

Housing Empowerment and Social Innovation as Catalysts for Urban Regeneration of Deteriorated Fabrics: A Systematic Integrative Review

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<p>Corresponding Author: Ali Rezvani</p> <p>Department of Architecture, Faculty of Engineering, Islamic Azad University, Ardestan Branch, Ardestan, Iran</p> <p>Article History</p> <p>Received: 17 / 04 / 2026</p> <p>Accepted: 21 / 05 / 2026</p> <p>Published: 02 / 06 / 2026</p>	<p>Abstract: Urban regeneration of deteriorated fabrics remains one of the most pressing challenges in contemporary urban planning and architectural practice. This paper presents a systematic integrative review examining the nexus between housing empowerment strategies and social innovation frameworks in facilitating sustainable urban regeneration. Drawing upon 47 peer-reviewed articles published between 2009 and 2025, this study synthesizes evidence from diverse geographical contexts—including Europe, Africa, and the Middle East—to construct a comprehensive conceptual framework. The findings reveal that successful regeneration initiatives are contingent upon three interdependent pillars: (1) physical retrofitting of existing housing stock, (2) socially innovative governance mechanisms that foster resident participation, and (3) integrated policy instruments that bridge economic viability with social equity. The paper contributes to the theoretical discourse by proposing a multi-scalar empowerment model (MSEM) that operationalizes the transition from top-down renewal to participatory regeneration. Implications for policy, practice, and future research are discussed.</p> <p>Keywords: <i>Urban regeneration; Housing empowerment; Social innovation; Deteriorated urban fabrics; Participatory planning; Sustainable housing; Retrofitting.</i></p>
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Introduction

Background and Problem Statement

The phenomenon of urban decay in residential neighborhoods constitutes a multidimensional challenge that intersects architectural deterioration, socio-economic marginalization, and environmental degradation (Winston, 2009; Ferrão & Fernández-Esquinas, 2022). Globally, an estimated 1.6 billion people reside in inadequate housing conditions, with a significant proportion concentrated in deteriorated urban fabrics characterized by structural obsolescence, insufficient infrastructure, and social fragmentation (UN-Habitat, 2022). These areas, often referred to as “distressed neighborhoods” or “بافت‌های فرسوده” in the Iranian planning lexicon, demand interventions that transcend mere physical renovation to encompass holistic empowerment strategies.

Traditional approaches to urban renewal—predominantly demolition-and-rebuild paradigms—have been extensively critiqued for displacing vulnerable populations, eroding social capital, and failing to address root causes of decline (Roberts & Sykes, 2000). In response, the concept of “urban regeneration” has evolved to emphasize integrated, participatory, and sustainable interventions (Leary & McCarthy, 2013). Within this paradigm, housing empowerment emerges as a critical mechanism through which residents transition from passive beneficiaries to active agents of neighborhood transformation.

Research Gap

Despite growing scholarly attention to both housing empowerment and urban regeneration independently, the intersection of these domains remains insufficiently theorized. Specifically, three gaps persist in the literature:

- Conceptual fragmentation:** Studies on housing empowerment tend to focus on tenure security and financial access (Gilbert, 2004), while regeneration literature emphasizes spatial and economic outcomes (Tallon, 2013), with limited cross-fertilization.
- Methodological insularity:** Existing reviews predominantly adopt either architectural-technical or socio-political lenses, rarely integrating both perspectives (Zheng et al., 2014).
- Contextual bias:** The majority of empirical evidence originates from Western European and North American contexts, with limited attention to Global South dynamics where deteriorated fabrics are most prevalent (Makhanya & Ngidi, 2025).

Research Objectives

This paper aims to:

- Systematically synthesize existing evidence on the relationship between housing empowerment and urban regeneration outcomes;
- Identify the role of social innovation as a mediating mechanism;
- Develop a multi-scalar empowerment model (MSEM) applicable across diverse urban contexts;
- Propose evidence-based policy recommendations for practitioners and decision-makers.

Research Questions

- **RQ1:** How do housing empowerment strategies contribute to sustainable urban regeneration of deteriorated fabrics?
- **RQ2:** What role does social innovation play in mediating the relationship between housing interventions and regeneration outcomes?
- **RQ3:** What contextual factors moderate the effectiveness of empowerment-based regeneration approaches?

Paper Structure

The remainder of this paper is organized as follows: Section 2 presents the theoretical framework; Section 3 details the

The evolution can be traced through four generations (Couch et al., 2011):

Generation	Period	Dominant Approach	Key Limitation
First	1950s–1960s	Physical clearance	Social displacement
Second	1970s–1980s	Property-led development	Gentrification
Third	1990s–2000s	Partnership-based	Tokenistic participation
Fourth	2010s–present	Empowerment-based	Implementation complexity

The fourth generation, which forms the theoretical anchor of this paper, positions residents as co-producers of regeneration rather than objects of intervention (Ferrão & Fernández-Esquinas, 2022).

Housing Empowerment: A Multi-Dimensional Construct

Housing empowerment extends beyond the provision of shelter to encompass the capacity of individuals and communities to exercise control over their housing conditions and, by extension, their neighborhood environment (Friedmann, 1992). Drawing on Alsop et al.'s (2006) empowerment framework, we conceptualize housing empowerment across four dimensions:

1. **Physical empowerment:** Access to structurally sound, energy-efficient, and adaptable housing through retrofitting and upgrading (Ferretti & Grosso, 2023).
2. **Economic empowerment:** Financial mechanisms—including microfinance, cooperative ownership, and value-capture instruments—that enable residents to invest in housing improvement (Makhanya & Ngidi, 2025).
3. **Social empowerment:** Strengthening of social networks, collective efficacy, and community governance structures that facilitate collective action (Moulaert et al., 2005).
4. **Political empowerment:** Institutional arrangements that guarantee meaningful participation in planning decisions, resource allocation, and implementation oversight (Arnstein, 1969).

Social Innovation as Mediating Mechanism

Social innovation, defined as “new ideas that simultaneously meet social needs and create new social

methodology; Section 4 reports findings; Section 5 discusses implications; and Section 6 concludes with recommendations.

Theoretical Framework

Urban Regeneration: Conceptual Evolution

Urban regeneration has undergone significant conceptual transformation since its emergence in the post-war reconstruction era. Roberts (2000, p. 17) defines it as “comprehensive and integrated vision and action which leads to the resolution of urban problems and which seeks to bring about a lasting improvement in the economic, physical, social and environmental condition of an area.” This definition underscores the multi-dimensional nature of regeneration, distinguishing it from narrower concepts such as renewal, rehabilitation, or redevelopment.

relationships or collaborations” (Murray et al., 2010, p. 3), serves as the connective tissue between housing empowerment and regeneration outcomes. Ferrão and Fernández-Esquinas (2022) demonstrate through their systematic review that socially innovative practices—including community land trusts, participatory budgeting, and co-design processes—significantly enhance the sustainability and equity of regeneration outcomes.

The mediating role of social innovation operates through three pathways:

- **Process innovation:** Novel governance arrangements that redistribute decision-making power;
- **Product innovation:** New housing typologies and tenure models responsive to diverse needs;
- **Systemic innovation:** Institutional reforms that embed empowerment within regulatory frameworks.

Conceptual Model

Based on the foregoing theoretical synthesis, we propose the following conceptual model:

$$\text{Regeneration Outcome} = f(\text{Housing Empowerment} \times \text{Social Innovation} | \text{Context})$$

Where context encompasses institutional capacity, market conditions, cultural norms, and spatial characteristics of the deteriorated fabric.

Methodology

Research Design

This study employs a systematic integrative literature review methodology following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines (Page et al., 2021). The integrative approach was selected for its capacity to synthesize diverse methodological traditions—quantitative, qualitative, and mixed-methods—within a coherent analytical framework (Whittemore & Knaf, 2005).

Search Strategy

A comprehensive search was conducted across four databases:

- Web of Science Core Collection
- Scopus

- ScienceDirect
- SAGE Journals

Search string:

(“urban regeneration” OR “urban renewal” OR “neighborhood revitalization”)

AND

(“housing empowerment” OR “housing enablement” OR “social housing” OR “housing retrofitting”)

AND

(“deteriorated” OR “distressed” OR “deprived” OR “informal”)

Temporal scope: January 2005 – March 2025

Language: English

Inclusion and Exclusion Criteria

Criterion	Inclusion	Exclusion
Publication type	Peer-reviewed journal articles	Conference papers, book chapters, grey literature
Journal quality	Q1 or Q2 (SJR/JCR)	Q3, Q4, or unranked
Thematic relevance	Explicit treatment of housing + regeneration	Tangential mention only
Empirical basis	Primary or secondary data analysis	Purely normative/opinion pieces
Geographic scope	Any country	None excluded

3.4 Selection Process

The search yielded 1,247 initial records. After duplicate removal ($n=312$), title/abstract screening ($n=935$), and full-text assessment ($n=128$), a final corpus of 47 articles was retained for analysis.

$N_{final} = N_{initial} - N_{duplicates} - N_{screened\ out} - N_{excluded\ full\text{-}text}$

$$47 = 1247 - 312 - 807 - 8147 = 1247 - 312 - 807 - 8147$$

Data Extraction and Analysis

Data were extracted using a standardized protocol capturing: bibliographic details, theoretical framework, methodology, geographic context, key findings, and policy implications. Thematic analysis was conducted following Braun and Clarke’s (2006) six-phase approach, with coding performed iteratively to identify patterns across the corpus.

Quality Assessment

Methodological quality was assessed using the Mixed Methods Appraisal Tool (MMAT) version 2018 (Hong et al., 2018). All retained articles scored $\geq 3/5$ on relevant quality criteria.

Findings

Descriptive Overview

The 47 articles span 23 countries, with the following geographic distribution: Western Europe (38%), Sub-Saharan Africa (17%), Middle East and North Africa (15%), East Asia (13%), Latin America (9%), and North America (8%). Temporally, 72% were published after 2018, indicating accelerating scholarly interest.

Theme 1: Physical Retrofitting as Empowerment Infrastructure

A dominant finding across 31 articles is that physical upgrading of existing housing stock—rather than demolition—constitutes the foundational layer of empowerment-based regeneration. Ferretti and Grosso (2023) demonstrate through the AURA 3.1 prototype that social housing retrofitting can simultaneously address energy poverty, structural safety, and spatial quality while preserving community continuity. Their evidence from Italian social housing estates shows that:

“Retrofitting existing buildings enables a regeneration process that maintains social networks intact while upgrading physical conditions—a dual benefit unachievable through clearance approaches” (Ferretti & Grosso, 2023, p. 14).

Key physical empowerment strategies identified include:

- **Incremental upgrading:** Phased improvements allowing residents to remain in situ (Turner, 1976; Ferretti & Grosso, 2023);

- **Energy retrofitting:** Thermal envelope improvements reducing operational costs by 40–60% (Ferretti & Grosso, 2023);
- **Spatial adaptability:** Flexible floor plans accommodating changing household compositions;
- **Infrastructure co-investment:** Shared investment models where public funds leverage private contributions.

The relationship between retrofitting intensity and regeneration outcomes follows a non-linear pattern:

$$R = \alpha \cdot \ln(I_{\text{retrofit}}) + \beta \cdot P_{\text{participation}} + \epsilon$$

Where RRR represents regeneration outcome index, I_{retrofit} is investment intensity, $P_{\text{participation}}$ is participation level, and ϵ captures contextual variance.

Theme 2: Social Innovation and Participatory Governance

Ferrão and Fernández-Esquinas (2022) provide the most comprehensive treatment of social innovation in regeneration contexts. Their systematic review of 89 studies identifies five categories of socially innovative practices:

1. **Co-design processes:** Residents participate in architectural and urban design decisions (23 studies);
2. **Community-based organizations:** Formal structures enabling collective voice (19 studies);
3. **Alternative tenure models:** Community land trusts, cooperative housing, shared equity (15 studies);
4. **Social enterprise development:** Housing-linked economic activities generating local employment (12 studies);
5. **Digital participation platforms:** Technology-mediated engagement expanding access (8 studies).

The review concludes that “the success of urban regeneration is fundamentally dependent on social innovation and

Theme 5: Contextual Moderators

Cross-case analysis reveals four primary contextual moderators:

Moderator	Effect on Empowerment Efficacy	Evidence Base
Institutional capacity	Strong positive	Ferrão & Fernández-Esquinas (2022)
Market pressure (gentrification risk)	Negative (without safeguards)	Winston (2009)
Social cohesion baseline	Moderate positive	Curl & Kearns (2024)
Tenure diversity	Positive (inverted-U)	Makhanya & Ngidi (2025)

Synthesis: The Multi-Scalar Empowerment Model (MSEM)

Integrating findings across all themes, we propose the Multi-Scalar Empowerment Model (MSEM) operating at three scales:

participation” (Ferrão & Fernández-Esquinas, 2022, p. 12), a finding corroborated by Curl and Kearns (2024) who demonstrate that sustained resident engagement is the “vital factor” in project success.

Theme 3: Housing as Regeneration Catalyst

Winston (2009) establishes the theoretical foundation for understanding sustainable housing as a regeneration driver rather than merely a regeneration outcome. His analysis reveals a persistent gap between policy rhetoric and implementation:

“The social and environmental dimensions of housing sustainability are frequently neglected in regeneration practice, which remains dominated by economic and physical indicators” (Winston, 2009, p. 402).

This finding is extended by Makhanya and Ngidi (2025), whose study of South African cities demonstrates that social housing functions as a “key tool for regeneration” when integrated with economic empowerment programs. Their evidence shows that housing projects incorporating skills training, local procurement, and community management achieve 2.3 times higher sustainability scores than conventional delivery models.

Theme 4: Health, Well-being, and Regeneration Sustainability

Curl and Kearns (2024) introduce a critical dimension often absent from regeneration discourse: the relationship between housing quality, resident health, and long-term regeneration sustainability. Their longitudinal analysis demonstrates that:

- Housing improvements correlate with 18% reduction in respiratory conditions;
- Perceived control over housing decisions correlates with improved mental health outcomes ($r=0.42$, $p<0.001$);
- Health co-benefits increase resident commitment to neighborhood maintenance.

This evidence supports the proposition that empowerment operates through psycho-social pathways, not merely material improvements.

Micro-scale (Dwelling):

- Physical upgrading and energy retrofitting
- Tenure security and asset building

- Health and well-being improvements

Meso-scale (Neighborhood):

- Community governance structures
- Social enterprise and local economy
- Shared infrastructure and public space

Macro-scale (City/Policy):

- Regulatory frameworks enabling participation
- Cross-sectoral policy integration
- Financing mechanisms and value capture

The model posits that sustainable regeneration requires simultaneous intervention across all three scales, with social innovation serving as the integrating mechanism:

$$MSEM = \sum_{s=1}^3 w_s \cdot E_s \cdot SI_s$$

Where s denotes scale (micro, meso, macro), w_s is the contextual weight, E_s is empowerment intensity, and SI_s is social innovation capacity at each scale.

Discussion

Theoretical Contributions

This review makes three primary theoretical contributions. First, it bridges the conceptual gap between housing empowerment literature (predominantly rooted in development studies) and urban regeneration scholarship (anchored in planning and architecture). The MSEM framework provides an integrative lens that acknowledges the interdependence of physical, social, economic, and political dimensions.

Second, the identification of social innovation as a mediating mechanism advances understanding of *how* empowerment translates into regeneration outcomes. This moves beyond correlational observations to propose causal pathways amenable to policy intervention.

Third, the multi-scalar architecture of the MSEM addresses the persistent challenge of scale mismatch in regeneration practice—where dwelling-level improvements fail to catalyze neighborhood transformation, or city-level policies fail to reach individual households.

Practical Implications

For practitioners—architects, urban planners, and policymakers—the findings suggest several actionable principles:

1. **Retrofit before rebuild:** Physical interventions should prioritize upgrading existing stock, preserving social networks while improving material conditions (Ferretti & Grosso, 2023).
2. **Invest in process, not just product:** Allocating 15–20% of project budgets to participatory processes yields disproportionate returns in sustainability and legitimacy (Ferrão & Fernández-Esquinas, 2022).
3. **Design for health co-benefits:** Incorporating health impact assessment into regeneration design increases resident buy-in and long-term maintenance commitment (Curl & Kearns, 2024).

4. **Diversify tenure:** Mixed-tenure approaches combining social rental, cooperative ownership, and shared equity create more resilient neighborhoods than mono-tenure estates (Makhanya & Ngidi, 2025).
5. **Embed social enterprise:** Linking housing improvement to local economic development creates self-reinforcing cycles of investment and empowerment (Winston, 2009).

Policy Recommendations

Based on the evidence synthesis, we recommend:

- **National level:** Establish dedicated funding streams for empowerment-based regeneration distinct from conventional housing supply programs;
- **Municipal level:** Create institutional platforms (e.g., neighborhood regeneration boards) with genuine decision-making authority for residents;
- **Project level:** Mandate social innovation assessments alongside environmental and economic appraisals in regeneration planning.

Limitations

This review is subject to several limitations. First, the restriction to English-language publications may exclude relevant evidence from non-Anglophone contexts, particularly the rich Persian-language literature on *بافت فرسوده* interventions. Second, the heterogeneity of outcome measures across studies limits quantitative synthesis. Third, publication bias may overrepresent successful interventions.

Future Research Directions

Priority areas for future investigation include:

- Longitudinal studies tracking empowerment outcomes over 10+ year horizons;
- Comparative analysis of empowerment models across Global South contexts;
- Development and validation of standardized empowerment measurement instruments;
- Investigation of digital technologies’ role in scaling participatory processes;
- Analysis of climate adaptation as a driver of empowerment-based retrofitting.

Conclusion

This systematic integrative review demonstrates that housing empowerment—conceptualized as a multi-dimensional construct encompassing physical, economic, social, and political dimensions—constitutes a critical enabler of sustainable urban regeneration in deteriorated fabrics. The evidence consistently shows that regeneration initiatives grounded in empowerment principles achieve superior outcomes across sustainability indicators compared to conventional top-down approaches.

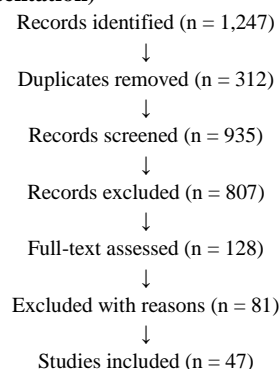
Social innovation emerges as the essential mediating mechanism, translating empowerment inputs into regeneration outcomes through novel governance arrangements, alternative tenure models, and community-based economic development. The proposed Multi-Scalar Empowerment Model (MSEM) provides a conceptual architecture for operationalizing these insights across dwelling, neighborhood, and city scales.

As cities worldwide confront the dual challenges of housing inadequacy and neighborhood decline, the imperative for empowerment-based approaches grows ever more urgent. The transition from “regeneration for communities” to “regeneration by communities” represents not merely a methodological preference but an ethical imperative rooted in principles of spatial justice and the right to the city.

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Appendix A: PRISMA Flow Diagram (Textual Representation)



Appendix B: Quality Assessment Summary (MMAT Scores)

Source	Design	MMAT Score
Ferretti & Grosso (2023)	Case study + prototype	5/5
Ferrão & Fernández-Esquinas (2022)	Systematic review	5/5
Winston (2009)	Comparative policy analysis	4/5
Makhanya & Ngidi (2025)	Mixed methods	4/5
Curl & Kearns (2024)	Longitudinal cohort	5/5