

An Evaluation Methodology to Support the Definition of Temporal Priorities Lists for Urban Redevelopment Projects

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Abstract. The present research concerns the relevant and current issue of the urban regeneration. In particular, a methodological approach for the identification of the areas - included in a city district or a larger macro-area - for which a higher urgency of urban redevelopment is detected, is developed. The proposed methodology intends to support the definition of the temporal priorities and preference lists of the interventions to be implemented in a territory, providing an evaluation tool able to highlight the areas on which the first attention of public decision-makers should be paid, in order to start urban transformation initiatives on a larger scale. The articulation of the methodology into 7 phases is illustrated and its flexibility of implementation is pointed out, to allow the replication of its operational procedure in every geographical context and for different intended uses. The methodology constitutes a valid reference for public decision-makers involved in the definition of programmatic guidelines for urban regeneration and of specific targets for the urban development policies.

Keywords: redevelopment projects · temporal priorities lists · urban policies · sustainable development goals · property prices · influencing factors · real estate market

1 Introduction

The need of planning interventions to be carried out on the urban territory, according to targeted strategic lines, is increasingly central, due to the reduced spending capacity of Public Administrations and, at the same time, the precious opportunity provided by European funds (Next Generation EU [1], National Recovery and Resilience Plan (NRRP) [2], Cohesion Funds [3–5], etc.).

In this sense, the evaluation constitutes a fundamental support for investment choices, first of all by highlighting the greater or lesser urgency of operating in a territory and, subsequently, by allowing the verification of the financial sustainability (in the case of public private partnerships) and the economic feasibility of the initiatives.

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Starting from an extended urban macro-area (district, suburb, etc.) characterized by a widespread state of degradation, the urban regeneration processes envisage the definition of an integrated approach capable of revitalizing entire city portions. This approach should consider the different zones included in the macro-area in which a greater urgency for intervention is detected and which could become pioneers of large-scale urban renewal and growth phenomena.

The lists of temporal priorities and preferences of the interventions to be implemented are part of this issue, aimed of defining a program plan of the operations to be carried out, with a common purpose of the strategic vision for the development of the areas that, from punctual and targeted initiatives, may reach a global improvement of the cities.

In this context, in the recent decades the European Union (EU) has promoted an in-depth debate on cities and their development, by determining an "EU perspective" on the topic called "urban acquis" since the end of the 1990s [6]. Already with the co-municipal initiatives URBAN I 1994–1999 and URBAN II 2000–2006 [7–9], the focus has been placed on an integrated approach able to associate the promotion of the economic activities with the improvement of infrastructures and the environment, the provision of customized training to the actions in favor of equal opportunities and the adaptation of social services.

The main European funds used to carry out the urban regeneration interventions included in these programs are the European Regional Development Fund (ERDF) [10] and the European Social Fund (ESF) [11], integrated with national and local funding.

In 2007, the Leipzig Charter [12] recommends a greater use of integrated urban development policy strategies in which the specific spatial and temporal aspects of the most important urban policy sectors should be coordinated. In this sense, each government should i) identify the main strengths and weaknesses of the city and the neighborhoods based on the current situation analysis, ii) define concrete goals for the urban areas development and iii) coordinate the projects related to the different neighborhoods, in order to ensure a balanced territory development, by orienting the effective use of funds by public and private sectors.

Furthermore, the urban planning tools must be connected at the local and metropolitan region level and involve the communities who can contribute to determining the future economic, social, cultural and environmental quality of each area. The application of a holistic and integrated development policy constitutes the key principle for the definition of a sustainable urban development that overcomes a purely sectoral policy and is supported by multi-level and stakeholder cooperation, by pushing the administrative boundaries. Following the success of the URBAN initiatives, the sustainable urban development policies have been fully included into EU funding mechanisms and have become central to Cohesion Policy (2007–2014). Subsequently, during the 2014–2020 programming period, among the Cohesion Policy objectives, the promotion of integrated urban strategies with the aim of strengthening the role of cities has been highlighted. Thus, the ERDF supports the sustainable urban development through integrated strategies to address the economic, environmental, climatic and social challenges of urban areas (art. 7, par. 1 of the regulation proposal of the European Parliament and of the Council on specific provisions concerning the European Regional Development Fund and the Investment for growth and jobs goal and which repeals Regulation (EC) No.

1080/2006 [13]). In this context, the Cohesion Policy has established that at least 5% of the ERDF resources allocated to each EU Member State are invested in integrated actions for sustainable urban development. New territorial tools have been also defined for the implementation of strategies in urban areas, in particular the Integrated Territorial Investment (ITI) and Community-Led Local Development (CLLD). In the current Cohesion Policy 2021–2027, it has been proposed to increase by up to 6% the minimum ERDF contribution to the urban sustainable development. The promotion of urban areas transformation policies will take place through a place-based approach to development, based on the multi-sectoral and multi-level governance with the participation of a plurality of stakeholders, and a participatory-type strategy that will concern multiple territories.

2 Aim

Within the sustainable urban development goals, the planning modes of effective strategies by Public Administrations are not unique, having to adapt to the specificities of the territories and the needs of the communities. Furthermore, the adequate management of the funding allocated on a regional and national scales for urban regeneration interventions is fundamental in order to achieve the goals set by the Agenda 2030 [14] and to create resilient cities. In this sense, the strategic planning should be intended as a flexible process capable of managing the changes and the populations' needs. Therefore, the urban policies should combine the issues of the physical space quality with those of territorial enhancement, social cohesion and economic revitalization, through a programmatic approach linked to defined times and to the technical and economic-financial sustainability of each interventions. In the outlined framework, given an urban macro-area to be redeveloped, the present research intends to develop a methodological approach for the identification of the areas for which a greater urgency for transformation is detected [15]. The proposed methodology aims to support the definition of the temporal priorities and preference lists of the interventions to be implemented, in order to guide the selection phases of the urban regeneration initiatives and to plan future ones. While promoting the preservation of the unitary character of the urban transformation initiative, the research intends to provide an evaluation tool that highlights the areas on which the first attention of public decision-makers should be paid, in order to start urban redevelopment initiatives on a larger scale.

In general terms, the study of the real estate market reveals the preferences shown by buyers and sellers within a specific spatial and temporal horizon. In fact, the selling price represents a synthetic indicator of potential buyers' willingness to pay and current owners' willingness to sell, based on the main intrinsic factors of the properties and the overall quality level of the urban context in which the asset is included. Therefore, since the property value is the result of a complex of intrinsic and extrinsic factors, it is assumed that a variation in the conditions that characterize the area determines an impact on the market value. Using the Hedonic Price Model, the total selling price of the property can be broken down into different components relating to the various intrinsic and extrinsic characteristics that are influential in the price formation process. Taking into account this aspect, an increase or decrease observed for the extrinsic variables

leads to a change in the property price connected to them. The logic underlying the proposed methodological approach concerns the existing relationship between the real estate prices and this category of variables, by assuming the property asset price increase as a proxy of the benefits generated by the urban redevelopment intervention for local communities.

The methodology is structured in different phases which, starting from the detection of the main potentially attractive landmarks or poles in the area (public spaces, historical, landscape and artistic assets, road and public transport infrastructures, health, school, cultural and religious facilities and buildings, etc.), through the implementation of an econometric technique, allows to identify the main places of the area considered by the local market as positive factors (key good elements) or negative ones (bad elements). The identification of the urban poles whose proximity is a determinant scarcely appreciated by the potential buyers of a real estate property implies the detection of the areas for which a greater urgency of intervention in terms of time or entity is found. On the contrary, cultural, architectural, landscape, etc. emergencies whose proximity to the existing building stock represents a positively appreciated market factor, are those that do not require punctual redevelopment, but which could be included in broader urban renewal policies.

The methodological approach intends to guide the decision-making processes of public entities for the definition of a strategic framework of territorial sustainable development initiatives and of private investors in the situations of public-private partnership to orient them towards choices that are financially profitable. In fact, if for the local governments the analysis carried out constitutes a valid support tool for urban dynamics, for private subjects, the developed methodology allows to identify the areas in which the investment is more convenient, in line with the current market appreciation and the likely variations as a result of urban regeneration interventions.

The Sections contents included in the paper are described below: in Sect. 3 the issue related to the importance to carry out an integrated approach for the urban regeneration decisions is highlighted. In Sect. 4 the proposed methodology is illustrated and the main steps that constitute the logical procedure to be implemented in order to identify the areas to pay attention for urban regeneration are described. In Sect. 5 the conclusions are introduced and the further insights of the research are listed.

3 The Collaborative Approach in the Urban Regeneration Decision Processes

To effectively improve the cities development prospects, the strategic planning requires integrated processes of collaboration between the different subjects involved in the initiatives in a multi-level governance system that includes the beneficiaries of the policies, i.e. the citizens, the businesses, the associations and the political decision-makers.

The definition of urban regeneration scenarios characterized by an inclusive "citizens centred" [16] approach is very often encouraged for adequate choice processes implementation. In this sense, the involvement of the local community with needs, requests and aspirations in the decision-making mechanisms is strongly requested by the governments. The modalities of participation in the public political debate aim to promote

local inclusion practices in order to combine the urban planning choices with the current community demands. The main goal is to favour the involvement of an active dialogue to develop shared "agreement" between the population, the professional and the academic communities. In the reference literature, numerous researches focused on the progressive prominence of the citizen participation in governance networks oriented towards urban regeneration can be detected [17–22].

In the current context, it is evident the complex nature of the urban transformation projects, mainly due to the different involved stakeholders, such as the local and central governments, the private developers and the local communities. These subjects often dissimilarly intend to implement the regeneration strategies as they assign different weights on the environment, housing, social welfare, and commercial enterprises [23, 24], in relation to the own interests and roles. In theoretical terms, the collaborative processes aim to provide a decision-making process able to obtain effective outcomes by which all stakeholders could maximize their benefits by exchanging information [25]. The existing scientific studies have attempted to analyse the relationships between the various stakeholders and to investigate the coordination mechanism of their interests by using several approaches and tools within different contexts.

However, the variability of stakeholders' interests strongly linked to the macro-economic changes and the expressed needs of the community makes it impossible to define a single approach of collaboration between governments and communities, but this should be tailored determined on the basis of the specificities of the geographical context, the physical, socio-economic, cultural and environmental conditions of the site to be redeveloped and of the current and forecast market supply and demand. It should also be pointed out that the community participation, especially in developing countries [26] in which the awareness of the citizens is often low, should be developed taking into account the political, social and economic situation of each involved subject [27–31], i.e. the individual's living environment, the economic status, the educational level that potentially influence the people's participation [32, 33]. In the framework outlined, the growing importance given to the collaboration integrated approaches between governments and stakeholders in the local public policies development has transformed the public *modus operandi* from the "static" governance of the urban transformation dynamics in which the different actors acted in solitary form due to their conflicting interests, to a "dynamic" governance, i.e. in terms of a collective process aimed at the definition and management of policy-making in which the interactions and different forms of partnership between the different stakeholders are defined.

4 Methodology

The methodology proposed in the present research aims at identifying the areas included in a larger urban macro-area (district, suburb, etc.) for which a greater urgency for transformation is detected.

The methodology is structured in 7 phases:

- the first step concerns the identification of the main landmarks (architectural, historical and environmental emergencies) included in the considered urban macro-area. These poles should be selected regardless of their current maintenance conditions,

i.e. by considering the existing or potential attractiveness they could have due to their localization and function. In this sense, the chosen landmarks could constitute amenities (whose proximity is positively appreciated on the reference market) or disamenities (whose proximity negatively affects the choices of buyers and sellers) of the analyzed urban territory;

- the second phase regards the detection of the main intrinsic factors that ordinarily influence the choices of buyers and sellers in the specific market segment analyzed (residential, commercial, management, etc.). These characteristics are selected by consulting the main operators of the local real estate market and evaluating the main positional, technical-typological and juridical-economic significant aspects in the buying and selling phases;
- the third stage aims at collecting a sample of properties (residential, commercial, office, etc. according to the purpose) sufficiently representative of the local real estate dynamics, recently sold, with known selling prices and characteristics. For each individual included in the study sample, the values of the mentioned selected intrinsic variables and those of the extrinsic variables in terms of distance from each considered landmark are recorded;
- the fourth step focuses on the implementation of an econometric technique for determining the most influential intrinsic and extrinsic factors on selling prices. In particular, the technique allows to obtain a large set of models expressed in polynomial form for which the selling price is function of a set of variables among those initially analysed, multiplied by numerical coefficients and raised to the proper numerical exponents [34, 35];
- among the different models generated by the polynomial regression model, in the fifth step the selection of that i) characterized by an adequate statistical performance level, ii) with an algebraic not excessively complex expression, iii) best interprets the specific real estate dynamics of the analyzed context, is carried out. Having chosen a model on the basis of i) and ii), the verification of the empirical consistence of the coefficient's signs should be performed, by taking into account the variation of the i-th variable analyzed in the interval of the observed sample and keeping the values of the other variables constant and equal to the respective average value;
- the sixth phase intends to analyze the functional correlations between the variables selected by the model and the selling prices in order to assess the positive or negative appreciation of the market for each factor. Furthermore, the marginal contributions given by the intrinsic and extrinsic variables (expressed in terms of distance between each property in the sample and each considered landmark) on prices are determined. By taking into account the main goal of the developed methodology, in this phase, among the urban poles initially considered in the analysis, those for which the greatest impact on the selling prices formation processes are highlighted, are identified;
- in addition, among the landmarks included in the chosen polynomial regression model, in the seventh phase those whose proximity negatively affects the choices of buyers and sellers are pointed out and, therefore, the areas for which a higher attention from public entities should be paid are focused. The outputs obtained in terms

of scarce/non-appreciation by the reference market for specific landmarks allow to identify the areas for which a greater transformation cogency is detected.

Figure 1 shows the listed and described steps in a flowchart in which each phase is preparatory to carrying out the next one, in line with the overall aim of defining the temporal priorities lists for urban redevelopment projects.

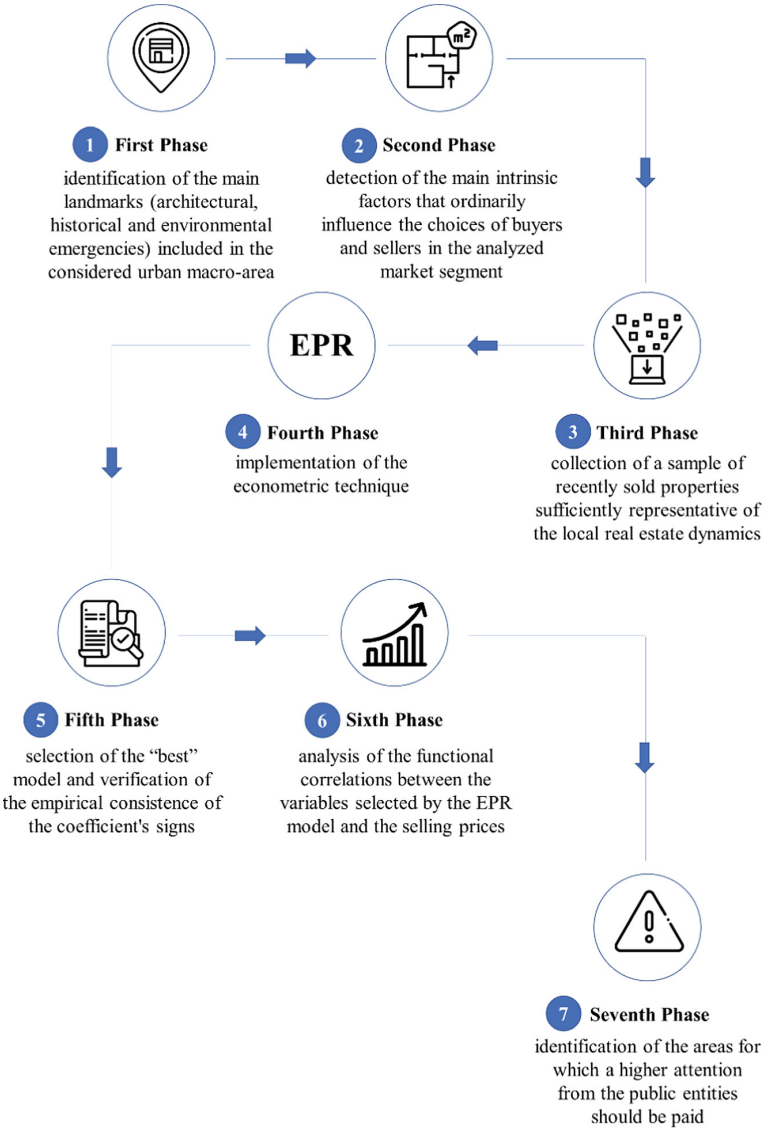

Fig. 1. The 7 phases of the proposed evaluation methodology

The developed methodology constitutes an evaluation tool to support the decision-makers in the development of effective strategic urban regeneration processes, through the preliminary identification of the areas to be included in the temporal priority lists among the most urgent projects to be implemented. The proposed approach borrows the logic according to which a variation in the maintenance conditions of a historical, architectural or environmental emergency affects the general level of urban quality of the area in which this emergency is located and, consequently, has an impact on the value of the existing building stock and on the preferences of potential buyers in the context of purchase and investment initiatives. Therefore, the cascade system links the different mechanisms of the reference market to the effects connected to the urban regeneration intervention, in terms of increasing the level of urban quality of the area in which the intervention is included and, more generally, of improvement of the community quality of life.

Figure 2 reports the relationship between the urban transformation intervention, the increase in urban quality of the area in which the project is implemented and the positive variation in real estate values. The direct relationship that associates the raising of the quality conditions of the place, consequent to any redevelopment intervention on an urban scale, and the increase in the values of the urban property stock represents a relevant assumption of the proposed methodological approach.

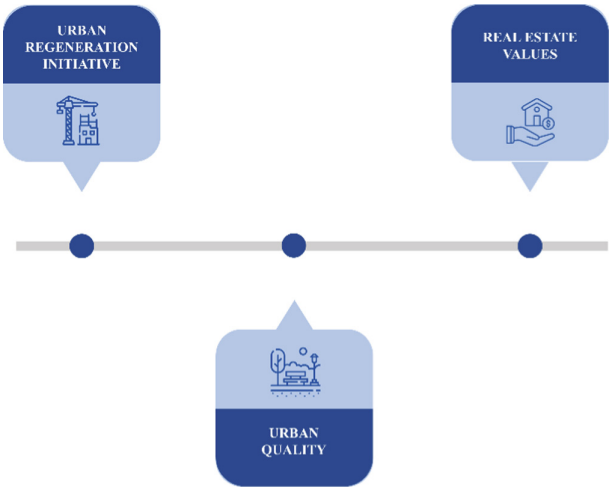

Fig. 2. The relationship between the urban regeneration initiative, the urban quality and the real estate values.

It should be highlighted that, for the development of the methodology, the influence of different external factors which overcome the two-way relationship related to the increase in urban quality and the growth in real estate values, and could modify the expected final outcome of a transformation intervention in terms of effects on the urban system, has been neglected.

First of all, among these factors, the consequences of the economic-financial crisis of the main European countries, whose effects add up to those determined by an urban transformation, should be mentioned. In fact, the impacts of the project implementation on the selling prices could be interpreted as an attenuation of the phenomenon of the decrease in real estate values caused by the crisis in the real estate market.

Likewise, any collateral effects deriving from the implementation of an urban regeneration intervention which, if not effectively planned in all its aspects, could occur in terms of changes in the structural dynamics of the real estate market, have been omitted. For example, in theoretical terms the consequences associated with a project for the pedestrianization of an urban area concern the creation of new spaces for aggregation but, also, the vehicular traffic flows shift to alternative road arteries.

The succession of the phases in which the proposed methodology is articulated, has been implemented with reference to an urban macro-area to be regenerated located in a municipality in Southern Italy and to the residential market segment.

In Fig. 3 the localization of the considered macro-area within the urban context of the considered city is reported.



Fig. 3. Localization of the macro-area to be redeveloped in the urban context

Given the need to renovate the analysed macro-area, due to its spread decay conditions, the analysis has been developed starting from the identification of the main landmarks located in the city portion (architectural, historical and environmental emergencies) (first phase).

In Fig. 4 the landmarks included in the macro-area and selected for the analysis are shown.

Moreover, the detection of the main intrinsic factors influencing the choices of buyers and sellers has been performed in the second phase. In particular, in the research the main real estate agents whose expertise area concerns the analyzed macro-area have



Fig. 4. Landmarks selected for the analysis

been consulted in order to choose the factors that mainly influence the current processes of formation of selling prices in the specific market area.

In Table 1 the intrinsic factors considered in the analysis are reported.

Table 1. Intrinsic factors considered in the analysis

Intrinsic Factors	Type of Variable	Measure
Floor surface	cardinal	m^2
Number of bathrooms	cardinal	number
Floor level	cardinal	number
Presence of lift	dummy	1 = presence, 0 = absence
Quality of the maintenance conditions of the property	dummy	1 = category that defines the specific quality of each property, 0 = the remaining two categories
Energy label [A-G] of the property	dummy	1 = energy label of the property, 0 = all the others
Age of the building	cardinal	number = difference between the year of sale and the construction year of the building

Furthermore, the third step of the proposed evaluation methodology has concerned the collection of a study sample consisting of three hundred residential properties sold between March and December 2021. Therefore, for each property the total selling price,

the distance from each landmark specified in the first phase (expressed in km to walk to it) and the values of the intrinsic factors, have been quantified.

In order to compare the data, the values of each variable have been normalized by the maximum value found for each category, so that a unique range of variation between 0 and 1 has been considered. In this sense, a database has been structured and some statistical analysis have been carried out to check the consistence and reliability of the sample and to identify any anomalous data to be removed.

The localization of the properties within the analyzed macro-area is shown in the Fig. 5.



Fig. 5. Localization of the residential properties detected for the study sample

In the fourth step of the assessment methodology, an econometric technique has been implemented in order to obtain a wide set of polynomial equations composed by different additive terms in which some or all of the initially detected explanatory variables are multiplied by numerical coefficients and raised to exponents. Starting from these models, the determination of the most influential intrinsic and extrinsic factors on the price formation processes has been carried out and the explanation of the functional correlations between the prices and the factors selected by the technique among those initially considered has been performed.

Among the different generated models, the best one, in terms of statistical performance, complexity of the algebraic form and empirical consistence of the coefficient's signs included in the mathematical expression, has been chosen in the fifth phase.

For each factor (intrinsic and extrinsic) included in the selected model, the analysis of the functional links (direct or inverse) between the explanatory variables and the selling prices has been carried out. Through this operation the evaluation of the positive or negative appreciation of the market for each factor and, with reference to the aim of the research, the explanation of the marginal contribution provided by the extrinsic

variables (expressed in terms of distance between each property of the sample and each considered landmark) on property prices, have been developed.

Some of the main functional relationships that could be obtained between each variable and the selling prices are reported in Fig. 6. It should be highlighted that, for the extrinsic variables, a direct link indicates an increase in property prices as the distance from the analyzed landmark grows. This situation points out a scarce appreciation by potential buyers for the proximity to the specific urban pole, which is reflected in a reduction in the selling prices of the proprieties overlooking/very close compared to those found for properties located in more distant urban areas.

On the contrary, an inverse functional correlation between the distance of the properties from the landmark and the real estate prices highlights this pole as a factor whose proximity is appreciated by the local market.

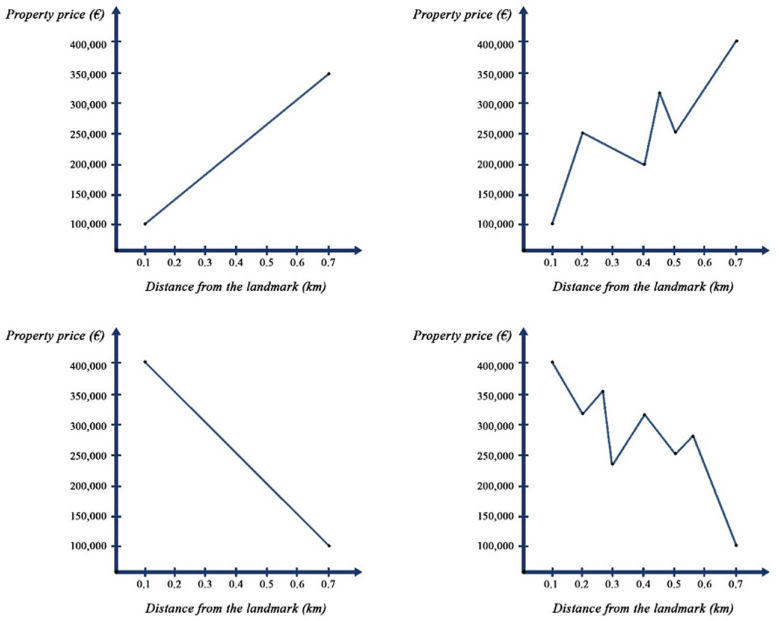

Fig. 6. Main functional correlations between selling prices and each selected explanatory variable

The different trends analysis has allowed in the seventh phase to detect the landmarks whose proximity negatively affects the selling prices and, consequently, the urban areas included in the macro-area for which a higher attention from public entities should be paid.

Figure 7 reports a summary of the outputs obtained in terms of positive (green dot) and negative influence (red dot) of the locational extrinsic variables selected by the polynomial regression model on property prices. The yellow dots indicate the landmark for which a limited market positive or negative appreciation has been detected. The graphic representation constitutes a useful support reference within the decision-making processes related to the definition of the temporal priority lists of urban regeneration

interventions as it is immediately readable in the programming and planning phases of the territorial initiatives to be implemented.



Fig. 7. Outputs obtained in terms of positive (green dot), negative (red dot) and "negligible" (yellow dot) influence of the locational extrinsic variables selected by the polynomial regression model on property prices. (Color figure online)

5 Conclusions

During the last decades, the urban regeneration constitutes a strongly discussed topic in the scientific literature and in the political debate [36–41]. Starting from a narrow conception of the recovery and redevelopment of the existing property assets and the urban spaces, over time the question of urban regeneration has involved environmental, social and economic aspects. In this sense, the urban transformation initiatives aim at improving the quality level of the area in which the intervention is located and, more generally, of the city. Furthermore, the direct involvement of the communities in the urban interventions planning plays a central role in the choices processes, as it is fundamental to begin by defining the current needs framework in order to activate valid initiatives able to improve the life quality of the citizens, in coherence with the set sustainable development goals.

Within the public policies aimed at defining effective projects to be implemented on the territory, in the present research an evaluation methodology has been developed to support the stages related to the definition of the temporal priority lists of the interventions. After verifying the urgency of redevelopment in a city portion characterized by a widespread state of degradation, caused by the presence of inadequate infrastructures, abandoned buildings and/or underused public spaces, the definition of appropriate valid

planning strategies represents an essential operation for conscious and successful urban initiatives.

In these situations, the projects assessment discipline assumes a crucial importance, allowing to orient the decisions processes towards the most urgent investments. The methodology proposed in this research is part of the support tools to be used for temporal priorities lists of urban redevelopment projects definition, i.e. in the preliminary design stages.

The 7 steps into which the developed methodology is articulated allow to identify the areas for which a greater need of intervention is observed, given the current scarce or lacking appreciation of the market for the proximity to specific city landmarks. The methodology constitutes a valid reference for public decision-makers involved in the definition of programmatic guidelines for urban regeneration. The methodology's implementation flexibility allows to replicate its operational procedure in every geographical context and for different intended uses, to verify the influence of the areas to be redeveloped on the property values and to define specific targets for the local development policies.

In accordance with the always increasing relevance of the urban regeneration issue in the strategic programs developed by central governments, connected to the sustainability goals fixed by the Agenda 2030, the present research is consistent with the current need of providing the local governors of effective tools to guide the urban planning and design, in order to improve the quality of the existing building stock and public spaces and to increase the life quality of the communities. The identification of the most critical urban areas constitutes a useful support in the investment choices of private and public operators.

Future developments of the research will concern the implementation of the proposed methodology with reference to a specific case study in order to test the validity and reliability of the developed approach. In this sense, the application of the methodology can be included in the first phases of the selection of the projects to be realized, in line with the main goals of the urban policies to be carried out. Therefore, after having identified the most critical areas that should be included in the temporal priority lists among the most urgent interventions, the methodology can integrate the overall analysis of an urban context aimed at identifying its strengths and weaknesses, to guide the initiatives towards strategies consistent with the needs of the community that are reflected in the property purchase decisions. The practical outcome of the methodology application could be a map in which the most critical urban areas are highlighted, in order to immediately visualize the results of the analysis and to provide a useful support in the investment choices of private and public operators. In particular, the map could orient the private operators in their investment decisions, through a higher awareness of the current and forecast market appreciation, whereas, for the Public Administrations, the map will be a reference for the calibration of the urban regeneration policies, in order to eliminate or, at least, reduce the existing gaps between the different parts of the city.

References

1. Next Generation EU (NGEU) - Recovery Fund. www.ec.europa.eu.it. Accessed 17 May 2021

2. National Recovery and Resilience Plan (NRRP). www.mef.gov.it. Accessed 10 Aug 2021
3. European Commission, New Cohesion Policy. https://ec.europa.eu/. Accessed 18 Dec 2022
4. Camera dei Deputati – Ufficio rapporti con l'Unione Europea – XVIII Legislatura: La nuova politica di coesione 2021–2027, No. 11 (2019)
5. Official Journal of the European Union: L 231/60 - Regulation (EU) 2021/1058 of the European Parliament and of the Council of 24 June 2021 on the European Regional Development Fund and on the Cohesion Fund, 30 June 2021. https://eur-lex.europa.eu/. Accessed 14 Nov 2022
6. European Commission: EU Manuale delle Strategie di Sviluppo Urbano Sostenibile (2020). https://urban.jrc.ec.europa.eu/. Accessed 23 Oct 2022
7. Hurtado, S.D.G.: Is EU urban policy transforming urban regeneration in Spain? Answers from an analysis of the Iniciativa Urbana (2007–2013). Cities **60**, 402–414 (2017)
8. Hurtado, S.D.G.: The implementation of the URBAN community initiative: a transformative driver towards collaborative urban regeneration? Answers from Spain. Eur. J. Am. Stud. **10**(10–3), 1–14 (2015)
9. Monaco, F.: La «Questione urbana» nella politica di coesione tra approccio strategico e autonomia gestionale. Riv. Economica del Mezzogiorno **27**(1–2), 99–120 (2013)
10. European Commission: EU European Regional Development Fund (ERDF). https://ec.europa.eu/regional_policy/funding/erdf. Accessed 20 July 2022
11. European Commission: EU European Social Fund (ESF). https://ec.europa.eu/european-social-fund-plus/en. Accessed 24 July 2022
12. European Parliament: The New Leipzig Charter. https://www.europarl.europa.eu/thinktank/it/document/EPRS_ATA(2020)659384. Accessed 16 July 2022
13. Official Journal of the European Union: Regulation (EU) No 1301/2013 of the European Parliament and of the Council of 17 December 2013 on the European Regional Development Fund and on specific provisions concerning the Investment for growth and jobs goal and repealing Regulation (EC) No 1080/2006
14. United Nations: Agenda 2030 (2015). https://unric.org/it/agenda-2030. Accessed 21 Mar 2021
15. Morano, P., Tajani, F., Di Liddo, F., La Spina, I.: The evaluation in the urban projects planning: a logical-deductive model for the definition of "warning areas" in the esquilino district in the city of Rome (Italy). Smart Cities **6**(1), 469–490 (2023)
16. Pontrandolfi, P., Scorza, F.: Sustainable urban regeneration policy making: inclusive participation practice. In: Gervasi, O., et al. (eds.) ICCSA 2016. LNCS, vol. 9788, pp. 552–560. Springer, Cham (2016). https://doi.org/10.1007/978-3-319-42111-7_44
17. Muir, J.: Public participation in area-based urban regeneration programmes. Hous. Stud. **19**(6), 947–966 (2004)
18. Woolrych, R., Sixsmith, J.: Placing well-being and participation within processes of urban regeneration. Int. J. Public Sect. Manag. **26**(3), 216–231 (2013)
19. Ferilli, G., Sacco, P.L., Tavano Blessi, G., Forbici, S.: Power to the people: when culture works as a social catalyst in urban regeneration processes (and when it does not). Eur. Plan. Stud. **25**(2), 241–258 (2017)
20. Maginn, P.J.: Towards more effective community participation in urban regeneration: the potential of collaborative planning and applied ethnography. Qual. Res. **7**(1), 25–43 (2007)
21. Atkinson, R., Cope, S.: Community participation and urban regeneration in Britain. In: Contested Communities, pp. 201–221. Policy Press (1997)
22. Liu, G., Fu, X., Han, Q., Huang, R., Zhuang, T.: Research on the collaborative governance of urban regeneration based on a Bayesian network: the case of Chongqing. Land Use Policy **109**, 105640 (2021)

23. Amin, H.M.T.M., Adu-Ampong, E.A.: Challenges to urban cultural heritage conservation and management in the historic centre of Sulaimaniyah, Kurdistan-Iraq. J. Cult. Heritage Manag. Sustain. Dev. **6**(3), 255–270 (2016)
24. Zhou, T., Zhou, Y., Liu, G.: Key variables for decision-making on urban renewal in China: a case study of Chongqing. Sustainability **9**(3), 370 (2017)
25. Wang, H., Zhao, Y., Gao, X., Gao, B.: Collaborative decision-making for urban regeneration: a literature review and bibliometric analysis. Land Use Policy **107**, 105479 (2021)
26. Davies, A.R.: Hidden or hiding? Public perceptions of participation in the planning system. Town Plan. Rev. **72**(2), 193–216 (2001)
27. Choguill, M.B.G.: A ladder of community participation for underdeveloped countries. Habitat Int. **20**(3), 431–444 (2001)
28. Jones, P.S.: Urban regeneration's poisoned chalice: is there an impasse in (community) participation-based policy? Urban Stud. **40**(3), 581–601 (2003)
29. Kotus, J., Sowada, T.: Behavioural model of collaborative urban management: extending the concept of Arnstein's ladder. Cities **65**, 78–86 (2017)
30. Mattila, H.: Can collaborative planning go beyond locally focused notions of the "public interest"? The potential of Habermas' concept of "generalizable interest" in pluralist and trans-scalar planning discourses. Plan. Theory **15**(4), 344–365 (2016)
31. Swapan, M.S.H.: Who participates and who doesn't? Adapting community participation model for developing countries. Cities **53**, 70–77 (2016)
32. Baum, H.S.: Ethical behavior is extraordinary behavior; it's the same as all other behavior: a case study in community planning. J. Am. Plann. Assoc. **64**(4), 411–423 (1998)
33. Li, X., Zhang, F., Hui, E.C.M., Lang, W.: Collaborative workshop and community participation: a new approach to urban regeneration in China. Cities **102**, 102743 (2020)
34. Morano, P., Guarnaccia, C., Tajani, F., Di Liddo, F., Anelli, D.: An analysis of the noise pollution influence on the housing prices in the central area of the city of Bari. In: Journal of Physics: Conference Series, vol. 1603, No. 1, p. 012027. IOP Publishing (2020)
35. Morano, P., Tajani, F., Di Liddo, F., Darò, M.: Economic evaluation of the indoor environmental quality of buildings: the noise pollution effects on housing prices in the city of Bari (Italy). Buildings **11**(5), 213 (2021)
36. Di Liddo, F., Morano, P., Tajani, F., Torre, C.M.: An innovative methodological approach for the analysis of the effects of urban interventions on property prices. Valori e Valutazioni (26) (2020)
37. Calabrò, F., Mafrici, F., Meduri, T.: The valuation of unused public buildings in support of policies for the inner areas. the application of sostec model in a case study in Condofuri (Reggio Calabria, Italy). In: Bevilacqua, C., Calabrò, F., Spina, L.D. (eds.) NMP 2020. SIST, vol. 178, pp. 566–579. Springer, Cham (2021). https://doi.org/10.1007/978-3-030-48279-4_54
38. Saaty, T.L., De Paola, P.: Rethinking design and urban planning for the cities of the future. Buildings **7**(3), 76 (2017)
39. Tajani, F., Morano, P., Di Liddo, F.: Redevelopment initiatives on brownfield sites: an evaluation model for the definition of sustainable investments. Buildings **13**(3), 724 (2023)
40. Locurcio, M., Tajani, F., Anelli, D.: Sustainable urban planning models for new smart cities and effective management of land take dynamics. Land **12**(3), 621 (2023)
41. Morano, P., Sica, F., Guarini, M.R., Tajani, F., Ranieri, R.: Integrated evaluation methodology for urban sustainable projects. In: Calabrò, F., Della Spina, L., Piñeira Mantiñán, M.J. (eds.) New Metropolitan Perspectives, vol. 482, pp. 1567–1577. Springer, Cham (2022). https://doi.org/10.1007/978-3-031-06825-6_151