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# SOCIAL INNOVATION AND URBAN VITALITY
## Key Indicators for Creative and Resilient Cities

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**KEYWORDS**

*Urban Vitalism*
*Social Innovation*
*Millennials*
*Resilient Cities*
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**ABSTRACT**

*The transition towards creative and resilient cities requieres governance models that integrate social innovation, environmental sustainability, and inclusive urban design. This study employs the urban vitalism paradigm as an integrative framework, operationalising five key dimensions: urban space, governance, social inclusion, environmental sustainability, and economic resilience. These dimensions are translated into measurable indicators aligned with global urban agendas. Drawing on survey responses from millennials, the research examines how these dimensions shape perceptions of future cities. The findings indicate that educational background and place of residence significantly influence priorities such as infrastructure, green spaces, participatory governance, and economic opportunities. Social innovation emerges as a cross-cutting driver, enhancing both resilience and citizen satisfaction. The study offers recommendations for policymakers and planners seeking to design environmentally responsible, economically competitive, socially inclusive, and culturally vibrant cities.*

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## 1. Introduction

The twenty-first century is characterised by rapid urban transformation, driven by factors such as climate change, digitalisation, demographic pressure, and a growing demand for resilience, as noted by Cerdá and Ortego (2024). According to the United Nations, more than 56% of the world's population currently resides in urban environments, with this figure projected to reach 68% by 2050 (Kapucu et al., 2024; ONU, 2016, 2020). This trend not only redefines modes of living but also presents unprecedented challenges regarding sustainability, governance, and social equity. In this context, traditional approaches to sustainable, smart, inclusive, or resilient cities tend to fragment debate and disperse urban action (Qian et al., 2024; Sharifi et al., 2025). By contrast, the paradigm of urban vitalism offers an integrative framework that can be operationalised in urban management practice across five key dimensions: urban space, governance, social inclusion, environmental sustainability, and economic resilience. This framework places citizen perception at the centre of planning and public discourse (Nederhand et al., 2023; Winslow and Coenen, 2023).

One of the cross-cutting drivers of this paradigm is social innovation, understood as the collective capacity to generate creative solutions to complex urban problems through collaboration among public, private, and community actors (Lee et al., 2022). Unlike isolated technological innovation, social innovation fosters cohesion, participation, and urban creativity, and enables international agendas such as the Sustainable Development Goals (SDG 11), the UN-Habitat New Urban Agenda, and the European Green Deal to be translated into concrete practices of inclusive governance (Cash-Gibson et al., 2025; Luo et al., 2025). Within this context, the millennial generation (1981–1996) provides a privileged observatory for examining these issues. Marked by globalisation, job insecurity, and environmental awareness, millennials tend to value creativity, equity, and resilience as essential components of urban vitality (Chang and Spierings, 2023; Sciuva, 2025). Their perceptions offer a generational barometer capable of anticipating the social demands that will shape the coming decades.

Despite the relevance of this approach, the literature continues to lack empirical studies that operationalise perceptual indicators of urban vitality and link them directly to social innovation. Much of the previous work has focused on theoretical frameworks or evaluated specific policies (Amegavi et al., 2025; Zucaro and Agostinho, 2025), without generating comparable metrics that allow citizen perceptions to be integrated into urban planning. This article addresses that gap.

The article is structured as follows. It begins with a presentation of the theoretical framework on urban vitality and social innovation, highlighting its connection to global agendas and recent literature. This is followed by a description of the study methodology, with particular attention to the construction and validation of the instrument. The main results are then presented, including both descriptive analyses and the identification of social innovation as a cross-cutting theme. In the discussion section, the findings are interpreted in relation to current academic debates, emphasising the implications for governance and urban design. The article concludes by outlining key conclusions, limitations, and directions for future research. Overall, it aims to provide empirical evidence linking citizen perceptions, social innovation, and urban vitalism.

## 2. Literature Review

### *2.1. The Paradigm of Urban Vitalism as an Integrative Approach*

In recent years, contemporary urban literature has been marked by a proliferation of labels which, while useful in their own right, often fragment the analysis and practice of urban phenomena. Examples include sustainable cities (Sharifi et al., 2025), smart cities (Qian et al., 2024), resilient cities (Kapucu et al., 2024), and creative cities (Wise et al., 2022). This fragmentation generates a degree of *semantic inflation*, in which concepts become rhetorical frameworks rather than practical guides for action (Schraven et al., 2021).

In this context, the paradigm of urban vitalism emerges as an integrative proposal. In contrast to partial approaches, urban vitalism seeks to articulate within a single analytical framework both the material dimensions of urban quality of life, such as infrastructure, services, and governance,

and the perceptual dimensions, including subjective well-being, inclusion, and participation. In this way, the paradigm consolidates itself as an alternative for interpreting urban complexity amid rapid urbanisation and the climate crisis (Kapucu et al., 2024; Sharifi et al., 2025). Its central premise is that urban vitality cannot be reduced to physical or purely sectoral indicators of material well-being; rather, in line with recent theoretical contributions, it should be understood as the dynamic interaction of five key dimensions: urban space, governance, social inclusion, environmental sustainability, and economic resilience (Nederhand et al., 2023; Winslow and Coenen, 2023).

Unlike traditional metrics that rely on theoretically objective indicators, such as gross domestic product (GDP), greenhouse gas emissions, or urban infrastructure density, urban vitalism incorporates perceptual indicators to move beyond biased notions of objectivity and to capture how citizens experience and assess their daily lives in relation to the key dimensions of urban quality of life (Andal, 2023). From this perspective, a green space is not only measured in hectares but also evaluated in terms of perceived accessibility, safety, and its capacity to foster community interaction. These aspects complement the simple quantitative measurement of tree-covered areas. Ultimately, this approach contributes at least three conceptual innovations:

- It goes beyond sectoral logic: it avoids juxtaposing labels such as smart, green, or resilient cities, providing a coherent narrative of urban life.
- It introduces vitality as a dynamic indicator: the city is conceived as a living organism, continuously adapting and transforming.
- It places centrality on citizenship**:** perceptions of spatial justice, institutional trust, and cultural inclusion become criteria of legitimacy as important as technical data (Buttazzoni et al., 2025).

Furthermore, the paradigm of urban vitalism aligns closely with the most relevant global and European agendas on urban development. For example, the Sustainable Development Goals (SDGs), particularly SDG 11 (ONU, 2016, 2020), aim to make cities inclusive, safe, resilient, and sustainable, ultimately requiring the development of both objective and perceptual indicators of urban quality of life. Similarly, the New Urban Agenda (ONU, 2017) prioritises citizen participation, cultural integration, and equity as essential conditions for sustainable urban development.

Elaborating further, regulatory frameworks such as the European Green Deal and the Cities Mission (EU, 2019–2025) emphasise decarbonisation and digital innovation as pillars of urban competitiveness, reinforcing the need to integrate citizen perceptions into the ecological transition (Cerdá and Ortego, 2024). In this sense, these agendas create an opportunity to translate perceptual data into public policies directly applicable to urban planning and management.

## *2.2. Social Innovation as a Driver of Urban Vitality*

In the field of spatial planning, social innovation has established itself as a key concept for understanding urban transformation processes in the 21st century. Defined as the ability to generate new solutions to social problems through collaborative, inclusive, and sustainable processes (Lee et al., 2022), social innovation differs from mere technological innovation in that its emphasis lies precisely on the social, cultural and community value of changes, rather than on technical efficiency *per se.* In this regard, within this framework, social innovation acts as a cross-cutting principle that connects the five dimensions:

- In urban spaces, it encourages the co-production of solutions for the use of public spaces and sustainable mobility (Nikitas et al., 2024).
- In governance, it enables co-design processes and citizen laboratories, which strengthen transparency and institutional legitimacy (Przeybilovicz et al., 2020).
- In social inclusion, it promotes redistributive projects in housing, health, and education (Cash-Gibson et al., 2025).
- In economic resilience, it promotes creative entrepreneurship, local SMEs and circular economies.

- In environmental sustainability, it coordinates community practices in recycling, water management and energy transition (Amegavi et al., 2025).

In summary, it can be said that social innovation acts as a catalyst for resilience and, ultimately, it transforms cities' adaptive capacity into a shared process, mobilising intangible resources such as trust, collective creativity and social capital (Becker et al., 2023). Compared to aspects of technological innovation linked to the digitalisation of smart cities, social innovation focuses on the capacity of communities to articulate participatory processes such as citizen laboratories, urban co-design, or participatory budgeting, which reinforce both the legitimacy of institutions within the framework of urban vitalism (Bastos et al., 2022; Winslow and Coenen, 2023).

### *2.3. Subjective Indicators for Measuring Urban Vitalism*

One of the most recent contributions to this paradigm is the proposal to operationalise vitality through perceptual indicators. These indicators enable the measurement of how citizens experience the city and complement traditional technical metrics. The literature identifies at least three justifications for their use. First, democratic legitimacy, in which citizen perceptions determine the acceptance of urban policies (Hardi et al., 2025). Second, predictive value, which allows social and political trends to be anticipated even when they are not visible in conventional indicators (Chang and Spierings, 2023). Third, multidimensionality, capturing the interactions between subjective well-being, social cohesion, and environmental sustainability.

In this study, the indicators have been organised around five dimensions: urban space, governance, inclusion, economic resilience, and environmental sustainability. This structure allows the analysis not only of average values for each dimension but also of the interactions between perceptions and how they are shaped by sociodemographic factors such as educational level and place of residence. In summary, the theoretical framework presented here positions urban vitalism as a proposal that transcends the fragmentation of traditional labels, including smart, sustainable, creative, or resilient cities, integrating them into a coherent model. Within this framework, social innovation functions as a cross-cutting driver that links the five key dimensions with citizens' perceptions of how the cities of the future should be configured.

## 3. Methodology

This study forms part of an international project funded by the International University of La Rioja (UNIR, Spain), which aimed to characterise millennials' perceptions of the attributes of cities of the future. The study adopted a quantitative, exploratory, and cross-sectional design, intended to capture perceptual trends rather than to develop complex statistical models. The focus was on operationalising the urban vitalism paradigm across the five dimensions identified through the literature review. The target population comprised young people of the millennial generation (1981–1996) residing in urban environments within the scope of the study. To ensure diversity, purposive and stratified sampling was employed based on gender, educational level, and type of residence, including medium-sized cities, large cities, and metropolitan areas. The final sample consisted of 386 valid cases, distributed between Spain and other Latin American countries participating in the project.

The data collection instrument was developed based on a review of the literature on creative cities, resilience, and urban vitalism (Sharifi et al., 2025; Wise et al., 2022). It comprised 30 items, distributed across the five dimensions under analysis, and used a Likert scale ranging from 1 for strongly disagree to 5 for strongly agree (see Table 1).

**Table 1.** Correspondence between conceptual dimensions and questionnaire items.

| Dimension | Indicators |
|---|---|
| **Urban space and habitability** | 1. The city offers sufficient accessible, high-quality green spaces.<br>2. Urban mobility is sustainable (public transport, cycling, walking).<br>3. The preservation of cultural heritage strengthens urban identity.<br>4. Public spaces are inclusive and encourage social interaction.<br>5. There is equitable access to basic services (health, education, leisure).<br>6. Urban planning promotes a compact and liveable environment. |
| **Urban governance** | 7. Effective channels for citizen participation exist.<br>8. Public management is transparent and accountable.<br>9. Local authorities promote collaboration between social actors.<br>10. The government is perceived as open and close to citizens.<br>11. Digital innovation is used to improve governance.<br>12. There is trust in urban institutions. |
| **Social inclusion and cohesion** | 13. There is equitable access to affordable and decent housing.<br>14. Education is inclusive and of high quality.<br>15. Cultural and leisure activities are accessible to all social groups.<br>16. The city promotes intergenerational equity (young people/older people).<br>17. Accessible health and welfare services are guaranteed.<br>18. Social diversity translates into community cohesion and harmonious coexistence. |
| **Economy and resilience** | 19. The city offers decent and stable employment opportunities.<br>20. Circular economy and responsible consumption policies are in place.<br>21. Technological innovation is geared towards inclusion.<br>22. Entrepreneurship and SMEs are supported.<br>23. The local economy is diversified and resilient to crises.<br>24. Creative and cultural industries generate value and employment. |
| **Environmental sustainability** | 25. Effective climate change mitigation policies are implemented.<br>26. Urban waste management is efficient.<br>27. Air and water quality are guaranteed.<br>28. The city protects its biodiversity and urban ecosystems.<br>29. Infrastructure is resilient to droughts, floods and extreme weather events.<br>30. The use of renewable and clean energy is promoted. |

Source: Own elaboration, 2026.

Data collection was conducted in December 2024 using an online questionnaire distributed through academic networks and institutional collaborations, including the International University of La Rioja (UNIR), Miguel de Cervantes European University (UEMC), Federico Santa María Technical University (USM), and EAE Business School. Participation was voluntary, with guarantees of anonymity and confidentiality in accordance with the ethical protocols of the coordinating university. As the primary objective of the study was to validate the overall structure of the questionnaire as an integrated instrument for data collection, in addition to conducting descriptive statistical analyses of the items, its reliability and validity were first examined using both exploratory and confirmatory methods, as outlined below.

## 4. Results

### *4.1. Sample Profile*

In general terms, the sample profile with respect to key sociodemographic variables was as follows: gender (women, 52%; men, 46%; and other or not specified, 2%), educational level (higher education, 67%; post-compulsory secondary, 28%; and other, 5%), and type of residence (medium-sized city, 32%; large city, 48%; and metropolitan area, 20%). To complement this basic descriptive profile, cross-tabulations were conducted between key sociodemographic variables, including age, gender, educational level, and type of residence, in order to identify distribution patterns that could influence urban perceptions.

The most relevant results are summarised in Table 2. They indicate that educational level and type of residence are the variables with the greatest influence on the sample profile. Specifically,

millennials with university education tend to be concentrated in metropolitan areas, consistent with the literature reviewed in this study. By contrast, the gender variable does not exhibit significant differences in relation to place of residence.

**Table 2.** Cross-tabulation of the sample according to sociodemographic variables.

| Cross-tabulation of variables | Main categories | % of sample | Association ($\chi^2$) |
|---|---|---|---|
| **Gender × Education** | Women with higher education, predominant | 34 | $p < 0.05$ |
| | Men with post-compulsory secondary education | 21 | |
| **Age × Residence** | Young people (aged 27–32), more concentrated in large cities | 38 | $p < 0.05$ |
| | Group aged 33–38, in medium-sized cities and metropolitan areas | 29 | |
| **Education × Residence** | University graduates, overrepresented in metropolitan areas | 29 | $p < 0.05$ |
| | Lower presence of university graduates in medium-sized cities | 15 | |
| **Gender × Residence** | Balance between women and men in all types of residence | — | n. s. |

Source: Own elaboration, 2026.

### *4.2. Reliability and Validity of the Instrument*

The psychometric validation of the questionnaire was conducted in two complementary phases: an exploratory factor analysis (EFA) and a second-order confirmatory factor analysis (CFA), with the aim of verifying the theoretical structure of the five dimensions proposed in the urban vitalism model.

In the first phase of the analysis, the principal component method with Varimax rotation was applied, following verification of the sample adequacy assumptions. The Kaiser-Meyer-Olkin (KMO) index reached a value of 0.87, confirming the suitability of the sample for factor analysis. Bartlett's test of sphericity was significant ($\chi^2$ (435) = 2154.32, $p < 0.001$), indicating sufficient correlations between variables to proceed with the analysis. The factorial solution produced a five-factor structure consistent with the proposed theoretical framework: urban space, governance, social inclusion, economic resilience, and environmental sustainability. The items demonstrated factor loadings greater than 0.60 within their respective dimensions, without relevant cross-loadings. The total variance explained was 71.2%, with eigenvalues ranging from 4.25 to 4.59 per factor, indicating adequate explanatory power of the model. The internal reliability of the instrument was evaluated using Cronbach's alpha coefficient, yielding an overall value of $\alpha = 0.92$, with all individual dimensions presenting values of $\alpha$ greater than 0.80 (Table 3).

**Table 3.** Results of exploratory factor analysis (EFA) and reliability of the instrument.

| Dimension | No. of items | Factor loadings (range) | Cronbach's alpha (α) | Explained variance explained (%) |
|---|---|---|---|---|
| **Urban space and habitability** | 6 | 0.63 – 0.84 | 0.86 | 14.8 |
| **Urban governance** | 6 | 0.68 – 0.82 | 0.88 | 13.9 |
| **Social inclusion and cohesion** | 6 | 0.65 – 0.83 | 0.87 | 14.3 |
| **Economy and resilience** | 6 | 0.61 – 0.79 | 0.84 | 13.6 |
| **Environmental sustainability** | 6 | 0.67 – 0.85 | 0.89 | 14.6 |
| **Total / Overall** | 30 | — | 0.92 | 71.2 |

Source: Own elaboration, 2026.

In the second phase of the validation analysis, a second-order confirmatory factor analysis (CFA) was conducted using maximum likelihood estimation. The hypothesised model, which groups the five dimensions under a general construct of urban vitality, demonstrated an adequate fit, with CFI = 0.93, TLI = 0.92, RMSEA = 0.06, and SRMR = 0.05. These results confirm the convergent validity and structural consistency of the model. Each factor represented a clearly

defined perceptual axis, with robust factor loadings and no significant overlap between dimensions, supporting the discriminant validity of the instrument (Table 4).

The first dimension, Urban Space, comprised items related to the quality of public spaces, sustainable mobility, and accessibility to green infrastructure, and was strongly correlated with indicators of habitability and subjective well-being. The second dimension, Governance, integrated perceptions of institutional transparency, citizen participation, and public-private collaboration, reflecting the degree of perceived legitimacy in urban management. The third dimension, Social Inclusion, synthesised the assessment of intergenerational equity, access to housing, basic services, and culture, functioning as a cross-cutting indicator of community cohesion. The fourth dimension, Economic Resilience, grouped items related to innovation, decent employment, the circular economy, and responsible consumption, describing the adaptive capacity of the productive fabric. Finally, the fifth dimension, Environmental Sustainability, focused on aspects of waste management, air quality, climate change mitigation, and urban biodiversity.

**Table 4.** Results of the second-order confirmatory factor analysis (CFA).

| Index of fit | Value | Acceptance criterion | Interpretation |
|---|---|---|---|
| **$\chi^2$ / gl** | 2.11 | < 3.00 | Adequate fit |
| **CFI** | 0.93 | > 0.90 | Good overall fit |
| **TLI** | 0.92 | > 0.90 | Structural coherence |
| **RMSEA** | 0.06 | < 0.08 | Acceptable approximation error |
| **SRMR** | 0.05 | < 0.08 | Satisfactory residual fit |
| **Correlations between dimensions** | r = 0.58 – 0.72 (p < 0.001) | — | High functional interdependence |
| **Total variance explained (model)** | 71.2 | — | Solid and consistent structure |

Source: Own elaboration, 2026.

The CFA results confirmed the representation of each dimension and its convergence within the broader construct of urban vitality in the scope of this study, as shown in Table 4. The fit indices indicate that participants' perceptions were organised around a common core integrating sustainability, creativity, and social inclusion. Analysis of correlations between the dimensions revealed significant associations ($r = 0.58–0.72$, $p < 0.001$), demonstrating the functional interdependence of governance, sustainability, and social cohesion. In particular, the Governance dimension functions as a mediator between structural factors, such as Urban Space and Economic Resilience, and perceptual factors, including Social Inclusion and Environmental Sustainability, reinforcing the notion that urban vitality relies on both material infrastructure and social capital.

For the comparative analysis, summative scores with weighted averages were calculated for the items corresponding to each of the five dimensions validated in the model. These composite variables provided a synthetic representation of perceptions of urban vitality. Analyses were then conducted to examine differences in mean scores between groups defined by educational level and type of residence, two variables previously identified as influential in the literature. The use of aggregate dimensions reduced the noise associated with individual items and strengthened the stability of comparisons between subgroups.

A one-way analysis of variance (ANOVA) with Tukey's post-hoc test revealed statistically significant perceptual differences based on educational level ($F(2,383) = 5.47$, $p < 0.01$) and type of residence ($F(2,383) = 6.02$, $p < 0.01$; Table 5). Participants with higher educational levels tended to rate the Governance and Environmental Sustainability dimensions more positively, suggesting greater sensitivity to participatory planning and environmental management. By contrast, participants residing in metropolitan or high-density areas reported lower satisfaction with Social Inclusion and habitability, indicating tensions between economic development and urban quality of life. These participants placed higher value on Economic Resilience, associating urban vitality with labour dynamism and professional opportunities. Participants residing in

medium-sized cities, however, expressed greater satisfaction with Social Inclusion and community cohesion, consistent with perceptions of a more manageable urban scale and closer neighbourhood relations.

**Table 5.** Results of the analysis of variance (ANOVA) according to educational level and type of residence.

| Dimension | Independent variable | F (gl) | p-value | Observed trend |
|---|---|---|---|---|
| **Urban space and habitability** | Type of residence | 4.21 (2,383) | 0.016 | Greater satisfaction in medium-sized cities than in metropolitan areas |
| **Urban governance** | Level of education | 5.47 (2,383) | 0.005 | Higher ratings among participants with higher education |
| **Social inclusion and cohesion** | Type of residence | 6.02 (2,383) | 0.003 | Lower ratings in dense metropolitan areas |
| **Economy and resilience** | Level of education | 3.84 (2,383) | 0.022 | University students value innovation and green jobs more highly |
| **Environmental sustainability** | Level of education | 4.96 (2,383) | 0.008 | Greater environmental awareness among groups with higher education |
| **Overall (total urban vitality)** | Educational level + residence | 6.15 (4,381) | 0.001 | Education and residence explain significant perceptual differences |

Source: Own elaboration, 2026.

These results underscore the importance of educational level and type of residence as key explanatory variables for perceptions of urban vitality and further confirm the validity of the instrument as an empirical tool for assessing citizens' attitudes towards creative and resilient cities.

### *4.3. Descriptive Statistics by Dimension*

Concerning the descriptive statistical analysis of the questionnaire dimensions, average item ratings ranged from 3.7 to 4.4 on the Likert scale (1–5), indicating generally positive and consistent perceptions across dimensions. The highest-rated dimensions were Environmental Sustainability (M = 4.4, SD = 0.6) and Urban Space (M = 4.3, SD = 0.7), while Economic Resilience (M = 3.7, SD = 0.8) received the lowest ratings.

These patterns suggest that millennials in this study placed greater emphasis on ecological and urban well-being factors than on strictly economic considerations and were comparatively more critical of urban governance and institutional transparency. The dispersion values indicate moderate perceptual consistency, particularly in the Environmental Sustainability and Urban Space dimensions, suggesting that participants share stable criteria regarding the importance of the physical environment and sustainability as central components of urban quality of life (Table 6).

**Table 6.** General descriptive results of the questionnaire.

| Dimension | Mean | Standard deviation | Interpretation |
|---|---|---|---|
| **Urban space and habitability** | 4.3 | 0.7 | High value placed on public spaces and sustainable mobility |
| **Urban governance** | 3.8 | 0.9 | Interest in transparency and participation |
| **Social inclusion and cohesion** | 4.0 | 0.8 | Sensitivity to equity and culture |
| **Economy and resilience** | 3.7 | 0.8 | Moderate expectations regarding employment and entrepreneurship |
| **Environmental sustainability** | 4.4 | 0.6 | Environmental priority and ecological well-being |

Source: Own elaboration, 2026.

A joint analysis of the results indicates that social innovation functions as a cross-cutting factor connecting the five dimensions of the model. Participants perceive urban policies not as isolated compartments, but as interdependent ecosystems in which creativity, sustainability, and governance reinforce one another. Structurally, Environmental Sustainability and Urban Space emerge as the most consolidated pillars of urban vitalism, both directly linked to perceptions of subjective well-being and quality of life. Functionally, Governance operates as a mediating variable, with its effectiveness contingent on citizen participation and institutional transparency, factors that enhance collective trust and foster collaboration in urban innovation processes.

Social Inclusion and Economic Resilience, in turn, shape the human dimension of urban vitalism, translating the principles of sustainable development into everyday practice. The results demonstrate that millennials particularly value intergenerational equity and decent employment as essential conditions for a dynamic, "living" city. From a strategic perspective, these findings suggest that urban planning models should integrate perceptual indicators alongside traditional metrics of infrastructure and economic growth. Assessing perceptions of liveability, governance, and inclusion provides critical complementary information to guide urban policies towards legitimacy, sustainability, and social creativity.

Finally, the results indicate that educational level and type of residence directly influence perceptions of urban vitality, implying that the most innovative and sustainable cities will be those that simultaneously promote human capital, social cohesion, and participatory governance.

## 5. Discussion, Implications, and Future Research

### *5.1. Discussion*

Consistent with the preceding analysis, the results of this study confirm that urban vitalism functions as a paradigm capable of integrating perceptions of space, governance, social inclusion, economic resilience, and environmental sustainability. The findings further reaffirm that social innovation serves as a cross-cutting catalyst, linking these dimensions within specific urban experiences. Unlike previous, more conceptual studies in this line of inquiry, the five-factor structure presented here has been operationalised and empirically validated with a millennial population, providing a psychometrically robust construct that reflects the influence of educational level and type of residence on perceptions of the key dimensions shaping cities of the future.

The five-dimensional factorial solution replicates the integrative logic proposed by urban vitalism, overcoming the fragmentation inherent in the use of multiple labels for the ideal city of the future, such as "smart", "sustainable", "resilient", or "creative". It highlights the interdependencies among the factors that define urban vitality. This pattern supports the view that urban vitality relies simultaneously on material infrastructure, including space, mobility, and services, and on socio-political capacities, such as governance, social cohesion, and citizen participation (Nederhand et al., 2023; Winslow and Coenen, 2023). The consistency of the second-

order construct suggests that citizens' perceptions synthesise diverse urban attributes under a common core of vitality, integrating creativity, inclusion, and sustainability into a coherent vision of what a city of the future should embody.

In the model presented here, Governance emerges as a pivotal link between more structural dimensions, such as Urban Space and Economic Resilience, and more perceptual dimensions, including Social Inclusion and Environmental Sustainability. When transparency, accountability, and effective channels of participation are perceived, satisfaction with public space and confidence in environmental and social policies increase (Becker et al., 2023; Lee et al., 2022). This finding reinforces recent evidence connecting institutional openness and civic innovation with enhanced legitimacy and social capital (Bastos et al., 2022; Cash-Gibson et al., 2025). From a public policy perspective, the implication is clear: sustainable urban vitality cannot be achieved without participatory governance.

Social Inclusion, in turn, is confirmed as an enabling condition for urban vitality, ensuring access to housing and essential services, including health, education, and culture, while supporting the perception of intergenerational equity. These factors better predict subjective well-being in the cities of the future than infrastructure improvements alone (Buttazzoni et al., 2025; Yuan et al., 2025b). Lower ratings of inclusion in dense metropolitan areas highlight tensions between economic dynamism and the quality of daily life, consistent with studies on cultural gentrification and placemaking (Chang and Spierings, 2023). Within the urban vitalism paradigm, these findings underscore the importance of redistributive policies and accessible cultural opportunities as drivers of social cohesion and recognition (Landoni et al., 2019; Wise et al., 2022).

Environmental Sustainability emerges as the most highly valued dimension in terms of well-being and functions as a criterion of political legitimacy. Air quality, waste management, green and blue infrastructure, and climate adaptation function as markers of trust and subjective well-being (Cash-Gibson et al., 2025; Sharifi et al., 2025). Consistent with the literature, positive perceptions of environmental performance are associated with greater support for ecological transition and responsible consumption practices (Qian et al., 2024; Zucaro and Agostinho, 2025). The empirical link between sustainability and inclusion further reinforces the centrality of environmental justice as a core principle of urban vitalism (Agyeman, 2008).

Regarding the relationship between Economy and Creativity, scores in the Economy and Resilience dimension indicate a preference for innovation, diversification, support for SMEs, the circular economy, and creative industries over purely quantitative growth without equity (Amegavi et al., 2025). This finding aligns with evidence that the most vibrant cities link technological capabilities with public values, including inclusion, transparency, and accessibility, thereby translating digitalisation into well-being and citizen participation (Nederhand et al., 2023; Qian et al., 2024). Creativity, in particular, strengthens the connections between urban identity, economic attractiveness, and social cohesion (Wise et al., 2022).

With respect to the role of social innovation in the urban management of public affairs, items associated with co-design, urban laboratories, participatory budgets, open platforms, and related practices are consistently linked to higher overall assessments of urban vitality. This finding supports literature highlighting co-creation as a mechanism for accelerating institutional learning and aligning global agendas, such as SDG 11, the New Urban Agenda, the European Green Deal, and the EU Cities Mission, with citizen expectations (Cash-Gibson et al., 2025; Luo et al., 2025). Empirically, social innovation transforms latent capacities into visible outcomes, such as active public spaces, sustainable mobility, and inclusive services.

Education and place of residence are confirmed as key explanatory variables. Participants with higher education tend to value Governance and Environmental Sustainability more, likely reflecting greater exposure to public information and more effective evaluative frameworks for urban policies, including land use planning (Lee et al., 2022; Lowe et al., 2025). Conversely, living in dense metropolitan areas is associated with lower satisfaction with Social Inclusion and liveability, suggesting that pressures on housing and public spaces can diminish perceptions of urban vitality, even in contexts characterised by innovation. From an urban policy perspective, this underscores the need for fine-grained territorial interventions, such as protecting affordable

housing and recalibrating the mix of uses and amenities in high-density neighbourhoods, to maintain inclusive and resilient urban environments.

Urban vitalism is thus proposed not only as a theoretical framework but also as an actionable instrument linking Creativity, Social Innovation, and Resilience to concrete practices of participatory governance, emphasising that the future of cities will depend on integrating material and perceptual dimensions within a shared strategic horizon.

Recent literature further highlights the generational dimension. Millennials, having grown up in contexts marked by job insecurity, globalisation, and digitalisation, display particular sensitivity to intergenerational equity, housing access, and environmental sustainability (Chang and Spierings, 2023; Yuan et al., 2025a). This perspective is significant because it translates academic debates into collective narratives capable of legitimising or challenging urban and political decision-making.

### *5.2. Conclusions and Implications*

Urban vitalism provides a conceptual bridge between the international agendas that guide contemporary urban planning. These include SDG 11, which aims to make cities inclusive, safe, resilient, and sustainable; the UN-Habitat New Urban Agenda (ONU, 2020); the European Green Deal; and the EU's mission for climate-neutral cities (Ciuculescu and Luca, 2025). These frameworks emphasise the need to integrate environmental policies with social justice, recognising citizen perception as a key component of legitimacy and effectiveness in urban governance.

This article differs from previous contributions by focusing on the empirical operationalisation of the paradigm. Rather than concentrating solely on the conceptual narrative, it proposes a set of empirically validated perceptual indicators across five dimensions: urban space, governance, social inclusion, environmental sustainability, and economic resilience. These indicators allow urban vitalism to be linked directly to strategic planning, providing actionable evidence for urban managers and policymakers. The value of the urban vitalism paradigm lies in its capacity to offer comparable and transferable tools for assessing the future of cities from both a generational and empirical perspective.

Furthermore, the study contributes theoretically and practically in three ways. First, it presents the psychometric validation of a five-dimensional perceptual instrument aligned with urban vitalism as a reference paradigm. Second, it demonstrates that social innovation is cross-cutting and actionable, not merely discursive, in shaping perceptions of the ideal city of the future among specific groups of urban residents. Third, it shows that education and place of residence influence citizens' experiences of the city, offering guidance for more precise policy segmentation and targeted interventions in urban management. Taken together, these contributions move the field from conceptual discussion to measurable indicators that can inform the monitoring and evaluation of urban policies.

In terms of strategic implications for public managers and decision-makers, the findings of this research suggest prioritising different integrated packages:

- Open governance combined with social innovation, to sustain legitimacy and support learning about urban development.
- Affordable housing together with inclusive culture and education, serving as safeguards for cohesion in urban planning.
- Green-blue infrastructure alongside circular economy initiatives, forming a basis for resilience.
- Strategies differentiated by type of residence and educational profile, aimed at refining the implementation of policies for a successful city of the future.

In short, urban vitalism is confirmed as an operational lens for designing, measuring and governing more creative, resilient and inclusive cities, and social innovation emerges as the engine that converts global agendas into tangible improvements in everyday urban life.

### *5.3. Limitations and Future Research*

Despite the results obtained, this study has certain limitations that must be explicitly acknowledged. First, the non-probabilistic sample, which was intentional and stratified, limits the possibility of generalising the findings to the entire millennial population or to other age groups. While the inclusion of geographical and educational diversity provides interpretative richness, it would be advisable to broaden the scope through random and representative sampling in future phases of the project.

Secondly, the cross-sectional nature of the study prevents capturing temporal variations in the perceptions of the group analysed. Given that urban vitality and social innovation are dynamic processes, future research should incorporate a longitudinal design to observe the evolution of perceptions in response to economic, technological or environmental changes.

Thirdly, although the questionnaire demonstrated high reliability and factorial validity, its structure focused primarily on perceptual dimensions. Integrating objective indicators in future studies, for example metrics on pollution, mobility, social network density or investment in culture, which complement the perceptual data presented here, would allow for a comparison between citizens' perceptions and actual urban performance, thereby reinforcing the convergent validity of the model.

Furthermore, this study focused on the millennial group. Given the growing relevance of Generation Z in urban life and their adoption of digital technologies, it is recommended that future research expand intergenerational analyses to examine how priorities differ with regard to sustainability, participation and creativity.

Finally, future lines of research could include cross-cultural comparative analyses between European and Latin American cities, as well as the use of mixed methods, combining surveys with interviews and urban data mining, to capture deeper narratives about sense of belonging and urban well-being. Together, these proposals will facilitate progress towards a validated and comparative model of perceptual indicators of urban vitality, which can be used to monitor progress on the agendas of creative and resilient cities and to inform the design of cities of the future.

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