic capabilities, and distributed sustainability capability) that are

derived from analysis with the intention of developing propositions that can be tested in both thin and thick contexts.

Mechanisms may be operationalised at an early stage as follows, to aid future researchers. Algorithmic legitimacy: (subjective) algorithmic fairness; transparency of AI implementation and contestation/appeal processes. Relational dynamic capabilities: strength and frequency of cross actor feedback loops, longevity of relationships, trust and authenticity of AI enabled engagement. Distributed sustainability capability: routine monitoring mechanisms shared across actors, interoperability of data-related practices and aligning/localisation mechanisms connecting initiatives to sustainability. These are not intended to be validated indicators but instead offered as concepts to refine for empirical research.

Practical implications: Implications indicate social entrepreneurs could perceive GenAI as a collaborative amplifier instead of an independent productivity solution, emphasising accessible design, clear communication, and continuous human-in-the-loop for trust and credibility. Governments and international institutions might explore policy frameworks that expand upon rules-based governance to include more polycentric solutions involving civil society groups and grassroots communities, as well as empower organisations to help balance power differentials. Recommendations to Incubators, Funders, and Educators: support ecosystem capacity building (e.g. via skills trainings on algorithm literacy, ethical design, participatory practices) and integrate considerations of inclusion and transparency into your assessment metrics. All conclusions presented here are speculative and should be adapted to context and further research.

Future research agenda

Table 1 includes a list of theoretically grounded and empirically testable research priorities. These priorities range from experimental and longitudinal studies on feedback-enabled innovation (with GenAI) (Donthu et al., 2021); cross-cultural studies of communication patterns between AI–human partners and how they impact trust generation (Chalmers et al., 2021; Chesbrough, 2003); scales development of algorithmic licitness and accountability in informal and hybrid entrepreneurship (Dwivedi et al., 2021); to comparative case studies that unpack regenerative entrepreneurship under different institutional support dynamics (Morales & Belmonte-Ureña, 2021; García-Muiña et al., 2021). These directions retain the ecosystem as the unit of analysis and make boundary conditions explicit.

Table 1 here

Comparative analysis with previous review studies

Table 2 provides comparison with previous reviews. Instead of focusing on tools, ethics or streams of innovation individually (Dwivedi et al., 2021; Fossen et al., 2024), this synthesis views them through the lens of an ecosystem. Existing literature on digital social entrepreneurship is relevant background work (Chalmers et al., 2021), however little work provides a GenAI specific ecosystem-level synthesis. Linking entrepreneurship, AI governance and sustainability considerations explicitly situates this work and its proposed mechanisms within theoretical boundaries.

Table 2 here

Integrated theoretical framework

Figure 8 depicts an integrative framework that conceptualizes GenAI as embedded and co-evolving infrastructure with institutional, governance and innovation architectures. Instead of presenting GenAI as a discrete input, Figure 8 positions GenAI as a mediating infrastructure between ethical governance, institutional logics, capability building, and stakeholder ecosystems. Governance Theory explains how adoption governance can be achieved with participatory deliberation and reflexive regulation (Ansell & Gash, 2008; Dwivedi et al., 2021). Institutional Theory interprets formal rules, informal norms, and cognitive frames that influence interpretation and legitimacy (Scott, 1995; Graham & Bonner, 2024). From a meso-level view, Resource-Based View interprets GenAI through the lens of an ecosystem-wide complement and source of relational capability (Barney, 1991; Helfat et al., 2023). Through the lens of Open Innovation, there is a network perspective through which GenAI can assist with boundary-spanning and co-creation, leading to collaboration and experimentation (Chesbrough & Bogers, 2014).

Synthesizing these views, we arrive at an ecosystemic interpretation wherein GenAI holds promise for cooperation, adaptive governance, and regenerative value creation on the one hand and creates governance risks that must be explicitly guarded against on the other. This is meant to serve as an analytical framework: it consolidates trends identified in existing writings and provides an organized starting point for further data-driven research on equitable and place-based GenAI-fostered social innovation.

Figure 8 here

Conclusion

This Bibliometric–Systematic Literature Review analyzed the discourse around Generative Artificial Intelligence (GenAI) and collaborative ecosystem innovation in social entrepreneurship. It synthesized emerging research, mapped four thematic streams, and offered an integrative framework based on Governance Theory, Institutional Theory, Resource-Based View, and Open Innovation. The key contribution is conceptual: repositioning GenAI from a technology-centric artefact to a socio-technical enabling infrastructure whose relevance depends on the institutional architecture, governance design, and ecosystem capabilities.

The review finds that the literature on GenAI is connected to stakeholder engagement, participatory governance, ethical accountability, and sustainability-oriented practices, in addition to productivity-oriented uses. The conceptual framework proposed in this paper connects governance arrangements, institutional conditions, and stakeholder networks with patterns of GenAI adoption. Moreover, the use of GenAI in a responsible and effective manner is not only dependent on technical readiness, but also on legitimacy work, governance capacity, and cross-actor coordination. In doing so, the study articulates mechanisms and boundary conditions through which GenAI may contribute to ecosystem learning and capability formation, while recognising that these mechanisms require empirical testing.

The following practical implications are offered, though they should be taken in the context of the review-based evidence that underlies them. Policymakers can enhance responsible adoption with measures that support inclusive governance arrangements that foster transparency, participation and accountability, as well as efforts to address digital divides which tend to marginalise already vulnerable communities. Social entrepreneurs and other ecosystem partners can concentrate on developing the capabilities needed for ethical governance, co-creation and systems thinking, and for implementing disclosure, oversight and feedback processes when GenAI is deployed in public-interest settings.

The focus on Scopus risks underestimating potentially relevant articles indexed in other databases, especially those in regional and non-English publications. Additionally, the inferences are limited by the maturity and distribution of the existing evidence base. Empirical studies, particularly comparative and longitudinal research, are necessary to investigate the influence of institutional arrangements, culture, and administrative capacity on the adoption and implications of GenAI in low-income and other developing settings. Future studies should operationalise the mechanisms articulated here, test them across settings with different institutional thickness and resource

endowments, and refine measures for legitimacy, relational capabilities, and distributed sustainability capacity.

This study provides a theoretically informed, methodologically transparent, and practice-relevant baseline for cumulative inquiry. As GenAI evolves, its role in social entrepreneurship should be assessed through evidence-led evaluation of governance safeguards, institutional conditions, and collaborative capabilities, rather than assumed as uniformly beneficial, to support more inclusive and sustainable development trajectories.

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Table 1: Future Research Agenda Table

Research Stream	**Research Questions/Agenda**	**Reference**
Design Methodology and Knowledge Creation	How can Systems Thinking approaches be integrated into research frameworks for studying GenAI adoption in social entrepreneurship? What participatory and experimental research designs can capture emergent ecosystem innovation processes?	Donthu et al., 2021; Graham & Bonner, 2024
Communication, Creativity, Social Interaction, and Stakeholder Engagement	How does AI-mediated communication influence trust-building and stakeholder engagement across diverse socio-cultural contexts? What governance mechanisms foster inclusive stakeholder co-creation in AI-enabled entrepreneurship?	Chalmers et al., 2021; Chesbrough, 2003
AI Systems, Ethics, Accountability, and Responsible Consumption	How can participatory governance models enhance ethical AI adoption within entrepreneurial ecosystems? What role do informal governance systems and community-driven ethical frameworks play in responsible AI innovation?	Dwivedi et al., 2021; Graham & Bonner, 2024
Sustainable Entrepreneurship, Ecosystem Transformation, and Environmental Governance	How can GenAI facilitate Circular Economy strategies and ecosystem-wide sustainability transitions? What Systems Thinking frameworks can capture the regenerative potential of AI-enabled entrepreneurship?	Morales and Belmonte-Ureña, 2021; García-Muiña et al., 2021

Table 2: Comparative Analysis Table

Study	**Focus Area**	**Time Frame**	**Key Themes/Variables**	**Methodology**
Fossen et al. (2024)	AI Adoption in Entrepreneurship	2016–2021	AI capabilities, entrepreneurship trends, digital transformation	Systematic literature review
Chalmers et al. (2021)	Digital Transformation in Social Entrepreneurship	2012–2021	Digital tools, stakeholder engagement, social innovation	Qualitative thematic synthesis
Dwivedi et al. (2021)	Ethical Governance of AI	2010–2021	Ethics, accountability, AI governance	Bibliometric analysis
George et al. (2021)	Entrepreneurship and Sustainability Integration	2010–2020	Entrepreneurship-sustainability nexus, innovation, governance	Structured literature review
Morales and Belmonte-Ureña (2021)	Sustainability Transitions in Entrepreneurship Ecosystems	2010–2020	Sustainability transitions, ecosystem resilience, policy support	Systematic review and conceptual analysis
Current Study	Generative AI in Social Entrepreneurship	2013–2024	GenAI-enabled ecosystem innovation, ethical governance, sustainability transitions	Bibliometric-Systematic Literature Review (BSLR)

Figure Legends

Figure 1: PRISMA Flow Diagram; Author

Figure 2: Documents by Author (Scopus Analysis)

Figure 3: Co-authorship Network of Authors (VOSviewer Analysis)

Figure 4: Documents by Country (Scopus Analysis)

Figure 5: Country-wise Collaboration Network (VOSviewer Analysis)

Figure 6: Annual Research Output on GenAI and Social Entrepreneurship (Scopus Analysis)

Figure 7: Keyword Co-Occurrence Network (VOSviewer Analysis)

Figure 8: Theoretical Framework; Author