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THE IMPACT OF REVITALIZATION ACTIVITY ON THE RESIDENTIAL ATTRACTIVENESS OF SELECTED CITIES IN POLAND AND IN TURKEY

Abstract

The purpose of the article. This study identifies revitalization activities that enhance residential attractiveness across diverse socio-cultural and economic contexts. Employing case studies and multiple-criteria decision analysis (MCDA), the research evaluates three Polish (Lodz, Wroclaw, Poznan) and two Turkish cities (Hatay, Diyarbakır). The findings demonstrate that revitalization strategies must be meticulously tailored to local circumstances, and their effectiveness relies upon the successful integration of social, economic, and environmental objectives. Ultimately, this research offers urban planners and policymakers valuable insights and cross-regional best practices for formulating sustainable urban development policies.

Methodology. The article uses Methods for Cardinal Preference of Attribute Given, i.e., Simple Additive Weighting Method – SAW and Hierarchical Additive Weighting Method.

Results of the research. Revitalization is an effective tool for increasing the residential attractiveness of cities; however, its effectiveness depends on resident engagement, the coherence of urban planning, and consideration of local needs. Measures taken in this regard can be a significant factor in increasing residential attractiveness. The revitalization successes of the cities analyzed can serve as a foundation for further development and for addressing contemporary demographic and urban planning challenges. At the same time, the analysis confirms the need for further research on the relationships between revitalization processes and residential attractiveness, especially in the context of cities operating under different social and cultural conditions.

Keywords: revitalization, residential attractiveness, local government, development policy, urban development

JEL Class: R11, R23, R58



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Introduction

Although the impact of revitalization processes on urban development has been widely discussed in the literature, existing studies predominantly focus on case analyses within homogeneous institutional and economic systems. Consequently, there is a distinct research gap regarding cross-national comparative studies that confront structured, often EU-subsidized urban regeneration models (such as in Poland) with the urban policies of emerging markets facing different demographic and spatial pressures (such as in Turkey). Furthermore, there is a lack of rigorous, quantitative multi-criteria decision analysis (MCDA) tools applied to objectively measure changes in residential attractiveness across such diverse legal and cultural contexts. This paper bridges this gap by integrating MCDA into a cross-national comparative framework, thereby providing original insights into how different urban policies shape territorial attractiveness and demographic resilience beyond a single institutional setting. Cities, much like companies, compete with each other. This concept, dating back over a thousand years, was significantly advanced from a strategic management perspective Michael Porter in his 1995 article, *The Competitive Advantage of the Inner City*. Porter, renowned for his work on the competitive advantages of companies, sectors, and countries, applied his expertise to urban competitiveness. He analyzed cities as companies, focusing on their competitive strengths and weaknesses and outlining the roles of various stakeholders in enhancing urban competitiveness. However, Porter was not the first to view cities in this way. For instance, Kotler et al. (Kotler et al., 1993) argued that if cities are to compete with one another, they must adopt a mindset similar to that of companies.

It is indispensable that all the activities in cities are undertaken in a planned and methodical manner. This is what, to the largest extent, contributes to restoring cities to their former glory and to enhancing their residential attractiveness.

The scale of negative phenomena occurring in metropolitan areas (increasing degradation of the urban fabric, social issues such as unemployment, poverty or exclusion) along with the extensive area on which these phenomena take place have become one of the key issues touched upon on the global, European, national and local forums. Revitalization activities are aimed at recovering from the critical state of such urban areas in particular with regard to a potential increase in their residential attractiveness.

The research aim of the paper is to present the significance of the revitalization process from the point of view of residential attractiveness as well as to evaluate, in terms of multiple criteria, selected cities in Poland and in Turkey with regard to the said attractiveness.

In order to reach the pursued objective, the following research questions were posed:

1. Question 1: What are the priorities when revitalization undertakings are carried out in a city?

2. Question 2: What are the most important factors contributing to the residential attractiveness of the urban areas subjected to revitalization?

3. Question 3: What activities should be undertaken in order to restore to life degraded urban areas?

The layout and content of particular sections of the paper are dictated by the adopted research hypotheses:

1. H1: Revitalization activities carried out in cities contribute to an increase in their residential attractiveness.

2. H2: There is a positive correlation between the level of residential attractiveness and revitalization activities.

3. H3: The redevelopment of urban technical infrastructure serves the purpose of enhancing their residential attractiveness.

The selection of adequate cities for the purpose of the study was crucial for obtaining representative results and for drawing general conclusions. In the present study three cities from Poland (Lodz, Wroclaw, Poznan), and two cities from Turkey (Hatay, Diyarbakir) were selected as the examples which can be used to analyze the impact of revitalization on residential attractiveness. The selection criterion was based on the analysis of similarities and differences in the economic, social, historical and town planning contexts of the aforementioned cities.

The case study method was, *inter alia*, applied in the study as it is conducive to an in-depth understanding of the local revitalization considerations and their impact on residential attractiveness. The selection of the cities was carried out according to the following criteria:

1. the scale and intensity of revitalization undertakings. The cities differ from one another in terms of the scale of carried out activities, which makes it possible to evaluate their effectiveness under various conditions;

2. historical and social complexity. The selected cities are characterized by a rich history, social diversity and varied urban planning challenges;

3. the position in the national settlement network. Middle-size cities, which play a vital role in the national urban system, constitute a good representative of the average urban development in Poland (Wroclaw, Lodz and Poznan are ranked third, fourth and fifth respectively in terms of the number of inhabitants) and in Turkey;

4. the possibility of drawing intercultural comparisons. The cultural diversity between Poland and Turkey provides an opportunity to better understand universal and specific revitalization mechanisms.

For the analysis of quantitative data, a range of variables addressing various aspects of the issues raised was adopted. A detailed analysis of numerical data was conducted using figures from 2015, 2022 and 2024. In the course of the research process multiple-criteria decision

analysis methods (MCDA) were applied – the Simple Additive Weighting method (SAW) and the Multiplicative Weighting Method (also known as the Hierarchical Additive Weighting Method). MCDA methods enabled researchers to evaluate a few alternatives in terms of many decision-making criteria.

The article was divided into four parts. The second section provides a brief analysis of the literature on the subject, describing the significance of revitalization efforts for urban development. In the third part the research methods were outlined as well as the findings of the study. The fourth section presents the final conclusions and recommendations.

Literature Review – Revitalization as a Factor Enhancing the Residential Attractiveness of Cities

Revitalization of urban spaces year by year becomes a priority issue for modern cities which strive after sustainable development and improving the quality of life of their inhabitants. Skillfully planned revitalization processes may turn degraded areas into vibrant quarters thus increasing their residential and economic attractiveness. “Cities undergo constant change. They are never static, never finished, always adjusting to new circumstances. But over the last 30 years many European cities have experienced a pace of change far more rapid than at any other time in their recent history” (Couch et al., 2008).

Undoubtedly, long-lasting neglect spanning for decades led to the degradation of both urban infrastructure as well as the quality of public spaces, which has an adverse effect on the quality of life of residents and the overall city image in the domestic and international arena. In order to improve the quality of life of the social strata and to restore cities to their former glory, regeneration activities that are undertaken, are aimed at combating the degeneration of the urban fabric and negative phenomena.

Contrary to the widespread approach, revitalization does not focus solely on restoring infrastructure. It encompasses several other vital aspects which are taken into account when undertaking the efforts to recover degraded areas. The activities are not only of the urban character but also of the social, economic and environmental one. They constitute value added as regards the areas in which they are carried out.

The definition of revitalization, both in the Polish and foreign literature, underlines its multifaceted character which encompasses a physical, social and economic restoration of degraded urban areas (Balsas, 2007). It is an expedient process, the main guideline of which is enhancing the quality of life and restoring to degraded urban areas their former functions and attractiveness (Ashworth, 1991; Skalski, 1996; Zuziak, 1998; Turok, 2005; Markowski & Stawasz, 2007; Tallon, 2013; Roberts & Sykes, 2020; Attia et al., 2017; Hajdys & Ślebocka, 2021).

Revitalization is one of the rehabilitation methods of cities and other related settlements. Due to the geopolitical changes, which generated both economic and social changes to a city, central areas are the most vulnerable urban spaces. This vulnerability occurs directly through neglect and abandonment of the central areas, which in many cases are historical and part of the city's identity, or indirectly as a consequence of the territorial urbanization in any point of the region, by decentralizing living, commerce and office areas (Radoslav et al., 2013). On the other hand, urban development and redevelopment initiatives (Özdemirli, 2014) are common ways of revitalizing cities as well.

Regeneration activities bring about numerous benefits which can be distinguished into the following main categories:

- a political aspect consists in city branding and enhancing city prestige. Systemically carried out revitalization not only exerts a positive impact on the perception of a city by potential investors and residents but also contributes to increasing its significance in the domestic and international arena (Lees et al., 2008; Pancewicz et al., 2021);
- a technical aspect relates to improving city infrastructure. One of the pursuits of the initiators of revitalization processes is adapting a city to current technical standards. Recovery measures lead to a significant enhancement of the condition of public spaces, roads, i.e., urban infrastructure in a broad sense (Dec-Kiełb, 2024);
- a social aspect – based on strengthening and rebuilding social bonds. When designing revitalization projects, it is important to identify the needs of those who will use the space. This translates into the level of resident engagement in the revitalization process, consequently leading to more sustainable and lasting effects, a sense of community, and an improved quality of life (Smith, 1996; Mliczyńska-Hajda, 2013; Neto et al., 2014; Lisowska & Ochmański, 2016; Dec-Kiełb, 2024);
- environmental and cultural aspects – they integrate all kinds of undertakings conducive to ameliorating the quality of urban environment by sustainable management of natural resources, investments in ecological infrastructure and cultural heritage conservation as well as promoting local culture. In this way they positively affect the attractiveness of cities with regard to tourism (Madandola & Boussa, 2023);
- economic aspects – they are manifested by the stimulation of local economy by means of job creation, supporting local businesses, attracting investors (Roberts & Sykes, 2000) or by an increase in property values (Cameron, 2003).

To sum up, “urban areas have always performed a wide range of functions. Shelter, security, social interaction, and the sale and purchase of goods and services are among the traditional roles of a town or city. The relative importance of each of these functions has changed over time,

and such changes have created new demands for land, floor-space, infrastructure and the provision of a range of accompanying facilities” (Roberts & Sykes, 2000). Therefore, revitalization of urban areas plays a key role with regard to ameliorating the quality of life and stimulating local economy, which in turn contributes to a rise in residential attractiveness.

Residential attractiveness is a relatively new concept. It originates from the issues regarding territorial development and is based on mutual rivalry between cities. Residential attractiveness is gradually advancing and currently constitutes one of the fundamental components of the policy conducted by municipal authorities striving to reverse the process of depopulation (Miot, 2015; Kuzmanović et al., 2020).

Residential attractiveness refers to the qualities of a location that make potential residents want to move there or encourage current residents to stay (Fertner et al., 2015). This attractiveness can be enhanced by public policies aimed at revitalizing the area’s residential appeal, thereby fostering a sense of attachment and attracting new residents (Miot, 2015). Some scholars suggest that the variation in features available in different urban areas accounts for their differing levels of attractiveness (Buch et al., 2014).

Different criteria affect the perception of a city as an attractive one. The major ones are as follows: amenities for social and family life, the level of economic development, job opportunities available in the place of residence or in its vicinity, conditions for sports and leisure, environmental factors etc. Growing expectations of residents in terms of residential standards are clearly noticeable. They concern not only proximity but also an unlimited access to social infrastructure facilities (schools, kindergartens, health centers), technical infrastructure (which ensures good commuting opportunities as regards the locations which are important for residents, the level of technical advancement of the water and sewage network adequate for a particular area, equipping flats in basic sanitary installations etc.) as well as paying attention to preserving nature-related attributes. In the literature on the subject numerous studies have been presented with regard to residential preferences. Empirical research has focused both on the physical characteristics of the places which shaped the said preferences (Pacione, 2003; Kim et al., 2005; Diepen & Musterd, 2009; Bader, 2011; Sinniah et al., 2016; Hasanzadeh et al., 2019) as well as on the social aspects touching upon the issues connected with ethnicity (Clark, 1991; Clark, 1992), age, the level of education, financial standing (Clark, 2009; Pisman et al., 2011; Andersson et al., 2019) and travel preferences (Handy et al., 2005; Van Acker et al., 2007; Susilo et al., 2012; Aditjandra et al., 2012; Luckey et al., 2018). The findings of earlier research indicated, *inter alia*, that attractiveness of a particular area in the perception of its inhabitants as well as their residential preferences are determined by exogenous factors – connected with the characteristics of the evaluated area and endogenous factors – pertaining to the traits of character of the evaluating person (Bartnicka, 1989). Researchers also put forward

a set of positive qualities which make up the residential attractiveness of a particular area, i.e., nature-related ones, utilitarian ones, social ones, town planning and architectural ones and aesthetic ones which can be assessed by various indicators (Bartoszek et al., 1997; Jałowicki & Szczepański, 2006).

Therefore, the perception of the residential attractiveness of a city is affected by objective aspects (the standard of buildings, associated infrastructure, landscape-related attributes, potential jobs, the proximity of social infrastructure facilities) as well as by subjective ones (the level of residential aspirations, emotional attachment to a particular area, aesthetic preferences etc.) (Szafrńska, 2016).

The relentless competition between cities compels their authorities to manage the city in a way that will ensure appropriate conditions for stable, sustainable development in the long term and contribute to positive demographic processes. Therefore, human potential is one of the key elements that cities compete for. It concerns the “potential for work, human resources – that is, a set of possibilities, abilities, skills and motivations inherent in people, and thus in the territorial unit” (Gołębiowska, 2005; Zabierowski, 2011). Each city strives to attract new residents, primarily young people and those with high qualifications. This is ultimately intended to lead to the creation of a stable and strong local social and intellectual capital, as well as to contribute to slowing down the ageing process and population decline (Pytlak, 2010; Malecki, 2000) in the area.

Undoubtedly, revitalization of the degraded urban fabric serves to attain the aforementioned strategic objective of the city. It is due to the fact that it significantly affects residential attractiveness and the enhancement of the quality of life of the inhabitants. It is also conducive to arousing interest on the part of new residents.

The most common ways in which revitalization exerts a positive impact on the residential attractiveness of cities encompass:

- the amelioration of the condition of infrastructure (the technical one, the social one) – within the framework of the revitalization process the existing infrastructure may be modernized and enhanced; the improvement of the technical condition of roads, pavements (walkways), systems of public transport as well as facilitated access to electric power and the water and sewage network; the construction, extension or modernization of schools, kindergartens, libraries, municipal reading rooms. All the aforementioned elements contribute to making a city a more functional and comfortable place to live in (Osman, 2016);
- public space and greenery – revitalization can focus on developing new green areas, parks, squares and cycle paths; the extension of this kind of areas is not only conducive to leisure but also creates a pleasant and quaint environment, which attracts residents and encourages them to spend time outdoors in an active manner (Jaszczak et al., 2021);

- a lively cultural and entertainment offer – new culture centers, theatres, art galleries, cinemas and entertainment spots which emerge in the course of revitalization arouse the interest of residents and tourists by creating a vibrant cultural scene (Peterson 1979; Gainza 2017);
- improved aesthetics and architecture – revitalization may encompass renovations and architectural restoration of the existing buildings and the introduction of new, attractive architecture. This translates into the city aesthetics and creates exquisite visual impressions (Forte & Girard 2009);
- security and the quality of life – regeneration activities can exert an impact on improving security in the areas which were formerly neglected or are more prone to crime. It positively affects the quality of life of residents and their sense of security (Mason, 2003);
- a variety of services and amenities – revitalization often triggers the development of new shops, restaurants, cafés and other services, which improves the availability of everyday amenities for residents (Vural-Arslan et al., 2011);
- community engagement – the engagement of the local community in the revitalization process may enhance a sense of community and pride in the city, which attracts residents and contributes to creating a positive spirit of collectivity (Lawson & Kearns, 2010);
- a rise in the real property prices – due to improving infrastructure, aesthetics and the quality of life, the price of real property in the areas subjected to revitalization may increase, which attracts investors and the people interested in purchasing or renting real property (Wadu et al., 2018).

Despite a wealth of academic research on urban regeneration (Roberts et al., 2020; Couch et al., 2008), the relationship between the effects of revitalization and the residential attractiveness of urban areas remains insufficiently understood. Existing research focuses primarily on the spatial, economic or social effects of revitalization processes, without examining the impact of regeneration measures on residential satisfaction (Kim & Sim, 2026a; 2026b), quality of life and residents' locational choices (Mouratidis, 2021; Mouratidis & Yiannakou, 2022; Chin et al., 2025). There is a clear shortage of research on post-socialist cities in Central and Eastern Europe, where regeneration processes take place within different historical and institutional contexts (Stanilov, 2007; Tsenkova, 2014). Consequently, there is a need to develop comprehensive research models that allow for the assessment of the impact of revitalization on residential attractiveness from the residents' perspective, as well as the long-term effects of these processes. Understanding how revitalization efforts contribute to increased residential attractiveness can provide valuable insights for urbanists, city planners, decision-makers involved in the regeneration of degraded urban fabric, lawyers, sociologists, and financiers. This, in turn, can translate into the development of more effective revitalization strategies.

Strategies that are better suited to the needs of the local community, contributing to attracting new residents, increased demand for properties, an increase in the number of infrastructure investments, and an enhancement of the city's prestige.

Materials and Methods

To address the theoretical and empirical objectives of this study, a cross-national comparative approach focusing on selected municipalities in Poland and Turkey was adopted. Comparative urban research frequently faces the challenge of contextual commensurability. However, contrasting a Central European EU member state with an emerging market economy at the crossroads of Europe and the Middle East offers a substantial cognitive value for urban regeneration and spatial attractiveness literature.

Poland exemplifies the Central European post-socialist urban transformation model, heavily anchored in the institutional, legal, and financial frameworks of the European Union. Urban regeneration in Polish cities (Lodz, Wroclaw, Poznan) operates under cohesive legislative mandates (such as the Polish Act on Revitalization of 2015) and relies heavily on structured EU structural and cohesion funds. Turkey, conversely, represents a rapidly urbanizing emerging economy characterized by a highly centralized governance model (e.g., TOKİ interventions) and distinct demographic pressures. Turkish urban regeneration is primarily driven by state-led infrastructure initiatives, market-driven redevelopment, disaster-mitigation imperatives, and geopolitical shifts.

Cognitive Value: Comparing these two distinct institutional regimes enables the identification of universal drivers of residential attractiveness (e.g., green space provision, basic technical infrastructure) versus context-dependent mechanisms (e.g., reliance on external EU subsidies versus rapid state-led crisis management).

The selected countries display contrasting urbanization trajectories and macro-level vulnerabilities:

- **Demographic Resilience vs. Shrinkage:** Polish cities operate within a broader national context of demographic ageing and suburbanization/depopulation (notably in post-industrial hubs like Lodz). In contrast, Turkish cities experience rapid population movement, internal migration, and distinct demographic expansion;
- **Nature of Urban Degradation:** While degradation in the selected Polish cities stems from historical post-industrial decline and socio-spatial transition after 1989, urban transformation in the selected Turkish cities is profoundly shaped by acute external shocks – namely, civil security conflicts and reconstruction in Diyarbakır, and catastrophic seismic events (the 2023 earthquakes) in Hatay.

Figure 1

Maps of the country showing the locations of the cities analyzed in the study



* The scale of the countries relative to one another is not maintained.

Source: created by the authors.

Therefore, when evaluating the level of residential attractiveness of the selected cities in Poland and in Turkey ten variables depicting the situation in particular cities in 2015, in 2022, and in 2024 in the social, economic, infrastructural, environmental and administrative sphere were taken into consideration.

This article uses Methods for Cardinal Preference of Attribute Given, i.e., Simple Additive Weighting Method and Hierarchical Additive Weighting Method. Simple Additive Weighting method (SAW) is probably the best known and very widely used method of MADM. The method is well summarized by MacCrimmon (1968). A basic discussion of the underlying considerations is given by Churchman and Ackoff (1954), and by Klee (1972).

Due to profound differences in macroeconomic contexts and data architecture (TÜİK vs. GUS), the Polish and Turkish cities were normalized within their respective national subgroups (against local maximums). While the SAW scores facilitate an assessment of urban development dynamics over time, the absolute values cannot be directly compared across the two countries.

To each of the attributes in SAW, the DM assigns importance weights which become the coefficients of the variables. To reflect the DM's marginal worth assessments within attributes, the DM also makes a numerical scaling of intra-attribute values. The DM can then obtain a total score for each alternative simply by multiplying the scale rating for each attribute value by the importance weight assigned to the attribute and then summing these products over all attributes.

After the total scores are computed for each alternative, the alternative with the highest score (the highest weighted average) is the one prescribed to the DM. The additive form is depicted by the following formula:

$$U(a) = \sum_{j=1}^n c_j(a)w_j \quad (01)$$

where:

$w_j \geq 0$ is the weight of the c_j criterion;

$c_j(a)$ is the value obtained by operation a for the c_j criterion function.

The c_j function is nondecreasing for the benefit criterion and nonincreasing for the cost criterion.

Simple additive weighting method requires a comparable scale for all elements in the decision matrix. The comparable scale is obtained by applying eq. to the following criteria:

- of the benefit type (e.g., exclusively for boosters), that is the more the better (the higher the value the better); in such a case we use the following formula for the calculations (1):

$$r_{ij} = \frac{x_{ij}}{x_j^*} \quad (02)$$

where:

x_{ij} – the present value

x_j^* – the maximum value which we take into consideration or the best value out of the considered alternatives;

- of the cost type (e.g. exclusively for inhibitors), that is the less the better (the lower the value the better); in such a case we use the following formula for the calculations (2):

$$r_{ij} = 1 - \frac{x_{ij}}{x_j^*} \quad (03)$$

where:

x_{ij} – the present value

x_j^* – the maximum value which we take into consideration or the best value out of the considered alternatives.

The abovementioned formula is applied solely in the situation when we consider the cost criterion. In the situation when we consider both types of criteria – of the benefit type and of the cost type we use formula No. 1 (for the benefit criterion) as well as the last formula No. 3 (for the cost criterion):

$$r_{ij} = \frac{x_j^{min}}{x_j^*} \quad (04)$$

where:

x_j^{min} – the minimum value which we take into consideration or the worst value out of the alternatives considered;

x_{ij} – the present value.

Simple additive weighting method uses all n attribute values of an alternative and uses the regular arithmetical operations of multiplication and addition; therefore, the attribute values must be both numerical and comparable. Further, it is also necessary to find a reasonable basis on which to form the weights reflecting the importance of each of the attributes (Hwang & Yoon, 2011).

Besides the additive form, also the multiplicative form of the function was applied which can be depicted by the following formula:

$$U(a) = \frac{\prod_{j=1}^n [1 + kc_j(a)w_j] - 1}{k} \quad (05)$$

where:

$w_j \geq 0$ is the weight of the c_j criterion;

$c_j(a)$ is the value obtained by operation a for the c_j criterion function;

the c_j function is nondecreasing for the benefit criterion and nonincreasing for the cost criterion;

$k > -1$, $k \neq 0$ is the scaling constant.

The evaluation of the residential attractiveness of the cities which were the subject of the study was carried out by going through every consecutive stage of the method described (Grabński, 1988; Panek & Zwierzchowski, 2013; Nermend, 2017):

Step 1 – Defining the problem, generating alternatives and determining criteria

The decision-making problem should start with a clear defining of the problem, delineating the alternatives, specifying the subjects, goals and all the points of the conflict along with limitations, the rate of uncertainty and key issues. After that the problem can be put into the framework indicating the evaluation criteria.

Step 2 – Assigning weights to criteria

Subsequent steps cover the assigning of weights to criteria. Those weights that indicate the relative importance of criteria in the multiple-criteria problem which is under consideration can be determined by means of techniques such as Analytical Hierarchy Process and the Sismos approach (Hwang & Yoon, 1981; Kobryń, 2014).

Step 3 – Development of the scoring matrix

The phase in which the model is developed constitutes the process in the course of which “the essence” of the problem is isolated from a complex picture so that the problem could be appro-

priately evaluated (Hwang & Yoon, 1981). In the end of this stage the MCDA problem can be depicted in the form of a matrix in the following way:

- where x_{ij} is the score assigned to the i alternative in relation to the j criterion, w_j – is the j criterion weight, n – is the number of criteria, and m – is the number of alternatives.

Step 4 – Selection of an adequate method

The multiple-criteria method must be selected and applied to consider the problem in order to rank the alternatives. Data and the rate of uncertainty constitute key factors for the decision maker when selecting one out of several multiple-criteria methods (Abdullah & Adawiyah, 2014).

Step 5 – Data normalization

Normalization is the process of preliminary data processing in order to facilitate the comparison of the said data and further analysis. The collected input data (indicators) are expressed in different units of measurement (km, item, m², PLN) and they have different areas of variability and thus it is not possible to directly carry out arithmetic operations on the said data or to compare them. The process of normalization of the variables will provide an opportunity to eliminate the aforementioned formal limitations and the difficulties related to interpretation (Kukuła, 2000).

Step 6 – The ranking of alternative solutions

Eventually, the ranking of alternatives is arranged appropriately, and the best alternative is prescribed as the solution (Nermend, 2009; Nowak, 1990).

To assess the residential attractiveness of the selected cities in Poland and Turkey in 2015, 2022 and 2024 the data was normalized and processed using the Simple Additive Weighting (SAW) method and the Multiplicative Weighting method. The obtained normalized values for each city and year are presented in the following tables.

Table 1

Ranking of Polish cities in 2015 based on the SAW method

POLAND 2015	Lodz	Poznan	Wroclaw
Additive Weighting Method	0.825	0.778	0.935
Multiplicative Weighting Method	1.145×10^{-11}	0.234×10^{-11}	4.784×10^{-11}

Source: own elaboration based on data published by Statistics Poland, <https://bdl.stat.gov.pl/bdl/start>.

Table 2*Ranking of Polish cities in 2022 based on the SAW method*

POLAND 2022	Lodz	Poznan	Wroclaw
Additive Weighting Method	0.807	0.797	0.969
Multiplicative Weighting Method	0.866×10^{-11}	0.314×10^{-11}	6.934×10^{-11}

Source: own elaboration based on data published by Statistics Poland, <https://bdl.stat.gov.pl/bdl/start>.

Table 3*Ranking of Polish cities in 2024 based on the SAW method*

POLAND 2024	Lodz	Poznan	Wroclaw
Additive Weighting Method	0.791	0.806	0.939
Multiplicative Weighting Method	0.511×10^{-11}	0.417×10^{-11}	5.232×10^{-11}

Source: own elaboration based on data published by Statistics Poland, <https://bdl.stat.gov.pl/bdl/start>.

General Trends in Poland:

- Lodz shows a constant decrease in attractiveness – the SAW method results indicate a decline in the attractiveness index for the city between 2015, 2022 and 2024. This suggests that despite revitalization efforts, external factors such as economic downturns, demographic changes, or infrastructural challenges might have contributed to lower perceived attractiveness.
- Poznan is showing a steady growth in its residential appeal. Despite having the least favorable starting point of the three cities analyzed, it has completely turned its situation around over the course of nine years, achieving a marked improvement compared with the other urban centers.
- Wroclaw's continuous improvement – the highest SAW value in the analyzed years suggests that Wroclaw has maintained and even enhanced its residential attractiveness. This improvement could be attributed to successful urban planning, infrastructure development, and an expanding job market. A noticeable decline in what was already a high figure between 2022 and 2024 may be linked to an improvement in Poznan's standing and in the parameters analyzed.
- Values decline in the Multiplicative Method – the negative values observed for Lodz in the Multiplicative Weighting method may indicate increasing disparities in attractiveness indicators relative to other cities, possibly due to socio-economic polarization.

Table 4*Ranking of Turkish cities in 2015 based on the SAW method*

TURKEY 2015	Hatay	Diyarbakır
Additive Weighting Method	0.697	0.508
Multiplicative Weighting Method	9.719×10^{-11}	0.813×10^{-11}

Source: own elaboration based on data published by Statistics Turkey, <https://www.tuik.gov.tr/Home/Index>.

Table 5*Ranking of Turkish cities in 2022 based on the SAW method*

TURKEY 2022	Hatay	Diyarbakır
Additive Weighting Method	0.616	0.628
Multiplicative Weighting Method	3.532×10^{-11}	4.347×10^{-11}

Source: own elaboration based on data published by Statistics Turkey, <https://www.tuik.gov.tr/Home/Index>.

Table 6*Ranking of Turkish cities in 2024 based on the SAW method*

TURKEY 2024	Hatay	Diyarbakır
Additive Weighting Method	no data available	0.578
Multiplicative Weighting Method	no data available	2.241×10^{-11}

Source: own elaboration based on data published by Statistics Turkey, <https://www.tuik.gov.tr/Home/Index>.

General Trends in Turkey:

- In the provinces of Hatay and Diyarbakır, both improvements and deteriorations were observed. In Hatay Province, a marked decline was observed during the analyzed period, although the interpretation of the 2024 results remains limited due to the lack of fully reliable data following one of the strongest earthquakes to strike Turkey this century. In the case of Diyarbakır, however, a more varied trend is observed in the SAW method; nevertheless, compared to 2015, the 2024 result still indicates a significant growth. This suggests that urban revitalization efforts, infrastructure development, and policy interventions have positively influenced residential attractiveness.

Comparative Observations:

- The results suggest that Polish cities have experienced a more pronounced improvement in residential attractiveness compared to Turkish cities, as reflected in the SAW scores.
- Wrocław stands out as the most consistently attractive city in Poland, while Diyarbakır has emerged as the leading city in Turkey in terms of residential attractiveness growth.
- The decline observed in Łódź may indicate urban challenges such as depopulation, economic stagnation, or inefficiencies in revitalization programs.
- The Multiplicative Weighting method, though showing very small numerical values, reinforces the observation that Poland's urban transformation has had a more balanced impact compared to Turkey's more varied outcomes.

The evaluation of residential attractiveness using both additive and multiplicative weighting methods provides a comprehensive understanding of urban dynamics in Poland and Turkey. The findings highlight the importance of strategic urban planning, investment in infrastructure, and effective policy measures to ensure sustainable urban growth and attractiveness. The future research could further explore the socio-economic drivers behind these changes and examine additional indicators to refine the assessment framework.

Between 2015, 2022 and 2024, Wrocław and Poznań demonstrated a steady and stable increase in residential attractiveness. Conversely, despite ongoing revitalization efforts, Łódź loses ground in the model, primarily due to persistently weak demographic indicators and a declining net migration rate. Among the Turkish cases, Diyarbakır exhibited significantly more dynamic development than Hatay (prior to the earthquake), capitalizing fully on improvements in its infrastructural indicators. The multiplicative weighting method is highly sensitive to extreme values, as a single poor-performing criterion drastically reduces the overall score. Consequently, Poznań recorded a very low MW score in 2015 due to its limited social housing stock compared to Łódź and Wrocław, although it markedly improved its position by 2024.

The selected cities differ in terms of historical, social and town planning contexts, which made it possible to carry out a comprehensive analysis of the impact of revitalization on the residential attractiveness. The comparison between Poland and Turkey provided an opportunity to explore universal and local revitalization mechanisms such as:

- a. the role of cultural heritage in constructing urban identity;
- b. the effectiveness of revitalization programs in terms of improving the quality of life of residents;
- c. the relation between revitalization and an influx of new residents.

Lodz is a city with a rich industrial history which since the 1990s has been undergoing an intense economic and urban transformation. These are the reasons why Lodz was selected for the purpose of the study:

- a. significant revitalization activities such as the overhaul of the Priest's Mill or the New Centre of Lodz project;
- b. a rich industrial history and the challenges ensuing from it related to adapting historic buildings (the collapse of textile industry brought about a considerable number of degraded areas and vacant buildings in the very city center);
- c. demographic problems of the city such as depopulation and ageing society which affect residential attractiveness (the number of residents in 2022 accounted for 93.93% of the population from the year 2015 (Główny Urząd Statystyczny, n.d.).

Wroclaw is an academic and economic hub which is developing dynamically and which for a long time has invested in the revitalization of historic areas. This city was selected for the following reasons:

- a. a sustainable revitalization development e.g., the Nadodrze regeneration program which constitutes an example of a sustainable approach to social and economic revitalization;
- b. a multicultural history which has affected the character of the city and the diversity of its residents;
- c. a dynamic economic development which attracts new residents and investors.

Poznan as a city characterized by a considerable economic and social potential constitutes an interesting case in the context of revitalization. The arguments for selecting this city were as follows:

- a. complex regeneration undertakings such as the overhaul of Srodka and the Old City (Staszewska 2017, pp. 53–66);
- b. a robust labor market which attracts young people and thus affects the residential attractiveness;
- c. the cultural character of the city which strengthens social ties and the sense of belonging of the residents.

Hatay is a city characterized by a strategic location and a rich history, which makes it an interesting case for studying revitalization in the context of geopolitical and social challenges. The city was selected on account of the following factors:

- a. the historical significance of the city which is at the juncture of various cultures and religions;

- b. revitalization activities which encompass renovating historic buildings and improving the city infrastructure;
- c. the impact exerted by migration and conflicts, which makes Hatay a unique example in terms of urban planning and social revitalization.

Hatay was chosen since the city was devastated because of the big earthquakes experienced on the 6th of February 2023. On February 6, 2023 two earthquakes of magnitude 7.7 and 7.6 occurred in southeastern Turkey, centered in Kahramanmaraş city. These earthquakes caused great destruction in 10 cities, including Hatay, causing thousands of deaths and injuries. According to the experts, an earthquake of this magnitude is experienced in Turkey once a century.

Diyarbakir is one of the oldest cities in Turkey. It represents a region which is characterized by considerable socio-political challenges. The selection of this city ensued from its following aspects:

- a. the cultural and historical richness, in particular the ancient city walls included on the UNESCO World Heritage list;
- b. the scale of its town planning problems encompassing intense urbanization and conflict-related destruction;
- c. the revitalization potential which combines the restoration of cultural heritage with enhancing the quality of life of the residents.

The historical center of the city was destroyed as a result of terrorist actions that started at the end of 2015 and continued in the first months of 2016. In the Sur district of Diyarbakir in 2015–2016, The Kurdistan Workers' Party (PKK) terrorists rendered thousands of houses unusable, as well as mosques, churches and historical sites.

The research period covered three single years: 2015, 2022 and 2024. In 2015 the Act on Revitalization came into force in Poland, which not only defined the notions but also specified the legal framework of the process, whereas the year 2022 was of particular importance due to the fact that the COVID-19 pandemic restrictions ended then, which resulted in intensified revitalization undertakings. The year 2024 is marked as the end of research period.

The collected research material was presented in the tabular form 1–4. In order to validate the research hypotheses, put forward in the introductory part of the article, the following rates were applied, divided into boosters and inhibitors:

1. Net primary school enrolment rate (%) (a booster), which assess the level of primary education among children of official school age. A high net enrolment index indicates a good quality of education and the easy availability of schools, which attracts families with children

at the same time providing an incentive to settle in a particular area. As for the cities included in the study in Poland and Turkey, this indicator remains at a similar level, as all the cities analyzed place great importance on a high level of primary education;

2. Balance of internal migration for permanent residence (persons) (a booster) indicates the level of attractiveness of a city as a place of residence. A positive migration balance may translate into a higher number of people who wish to settle in a given city rather than find another place to live, which can be indicative of the level of its attractiveness. Among the cities in Poland which were the subject of research Wrocław is ranked in the first position (in the year 2022 Łódź lost its third position in the ranking of cities in Poland in terms of population to Wrocław (Główny Urząd Statystyczny, n.d.). In Turkey Hatay is more often indicated as the preferred place of residence than Diyarbakir despite its being situated in the seismic zone. In 2022 the situation of the Diyarbakir city improved. It was related to the fact that the Turkish government allocated approximately USD 3.4 billion to the restoration of the territories destroyed in the fighting which broke out in 2015 between government forces and Kurdish militants after the collapse of peace negotiations between the Kurdistan Workers' Party (PKK) and the Turkish state (*Rzqd Turcji...*, n.d.);

3. Entities entered in the REGON register per 10,000 residents of working age (a booster). The number of such entities makes it possible to estimate the level of economic activity. Among the Polish cities the lowest rate was reported in 2015 in Łódź. It is the effect of a slow depopulation of the city and an outflow of young people. As regards the cities in Turkey, Hatay is characterized by a higher level of businesses, where conducting business activity is advantageous due to more considerable government subsidies for entrepreneurs and ensuing potential benefits and tax relief (when comparing the year 2022 with 2015);

4. Housing stock of municipalities – social housing (a booster). The number of social housing flats as well as their availability is vital especially for the poor and for the people with low income. As a result of the undertaken regeneration activities such as renovations and modernization of the existing condition of the buildings it is possible to gradually increase the pool assigned for distribution among those in need. In analyzed periods in Poland the city of Łódź achieved the best results in this regard, however, both Wrocław and Poznań maintain at a steady level their housing potential. In Turkey thanks to subsidizing the regeneration of the degraded urban fabric Diyarbakir steadily restores its housing resources, whereas the situation in Hatay has not changed;

5. Average number of persons per dwelling (an inhibitor). This rate gauges residential density which directly translates into the quality of life of the residents. The more square meters per one resident, the higher the comfort and the better the living conditions. And improving the quality of life is one of the priorities of revitalization. It also exerts a direct impact on the residential

attractiveness of a given city. The worst situation among the analyzed cities in Poland was noted in Poznan, whereas in Turkey in Diyarbakir. The rates were the same in 2022 and 2024;

6. Residential buildings connected to water supply infrastructure – in % of total residential buildings (a booster). An unimpeded access to the infrastructure directly translates into the quality of life and at the same time it contributes to improving the housing standards. All the cities which were the subject of analysis are making steady attempts at increasing the number of buildings connected to water supply infrastructure;

7. Residential buildings connected to sewage infrastructure – in % of total residential buildings (a booster). Nowadays the access to sewage infrastructure is taken for granted. The lack of it directly contributes to the deterioration in the quality of life of residents. Local self-government authorities put an emphasis on ensuring an unimpeded, private access to sewage infrastructure in the degraded areas. It is hard to imagine not prioritizing such efforts, which affects the residential attractiveness rating of a given city. When comparing the conditions in this regard in the analyzed cities in Poland, the worst situation was noted in the city of Lodz, which gradually increases the number of residential buildings connected to sewage infrastructure, however, the said number still leaves much to be desired (*Łódź będzie w 100 proc. skanalizowana...*, 2019);

8. Total area of parks, parkettes and neighborhood green areas (ha) (a booster). Green areas constitute an essential factor which affects the residential attractiveness of cities. Providing residents with an access to spaces for recreation and leisure is also a vital element of revitalization activities (Hajdys & Ślebocka, 2020, p. 58). The more such spaces in urban areas the better the quality of life, which can translate into an increase in the number of residents and thus into the amount of income at the disposal of the local self-government and as a result a rise in the pool of financial resources which can be allocated to revitalization undertakings. It can also positively affect the perception of a particular area as attractive from the point of view of potential residents. It is also important to ensure that the revitalization efforts do not cause depletion or devastation of green areas. It would be optimal if such resources were increased (Najwyższa Izba Kontroli..., 2022, p. 15).

The selection of the cities (Lodz, Wroclaw, Poznan, Hatay, Diyarbakir) was based on their diverse revitalization contexts, which provided an opportunity to take a holistic approach to the analyzed problem. The analysis of the aforementioned cities made it possible to better understand the impact of revitalization activities on residential attractiveness under different geographic and cultural conditions. The findings of the study may be useful for municipal authorities, town planners and researchers dealing with the urban policy and planning.

The city of Lodz is distinguished by its ambitious revitalization projects such as post-industrial spaces transformations, e.g., into the EC1 Science and Technology Centre or the Manufaktura arts center, shopping mall, and leisure complex. The aforementioned undertakings

positively affected the attractiveness of the city from the perspective of investors. However, there still exists a problem of low standards prevalent in many residential areas as well as the outflow of people caused by the lack of complex support programs for the residents with the lowest income. Therefore, there persists the key challenge related to integrating the revitalized spaces with other quarters of the city as well as to job creation in the immediate neighborhood of the residential areas. In this connection, it is advisable for the city to establish a cohesive network of ties between residential, recreational and business areas by developing public transport and the infrastructure for pedestrians and cyclists (the integration of revitalized spaces). The introduction of programs aimed at enhancing energy efficiency in residential buildings and at providing subsidies for the tenants residing in the revitalized areas (a financial support for tenants) may bring positive outcomes. Another recommended activity aimed at enhancing the residential attractiveness of the city (promoting Lodz as the city of culture) is the development of cultural events and local initiatives as a factor which attracts new residents and retains the existing ones.

As regards Wroclaw, it effectively implements revitalization projects focusing on the restoration of the riverside territories such as the Odra River Boulevards. The investment activity carried out in this area improved the quality of public spaces and led to an increase in the number of high standard apartments in the vicinity of the city center. The challenges that the municipal authorities face concern predominantly the revitalization of the neglected quarters such as Nadodrze, where the restoration of the urban fabric does not always effectively prevent the process of gentrification. Wroclaw constitutes an example of a city where revitalization contributes to ameliorating the diversity of the cultural and recreational offer and this in turn is conducive to attracting new residents. It is advisable for Wroclaw to introduce the mechanisms which could support the low-income residents such as rent subsidies or the construction of government housing in the revitalized areas (offering solutions to the problem of gentrification). The construction of new cycle paths and improving public transport in the revitalized areas in order to enhance their accessibility (developing the mobility infrastructure) is another proposal for Wroclaw. As regards neglected quarters, the kind of undertaking which could positively affect the quality of life and residential attractiveness is the intensification of green plantings in particular areas (green revitalization).

In Poznan the revitalization activities carried out so far focused predominantly on the historic areas of the city such as the City Centre and the Old Market Square. The investments targeted at the renovation of historic tenement houses and modernization of public spaces contributed to an increase in the tourist attractiveness of the city. An insufficient engagement of the residents in the decision-making process still poses a problem, which impedes the long lasting effects of revitalization in terms of improving the quality of life. A migration of population to the suburbs

can be observed in the city, which points to the need of better adjusting the revitalized areas to the requirements of modern families. It is recommended for Poznań to introduce social consultations at every stage of the process of revitalization. The participation of residents will thus make it possible to more effectively adjust the activities to the needs and expectations of the local community (participatory society). Another proposal is the development of flats adjusted to the needs of families with children, including the proximity of green areas and educational infrastructure (the enhancement of the housing offer). Expanding the scope of revitalization undertakings to the less attractive quarters of the city, including peripheral districts constitutes another activity which could counteract the outflow of people to the suburbs (balancing revitalization activities).

Hatay is a city which in the aftermath of an earthquake faced the difficult challenge of restoring the degraded urban fabric. The natural disaster not only left thousands of buildings in ruins but also contributed to displacing thousands of residents. The city, which was earlier associated with precious historic monuments, which was regarded as an interesting point on the tourist map of Turkey because of its history, was forced to take the difficult challenge aimed at an economic recovery and restoration of the lost potential.

The revitalization of Hatay centers on the most significant elements which, *inter alia*, encompass: preserving the regional heritage, enhancing the local identity, providing resilience to natural disasters e.g., floods and increasing the residential attractiveness of the city. Due to the scale of damage, the initiative which was undertaken at that time entailed designing 5000 houses with a total area of 50 ha. Taking into consideration the cultural heritage a new environment was created which was sustainable and functionable (World Design Organization, 2024) and covered, *inter alia*, new public green zones, efficient public transport or community centers. First and foremost, social inclusiveness was of prime importance. It constitutes an indispensable element of fair and sustainable urban development. In the context of revitalization, its role consists in ensuring that the benefits ensuing from the undertaken activities are accessible to all the social groups. It contributes to constructing cohesive, resilient and attractive cities. The adoption of such a restoration strategy by Hatay is supposed to enable the city to achieve positive, long term results in the social and town planning aspect. It is recommended for this city to carry out revitalization activities considering its specific natural conditions (seismic zones and flood inundation areas).

Diyarbakır is the largest city in the Kurdish south-east region of Turkey, which undertakes revitalization activities related to the destruction resulting from warfare permanently waged in this area. In the year 2015 the city became the scene of combat between the Turkish army and the Kurdish PKK guerrillas. Almost the entire historic center of the city was destroyed and therefore the undertaken recovery activities are of a different nature. The said activities have

entailed a heavy project-based reconstruction of the city since then. Work has been initiated to rebuild the district, which was cleared of terrorists by the operations of the security forces. Nowadays, it is aimed to host five million tourists with the completion of the construction in the district, where more than seven thousand houses and the area where 21 thousand people lived were destroyed during the terrorist actions.

Diyarbakir with its unique architecture and the city walls included on the UNESCO World Heritage list is an example of a city where revitalization combines the conservation of cultural heritage with improving the quality of life. The findings of the analysis indicate that:

- an effective use of the cultural heritage as a resource attracts investors and tourists, which positively affects residential attractiveness;
- however, the political context and social tensions constitute a considerable constraint to the cohesion of revitalization activities.

It is recommended for the city of Diyarbakir to intensify the efforts aimed at reconstructing the degraded area (Daily Sabah, 2024) but to also to undertake the activities of a soft character focused on improving the level of education. A high rate of illiteracy can still be noted in the city, especially among the residents of a Kurdish origin. In this case it is worth taking into consideration the political and social context, the main objective of which are activities aimed predominantly at restoring the local community after the years of conflicts.

The comparison of five selected cities from Europe (Lodz, Wroclaw and Poznan) and the Middle East (Hatay and Diyarbakir) points to several universal revitalization mechanisms such as:

- the key role of investing in infrastructure and public space in improving the quality of life of residents;
- the significance of conserving the cultural heritage for the purpose of constructing the urban identity and increasing residential attractiveness;
- the challenges related to social integration, avoiding gentrification and balancing the interests of various social groups.

Conclusions and Recommendations

In response to the presented research questions, findings indicate that the main priorities for revitalization are improving technical and housing infrastructure, public spaces, accessibility, and social integration. The most important factors shaping residential attractiveness are migration trends, housing conditions, economic activity, and access to infrastructure and green spaces. The most favorable trends were observed in Wroclaw and Poznan, while Lodz struggled with a declining population; the situation in Diyarbakır has improved, whereas Hatay requires reconstruction focused on resilience following the 2023 earthquake. Consequently, revitalization efforts should combine infrastructure investments with social and demographic measures tailored to local conditions.

To sum up, revitalization is an effective tool for improving the residential attractiveness of cities; however, its effectiveness depends on the involvement of residents, the coherence of urban planning, and the consideration of local needs. Measures taken in this regard can be a significant factor in increasing residential attractiveness. In the case of Wrocław, the high residential attractiveness indicators are consistent with the findings of Mouratidis (2021), who indicates that the quality of public spaces, the availability of infrastructure and the development of green spaces are among the most important determinants of resident satisfaction. At the same time, Łódź's lower scores confirm the observations of Roberts & Sykes (2020), according to whom even advanced regeneration projects do not guarantee an improvement in residential attractiveness if they are not accompanied by measures to curb depopulation and social exclusion.

Interesting results were also obtained for Turkish cities. The latest research on housing regeneration emphasizes the importance of integrating infrastructure, social and environmental measures to achieve sustainable development outcomes (Chin et al., 2025). In each of the cities analyzed, regeneration initiatives have contributed to improving living conditions and stimulating interest among investors and residents. At the same time, the analysis revealed the local specificity of revitalization projects, resulting from differing historical, cultural and political contexts in Poland and Turkey. Turkish cities require strategies that take migration and conflict into account, whilst Polish cities focus on managing post-industrial and urban transformation. Undoubtedly, therefore, revitalization strategies must be tailored to the specific challenges and resources of each city, thereby maximizing social and economic outcomes. Investment in infrastructure, public space and the protection of cultural heritage are key factors influencing the effectiveness of revitalization projects. The success of regeneration depends on the ability to combine social, economic and environmental objectives into long-term, coherent actions. The analysis showed that the effectiveness of regeneration does not depend solely on the scale of infrastructure investment. In both Poland and Turkey, social factors are of key importance, including housing availability, educational attainment, the quality of public spaces and the preservation of local identity.

These findings are consistent with the concept of residential attractiveness, understood as a city's ability to attract and retain residents through a high quality of life and favorable housing conditions (Mouratidis & Yiannakou, 2022). The revitalization successes of the cities analyzed may form the foundation for further development and for addressing contemporary demographic and urban challenges. At the same time, the analysis confirms the need for further research into the relationships between revitalization processes and residential attractiveness, particularly in the context of cities operating under different social and cultural conditions. This partially fills the identified research gap concerning the comparative assessment of the impact of regeneration on residential attractiveness in cities of Central and Eastern Europe and the

Middle East. The cities under study can effectively utilize their existing revitalization successes as a foundation for further development and for addressing demographic and urban challenges. The findings of this study will contribute to a better understanding of the mechanisms of urban revitalization and may serve as a basis for the development of more effective urban policy.

In summary, the recommendations formulated herein represent an original analytical contribution derived directly from the multi-criteria evaluation of urban revitalization trajectories in Poland and Turkey. By systematically aligning empirical MCDA outputs – spanning infrastructural modernization, demographic balance, and environmental quality – with the broader theoretical discourse on territorial competitiveness and residential attractiveness, this study bridges the gap between quantitative policy evaluation and context-sensitive spatial strategy. Consequently, the proposed intervention pathways serve not merely as contextualized solutions for the studied municipalities, but as transferable, policy-relevant frameworks capable of guiding sustainable urban regeneration across contrasting socio-institutional and post-disaster operational environments.

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