THE LOCAL POPULATION'S PERCEPTION OF URBAN GREEN SPACES IN SOUTH-WEST OLTENIA REGION OF ROMANIA

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Abstract. In the current era of accelerated urbanization, urban green spaces are becoming increasingly important elements in the quality of life and health of local communities. The region of South-West Oltenia, with its geographical and cultural specificities, is a territory of interest in terms of its residents' perceptions of urban green spaces. This study investigated and analyzed how residents of this region perceive and value green spaces in their urban environment. By exploring these perceptions, we aimed to gain a deeper understanding of the relationship between the community and the environment to identify possible directions for developing and improving green spaces to meet the needs and preferences of residents. A questionnaire was administered to a representative sample of 100 local residents of a variety of social backgrounds and ages. The questions were designed to assess not only general opinions on green spaces but also specific aspects, such as development potential, contribution to population health, impact on quality of life, and preferences regarding innovative solutions for integrating green spaces into the urban environment. By analyzing the results of this questionnaire, we aimed to obtain a comprehensive understanding of the community's needs and expectations regarding green spaces. This information will serve as a foundation for identifying optimal directions for the development and management of urban green spaces in the South-West Oltenia region in an effort to contribute to a more sustainable and pleasant urban environment for all residents and visitors (tourists).

Keywords: Local population's perception**,** Urban Green Spaces, South-West Oltenia, SPSS, Region.

Rezumat. Percepția populației locale asupra spațiilor verzi urbane în Regiunea Sud-Vest Oltenia a României. În era urbanizării accelerate, spațiile verzi urbane devin elemente cruciale pentru calitatea vieții și sănătatea comunităților locale, în era urbanizării accelerate. Regiunea Sud-Vest Oltenia, cu specificul său geografic și cultural, reprezintă un teritoriu de interes în ceea ce privește percepția locuitorilor asupra spațiilor verzi urbane. Acest studiu va investiga și analiza modul în care rezidenții acestei regiuni percep și prețuiesc spațiile verzi din mediul lor urban. Explorând aceste percepții, ne propunem să obținem o înțelegere mai profundă a relației dintre comunitate și mediu pentru a identifica posibile direcții de dezvoltare și îmbunătățire a spațiilor verzi pentru a răspunde nevoilor și preferințele rezidenților. Un chestionar care acoperă o varietate de medii sociale și vârste va fi administrat unui eșantion reprezentativ de 100 de persoane. Întrebările sunt menite să evalueze nu numai opinii generale despre spațiile verzi, ci și să aprofundeze în aspecte specifice, cum ar fi potențialul de dezvoltare, contribuția la sănătatea populației, impactul asupra calității vieții și preferințele privind soluțiile inovatoare pentru integrarea spațiilor verzi în mediul urban. Prin analiza rezultatelor acestui chestionar, ne propunem să obținem o înțelegere comprehensivă a nevoilor și așteptărilor comunității cu privire la spațiile verzi. Aceste informații vor servi drept temelie pentru identificarea direcțiilor optime pentru dezvoltarea și gestionarea spațiilor verzi urbane din Regiunea Sud-Vest Oltenia, în efortul de a contribui la un mediu urban mai sustenabil și mai plăcut pentru toți locuitorii și vizitatorii (turiștii).

Cuvinte cheie: Percepția populației locale, Spații verzi urbane, Sud-Vest Oltenia, SPSS, Regiune.

INTRODUCTION

The share of the world's population living in cities is expected to increase to 66% by 2050 (VEEN et al., 2020). Thus, the global urban population will exceed six billion by 2045. Much of this expected urban growth will occur in countries in developing regions, such as Africa. These countries will therefore face numerous challenges in meeting the needs of their growing urban populations, including housing, infrastructure, transport, energy, and employment, as well as basic services such as education and healthcare (UNITED NATIONS, 2014). Urbanization follows two main trends: (1) increasing building density to create more compact cities and (2) expanding peripheral areas through urban sprawl (POPA et al., 2022; GÂRJOABĂ et al., 2023).

Land cover and land use (LULC) changes are taboo subjects when analyzing the environmental consequences of urban expansion (COCHECI & PETRIȘOR, 2023). According to studies by JOHNSON (2001) and ALBERTI et al. (2020), changes in land cover caused by urbanization affect ecological systems and result in landscape fragmentation and natural landscape degradation. There are other notable effects of land cover and land use changes, such as decreases in local biodiversity (AOUISSI et al., 2021) and the loss of agricultural land (VAN VLIET et al., 2017; PETRIȘOR et al., 2020; GRIGORESCU et al., 2021).

According to CHEN et al. (2022), visitor satisfaction with urban green spaces is extremely useful for planning the sustainable urban and peri-urban development of a well-defined geographical space or territory and can simultaneously increase people's awareness of environmental protection and psychological well-being. Urban and peri-urban ecosystems, represented by the ecosystem services provided in urban and peri-urban areas by green infrastructure (GI) (CREȚAN et al., 2024), including trees, parks, street vegetation, green gardens, botanical gardens, green roofs, and wetlands or lakes (BOLUND & HUNHAMMAR, 1999; HAASE et al., 2014), are subject to constant human pressure as a result of accelerated global urbanization in the 21st century, population growth, and societal challenges, such as the emergence of the SARS-CoV-2 (COVID-19) virus (RICHARDS & THOMPSON, 2019; GAVRILIDIS et al., 2020; LEGUTKO-KOBUS et al., 2023; PETRIȘOR et al., 2021; RUSSO & CIRELLA, 2023).

As a result, ecosystem services play an extremely crucial role in promoting sustainability and well-being in cities and in influencing their development regions (RUSSO et al., 2017; PAN et al., 2021). Moreover, the use of urban green spaces (UGSs), including parks, gardens, and green roofs, within the Craiova Municipality and the South-West Oltenia region can facilitate the removal of atmospheric pollutants and improve air quality, thus reducing the negative effects on population health associated with exposure to pollutants (KRUIZE et al., 2019; JANG-HWAN et al., 2020; LANGEMEYER et al., 2020; BERGLIHN & GÓMEZ-BAGGETHUN, 2021; DIENER & MUDU, 2021; DUDEK et al., 2022; HEGETSCHWEILER et al., 2022; WANG et al., 2022; WANG et al., 2022).

In the context of this research, according to BRESSANE et al. (2024), urban green spaces (UGSs) "are spaces accessible to the local population, but also to visitors (tourists), in urban and peri-urban areas, which are predominantly covered by vegetation and are intended for recreational, ecological, aesthetic and health-promoting functions". Green spaces also represent a basic component of urban green infrastructure (UGI) (STOIA et al., 2020). Urban green space ensures local and regional biodiversity and thus offers the resident population an opportunity to connect with the environment: nature (DOS SANTOS et al., 2021). Therefore, the pandemic caused by SARS-CoV-2 (COVID-19) has drawn public attention to living conditions related to housing, the population's access to green spaces near the neighborhood, and opportunities to participate in recreational and leisure activities (RICE et al., 2020; TANSIL et al., 2022; CIESIELSKI et al., 2023; DRĂGULEASA et al., 2024a; TACZANOWSKA et al., 2024).

According to POPESCU et al. (2024), artificial intelligence technologies are being increasingly used in urban green infrastructure (GI) planning to find the best solutions to minimize the effects of climate change in large cities. Urban plans represent the main tool for urban spatial planning (SLAVE et al., 2023; PETRIȘOR et al., 2025). Among green infrastructure elements, ecological corridors are explicitly mentioned in official documents on protected natural areas, biodiversity, climate change, the Carpathian Convention, and the National Development Plan 2007-2013 developed in 2005 (POPESCU & PETRIȘOR, 2021). This research aimed to explore in detail the local population's perception of urban green spaces.

MATERIALS AND METHODOLOGY

Field of study. The South-West Oltenia development region mainly includes the traditional counties (Fig. 1) that formed the basis of the political and administrative entity of Romania—Oltenia (ERDELI & CUCU., 2007, p. 402; IONUȘ et al., 2015). The South-West Oltenia region comprises a complex mosaic of green spaces in an extremely varied urban landscape, stretching from high-density urban cores to smaller peri-urban areas.

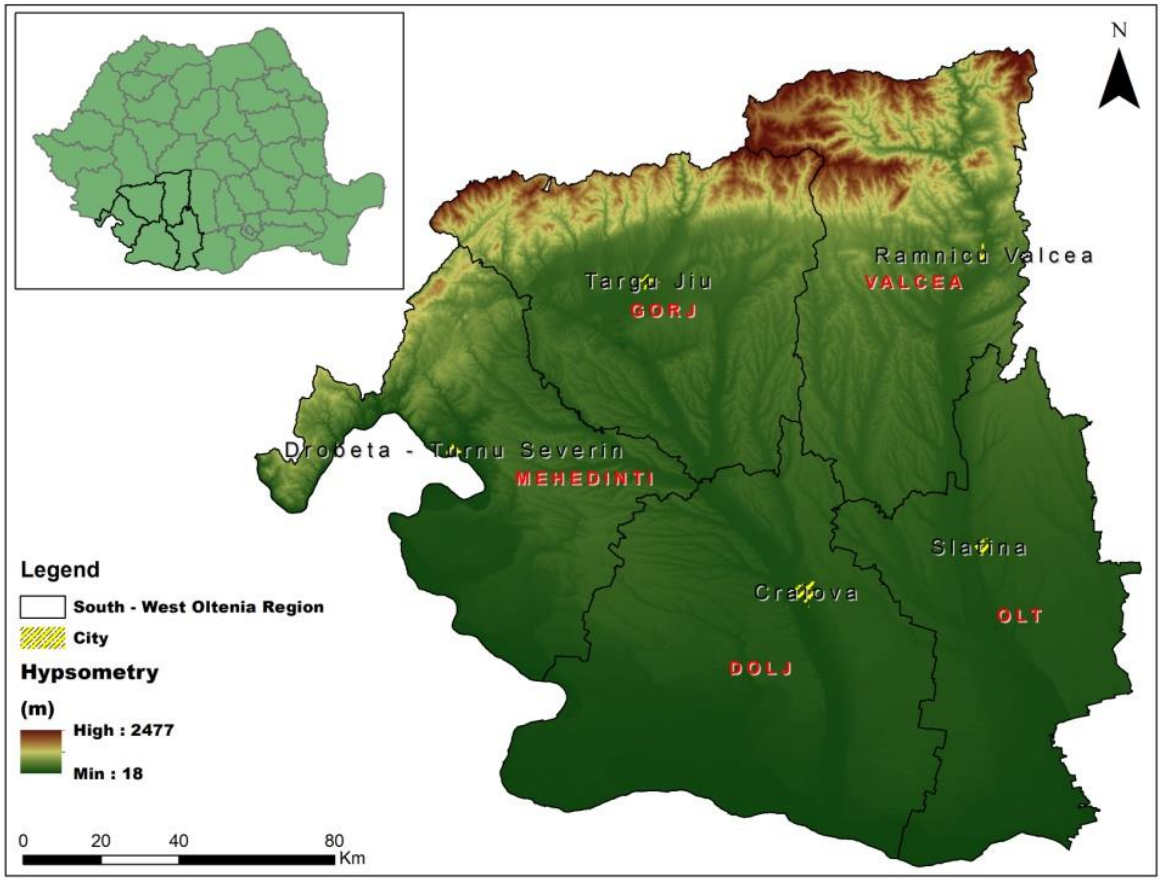

Figure 1. The geographical location of the counties of the South-West Oltenia region at national level.
Source: data processed by authors in ArcGIS 10.7.2

Methods, research hypotheses, source and collection of statistical data, and research questions. In this research, the methodological approach was based on the administration of a structured questionnaire to a sample of 100 people from the South-West Oltenia region. The main objective was to assess residents' perceptions of urban green spaces, identify the factors influencing these perceptions, and highlight relevant trends for sustainable urban development.

A quantitative approach was applied to examine the opinions of residents on urban green spaces in the South-West Oltenia region, Romania. Data were collected between 29.08.2022 and 09.09.2022 using an online survey.

For data processing, specific statistical techniques were used, designed to highlight significant correlations, differences, and influences between the analyzed variables. The collected data were processed using the SPSS program (version 15.0), and the analysis focused on the methodological directions described below.

The research used several statistical methods, each selected depending on the specifics of the hypotheses formulated and the nature of the available data. The methods included a t-test for independent samples, ANOVA, Chi-Square test, Pearson correlation, and regression analysis. These methods were selected to highlight relationships, differences, or influences between socio-demographic variables and respondents' perceptions of urban green spaces.

ANOVA was used to compare means between multiple groups (DRĂGULEASA et al., 2024b) in order to assess statistically significant differences. This method is appropriate when analyzing the relationship between a categorical variable (such as education level or income) and a continuous dependent variable (such as the perception of the quality of green spaces). The null hypothesis states that all means are equal, and its rejection indicates the existence of significant differences between groups (TABACHNICK & FIDELL, 2019).

The Chi-Square (χ^2) test was applied to examine associations between categorical variables, such as the gender of the respondents and their perception of the potential for capitalizing on green spaces. This method compares observed with expected frequencies and identifies whether there is a statistically significant relationship between the analyzed variables. This method is particularly suitable for nominal or ordinal data (AGRESTI, 2013; DESCULȚU GRIGORE et al., 2024).

Pearson correlation was used to measure the strength and direction of the linear relationship between two continuous variables (MAZILU et al., 2023), such as the importance given to the development of green spaces and the appreciation of their quality. The Pearson coefficient varies between -1 and +1 (DRĂGULEASA et al., 2023b), and the statistical significance of the relationship is tested to assess whether it can be generalized to the entire population (DANCEY & REIDY, 2007).

Regression analysis was used to investigate the relationship between one or more independent variables (predictors) and a continuous dependent variable, such as the perception of the potential for the capitalization of green spaces. The simple linear regression model used is expressed by the following equation:

$$Y = \beta_0 + \beta_1 X + \epsilon$$

where Y is the dependent variable, X is the predictor, β_0 is the intercept, β_1 is the regression coefficient, and ϵ is the error.

This analysis was used to quantify the influence of predictors on the analyzed variables and determine the statistical significance of the identified relationships (FIELD, 2018).

ArcMap 10.7.2 software is useful as a means of spatio-temporal representation (Fig. 1) using a Geographic Information System (DRĂGULEASA et al., 2023a; DRAGAN et al., 2024; ROTARU et al., 2024). "GIS offer the possibility of obtaining an awareness of different situations that are analyzed and investigated in realtime over a certain spatial scope by researchers (BATTY, 2010; ROTARU et al., 2023; DRĂGULEASA et al., 2025)." According to TACHE et al. (2023), "GIS models are widely used tools for designing ecological corridors, and low-cost modeling allows testing through empirical studies."

Hypotheses constitute the fundamental premises or assumptions of the research, providing a direction and structure for further investigation (Table 1). They are testable statements or assertions that are to be evaluated and analyzed within the study in order to obtain the results of interest. In this context, we will explore the process of defining our hypotheses, which focus on the perceptions of residents of the South-West Oltenia region regarding urban green spaces.

In the scientific research process, defining research questions is an essential and strategic step in establishing the direction and objectives of a study. Research questions guide researchers in their efforts to investigate, understand, and explore phenomena, processes, or relationships between variables in a systematic and rigorous manner. These questions serve as a starting point for developing hypotheses, collecting data, analyzing results, and ultimately formulating conclusions and recommendations.

Is there a significant correlation between the level of importance given to the development of green spaces, the appreciation of the quality of these green spaces, and the perception of the potential for the capitalization of green spaces?

This research question explores whether there is a statistical link between how important the development of green spaces is, how their quality is perceived, and how well they can be capitalized. The aim is to analyze whether these three aspects are correlated among local residents.

Is there a significant correlation between residents' monthly net income, their perception of green development solutions, and their perception of the potential for green space utilization?

Table 1. Research hypotheses.

Hypothesis No.	Hypothesis	Variables used	Statistical method used
H1	There is a significant correlation between the level of importance given to the development of green spaces, the appreciation of the quality of these green spaces, and the perception of the potential for the capitalization of green spaces.	- Importance of developing green spaces; - Appreciation of the quality of green spaces; - Perception of the potential for the capitalization of green spaces.	Correlation analysis
H2	There is a significant correlation between residents' net monthly income, their perception of appropriate green solutions for development, and their perception of the potential for capitalizing on green spaces.	- Monthly net income - Perception of green solutions for development; - Perception of the potential for the capitalization of green spaces.	Correlation analysis
H3	There is a significant correlation between the age range of residents and their perception of the smart city as a model of urban development.	- Age range; - The smart city as a model of urban development.	Correlation analysis
H4	Monthly net income has a positive impact on the importance of tourist attractions in Nicolae Romanescu Park.	- Net monthly income; - Importance of tourist attractions in Nicolae Romanescu Park.	Regression analysis
H5	Education level influences the perception of strategic objectives for establishing green spaces.	- Education level; - Perception of strategic objectives for establishing green spaces.	Analysis of variance (ANOVA)
H6	There is a difference in perception between genders regarding the potential for capitalizing on green spaces.	- Sex; - Perception of the potential for green spaces.	Chi-Square test
H7	Labor market status, age range, net monthly income, and background positively influence the perception of the potential for the capitalization of green spaces.	- Labor market status; - Age range; - Net monthly income; - Background; - Perception of the potential for the capitalization of green spaces.	Regression analysis
H8	The environment of origin, labor market status, and net monthly income have an impact on the appreciation of the quality of green spaces.	- The environment of origin; - Labor market status; - Net monthly income; - Appreciation of the quality of green spaces.	Regression analysis

Source: Data processed by the authors using Microsoft Excel 2010.

This research question investigates whether local residents' monthly net income is associated with their perception of green development solutions and the potential for green space utilization. The aim is to assess whether there is a significant correlation between these variables.

Is there a significant correlation between the age range of residents and their perception of the smart city as a model of urban development?

This research question focuses on the possibility that age influences local residents' perceptions of the concept of a "smart city" as a model of urban development. The aim is to determine whether there is a significant correlation between age range and this perception.

Does monthly net income have a positive impact on the importance of tourist attractions in Nicolae Romanescu Park?

This research question explores whether local residents' monthly net income positively influences the importance given to tourist attractions in Nicolae Romanescu Park. The goal is to determine whether monthly income has a significant impact on this perception.

Does education level influence perceptions of strategic objectives for establishing green spaces?

This research question examines whether local residents' education level affects how they perceive strategic objectives for establishing green spaces. The aim is to determine whether there are significant differences in perception between residents with different levels of education.

Is there a gender difference in the perception of the potential for green spaces?

This research question explores whether men and women significantly differ in their perception of the potential for green spaces. The aim is to assess whether gender influences the perception of this potential.

Do labor market status, age range, net monthly income, and background positively influence the perception of the potential for the capitalization of green spaces?

This research question focuses on investigating the positive impact of labor market status, age range, net monthly income, and background on the perception of the potential for the capitalization of green spaces. The aim is to assess the influence of these factors on this perception.

Do background, labor market status, and net monthly income have an impact on the appreciation of the quality of green spaces?

This research question analyzes whether background, labor market status, and net monthly income affect how residents appreciate the quality of green spaces. The goal is to determine whether these variables have a significant impact on the appreciation of the quality of green spaces.

RESULTS AND DISCUSSION

Socio-Demographic Characteristics of Residents. In the sample of respondents, the percentage of females is higher than that of males, with 35 male respondents (35% of the total respondents) and 65 female respondents (65% of the total respondents).

The majority of respondents come from urban areas, while fewer come from rural areas, with 81 respondents (81% of the total respondents) from urban areas and 19 (19% of the total respondents) from rural areas.

The distribution of respondents by age is as follows: 44 respondents (44% of the total respondents) fall into the age range of 18-29 years, 14 respondents (14% of the total respondents) are 30-39 years old, 26 respondents (26% of the total respondents) are 40-49 years old, 12 respondents (12% of the total respondents) are 50-59 years old, and 4 respondents (4% of the total respondents) are "over 60 years" of age. This data were used to analyze perceptions and responses by age groups.

In terms of education, 5 respondents (5% of the total respondents) have completed high school, and 95 respondents (95% of the total respondents) have completed higher education (bachelor, master, doctorate). The data show that most respondents have a higher education level, which may influence their perceptions and responses in the research.

In terms of employment, 33 respondents (33% of the total respondents) are students, 64 respondents (64% of the total respondents) are employees, and 3 respondents (3% of the total respondents) are retired. No respondents in this research sample are unemployed.

The data show that the majority of respondents in this sample are employees or students, with a small number of residents who are retired or unemployed. This aspect may influence how respondents perceive the research topic and may provide different perspectives depending on their status in the labor market.

Among respondents, 33 (33% of all respondents) have a monthly net income below RON 1200, 29 respondents (29% of all respondents) have a monthly net income between RON 1201 and 2600, 17 respondents (17% of all respondents) have a monthly net income between RON 2601 and RON 4000, and 21 respondents (21% of all respondents) have a monthly net income greater than RON 4000.

These data show that the respondents have various levels of monthly net income, with the majority having moderate or low incomes but a significant number having higher incomes. This aspect may influence their perceptions of the research topic and may provide different perspectives depending on income level.

Analysis of the questionnaire results. The varied questions in the questionnaire and the responses provided by the respondents provide us with a comprehensive picture of how they perceive the importance of green spaces, how they value them, and how they perceive the impact of these spaces on the quality of urban life. In addition, the analysis of the questionnaire results helps us identify significant trends and differences in the answers provided by subgroups of respondents, which allows us to draw relevant conclusions and formulate useful recommendations for urban planning and development in this specific region.

Next, we will explore and interpret the collected data, highlighting key observations and their implications. This analysis process will provide detailed insights into residents' perceptions of urban green spaces and will bring to the fore essential aspects for decision-making within the framework of sustainable urban development.

Do urban green spaces represent opportunities for rest and recreation? This question asks the respondents about their perceptions of the role of green spaces in providing opportunities for rest and recreation. The respondents could choose "Yes," "No," or "I don't think so."

The graph in Figure 2 reflects the results for the question, "Do urban green spaces provide opportunities for rest and recreation?"

According to Figure 2, 100% of the respondents chose the option "Yes"; 0% of respondents chose the option "No" or "I don't think so".

All respondents (100%), a clear majority, indicated that they consider urban green spaces opportunities for rest and recreation. No one chose the option "No" or "I don't think so".

On a scale of 1 to 5, do you consider rest and recreation spaces (places designed for socializing, tennis courts, handball, fitness equipment, chess, bike paths, etc.) a very important point in the development of urban green spaces? This question measures the degree of importance given to rest and recreation spaces in the development of green spaces. The respondents could give a score from 1 (low importance) to 5 (high importance).

The graph in Figure 3 reflects how the respondents evaluated rest and recreation spaces in terms of the development of urban green spaces on a scale from 1 to 5: 4 respondents gave a score of 2 (2% of all respondents), 7 respondents gave a score of 3 (7% of all respondents), 29 respondents gave a score of 4 (29% of all respondents), and 60 respondents gave a score of 5 (60% of all respondents).

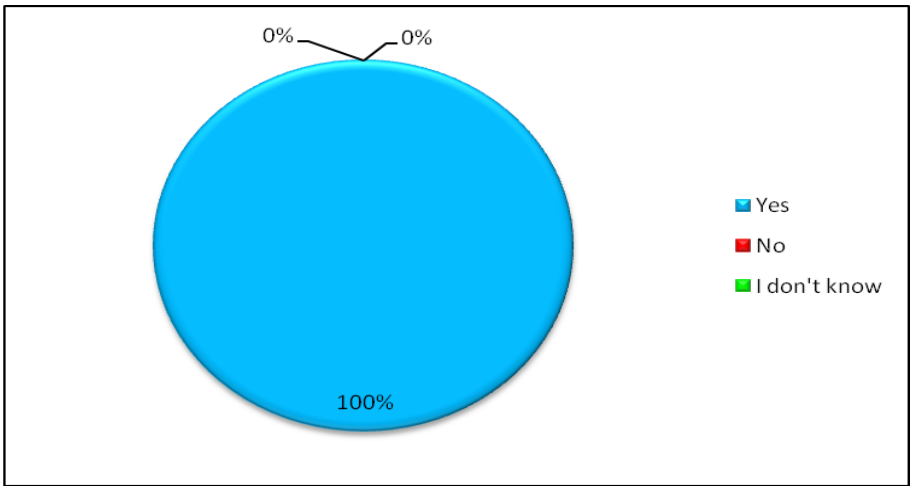

Figure 2. Do urban green spaces provide opportunities for rest and recreation?
Source: Data processed by the authors using Microsoft Excel 2010.

The majority of respondents (89% of the total) rated rest and recreation spaces within urban green spaces as important, giving scores of 4 and 5 on a scale of 1 to 5.

A small number of respondents (9%) gave a score of 3, indicating that they consider these spaces to be moderately important for the development of green spaces.

A very small number of respondents (2%) gave a score of 2, indicating that they consider these spaces to be of little importance for the development of green spaces.

In general, the results suggest that the majority of respondents perceive rest and recreation spaces as a significant aspect in the development of urban green spaces, giving high scores on the scale.

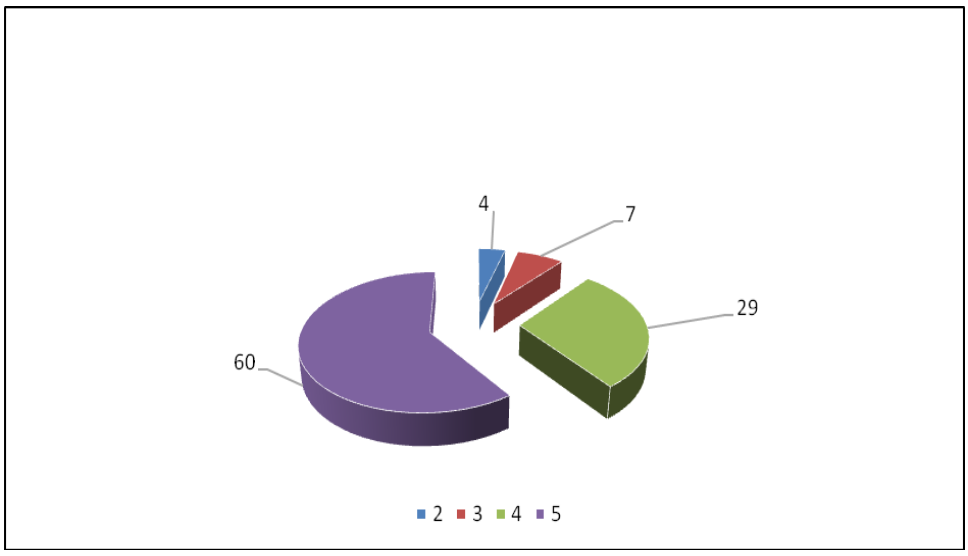

Figure 3. Do you consider rest and recreation spaces an important factor in the development of urban green spaces?
Source: Data processed by the authors using Microsoft Excel 2010.

Which of the following characteristics of the aesthetic, social, and environmental image represent strategic objectives for the establishment of new green spaces? In this question, the respondents were asked to select from a list of characteristics considered to be strategic objectives for the creation of new urban green spaces. Each option was assigned a number for further analysis.

The graph in Figure 4 reflects the respondents' preferences regarding the characteristics considered strategic objectives for the establishment of new green spaces.

The data show that landscape architecture received 21 votes (21% of the total votes), accessibility to green spaces received 23 votes (23% of the total votes), the quality of urban green spaces received 14 votes (14% of the total votes), rest, recreation and entertainment facilities received 28 votes (28% of the total votes), and visual appearance received 14 votes (14% of the total votes).

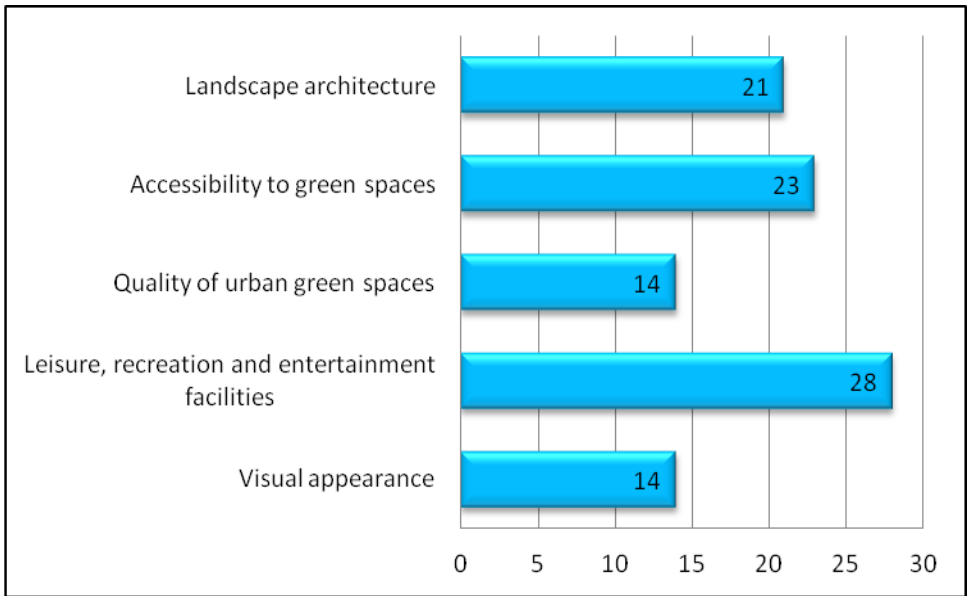

Figure 4. Which of the following characteristics of the aesthetic, social, and environmental image represent strategic objectives for the establishment of new green spaces? Source: Data processed by the authors using Microsoft Excel 2010.

On a scale of 1 to 6, which of the following benefits to cities has the potential for capitalizing on urban green spaces? In this question, the respondents were asked to evaluate the potential for capitalizing on the various benefits of green spaces, giving scores from 1 to 6.

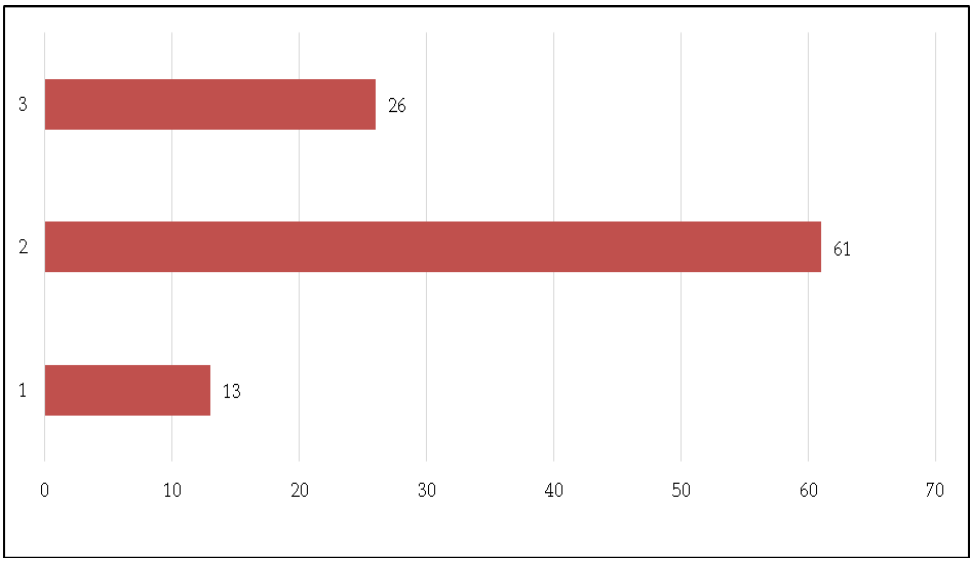

Figure 5. On a scale of 1 to 6, which of the following benefits to cities has the potential for capitalizing on urban green spaces? Source: Data processed by the authors using Microsoft Excel 2010.

To assess the perception of the potential for capitalizing on urban green spaces, the respondents were asked to give a score, ranging from 1 to 6, to each benefit provided to cities by these green spaces. The distribution of the scores given by respondents was divided into three ranges (Fig. 5). Range 1 (scores between 1 and 6) had a total of 13 respondents. These respondents gave lower scores, indicating that they consider the benefits of urban green spaces to have a low potential for capitalization. Range 2 (scores between 7 and 12) had the largest number of respondents, 61, who assessed the benefits as having an average potential for capitalization. Range 3 (scores between 13 and 18) had 26 respondents. These respondents gave higher scores, suggesting that they see the benefits provided by urban green spaces as having a high potential for capitalization.

Therefore, the distribution of scores indicates that the majority of respondents (represented by range 2) consider urban green spaces to have a moderate potential for capitalization, while a smaller number of respondents (represented by range 3) consider them to have a high potential for capitalization. There is also a smaller group of respondents (represented by range 1) who see a low potential for the capitalization of urban green spaces.

Does the smart city represent a model for innovative development of urban spaces? This question aims to assess local respondents' perceptions of the concept of a "smart city" as an urban development model. Respondents could choose "Yes," "No," "I don't know," or "Maybe."

The graph in Figure 6 reflects the respondents' opinions on whether the smart city represents a model of the innovative development of urban spaces. The data show that 89 respondents (89% of the total votes) answered "yes", indicating that they consider the smart city to be a model of innovative development of urban spaces; only 1 respondent (1% of the total votes) answered "no", indicating that they do not consider the smart city to be an innovative model of urban development; 6 respondents (6% of the total votes) answered "I don't know", indicating their uncertainty on this aspect; and 4 respondents (4% of the total votes) answered "maybe", which suggests a certain ambiguity in their opinion on this development model.

This shows that the majority of respondents (89%) see the smart city as a model of innovative development for urban spaces, while a very small percentage (1%) disagree with this perspective. A smaller number of respondents are in the uncertainty zone (6%) or believe that there may be innovation but are not sure (4%).

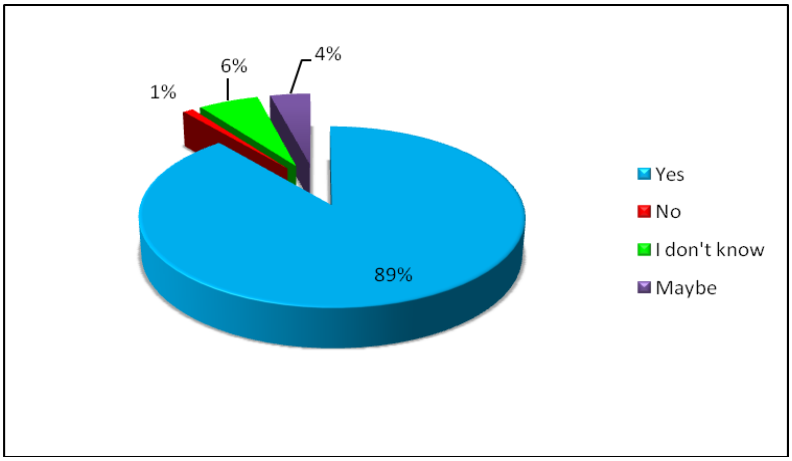

Figure 6. Does the smart city represent a model for the innovative development of urban spaces?
Source: Data processed by the authors using Microsoft Excel 2010.

Which of the following categories of green solutions do you consider appropriate for the development and valorization of urban green spaces? For this question, the respondents selected from a list of categories of green solutions that they considered suitable for the development and valorization of urban green spaces.

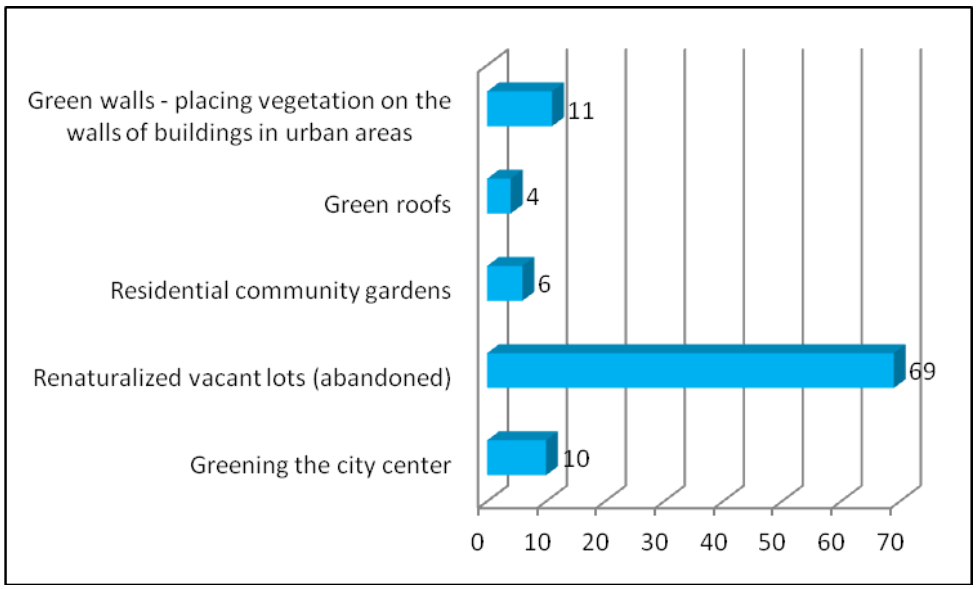

Figure 7. Which of the following categories of green solutions do you consider appropriate for the development and valorization of urban green spaces? Source: Data processed by the authors using Microsoft Excel 2010.

The graph in Figure 7 reflects the respondents' preferences regarding the categories of green solutions considered appropriate for the development and valorization of urban green spaces. The data show 11 votes (11% of the total votes) for green walls—placing vegetation on the walls of buildings in urban areas; 4 votes (4% of the total votes) for green

roofs; 6 votes (6% of the total votes) for residential community gardens; the most votes, i.e., 69 (69% of the total votes), for renatured (abandoned) vacant land; and 10 votes (10% of the total votes) for greening the city center.

These data suggest that the majority of respondents consider reclaimed (abandoned) brownfields to be the most appropriate option for the development and valorization of urban green spaces (69%). Green walls and city center greening are also considered appropriate, but with less support (11% and 10%, respectively). Green roofs and residential community gardens received fewer votes and are considered less appropriate by respondents (4% and 6%, respectively).

On a scale from 1 to 5, how would you rate the quality of urban green spaces in the South-West Oltenia region? This question was used to measure the respondents' perceptions of the quality of urban green spaces in a given region, where they could give grades from 1 (low quality) to 5 (high quality).

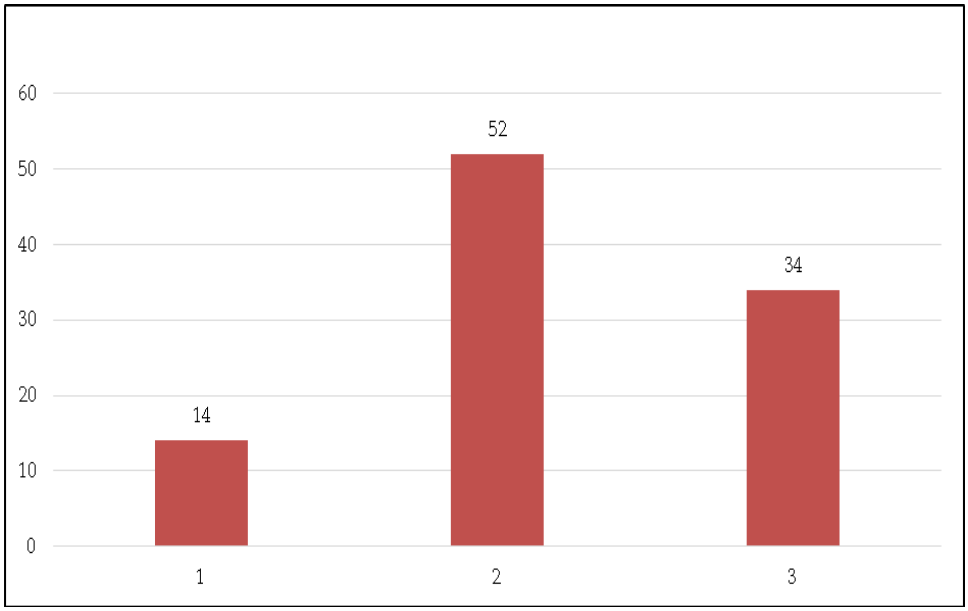

Figure 8. Assessing the quality of urban green spaces in the South-West Oltenia region.
Source: Data processed by the authors using Microsoft Excel 2010.

A rating scale from 1 to 5 was used to measure the respondents' perceptions of the quality of urban green spaces in the five counties of the South-West Oltenia region. Each respondent's individual scores were then summed, reflecting an overall assessment of the quality of urban green spaces in the respective region. The total scores were then grouped into three ranges, each with well-defined lower and upper limits.

Interval 1 (total scores between 5 and 10) represents the opinions of respondents who perceive the quality of urban green spaces in South-West Oltenia to be low.

Interval 2 (total scores between 11 and 17) reflects the opinions of respondents who consider the quality of urban green spaces in the region to be average.

Interval 3 (total scores between 18 and 25) indicates that respondents perceive urban green spaces in South-West Oltenia as having a high potential in terms of quality.

The data reveal that the majority of respondents (52 out of a total of 100) fell into range 2, thus expressing the perception that the urban green spaces in the region are of average quality. In addition (Fig. 8), 34 respondents were in range 3, meaning that they perceive the quality of the urban green spaces in South-West Oltenia to be high, while 14 respondents were in range 1, indicating the perception of these spaces as low-quality.

These results can serve as a basis for the planning and development of urban green spaces in the South-West Oltenia region, taking into account the expectations and perceptions expressed by the respondents regarding the quality of these spaces.

Is the lack of urban green space a factor that affects population health? In response to this question, the respondents assessed whether they believe that the lack of urban green space has an impact on the health of the population, with options of "Yes," "No," or "I don't think so."

The graph in Figure 9 reflects the opinions of the respondents regarding the impact of the lack of urban green space on the health of the population. The data show that 95 respondents (95% of all respondents) agreed that the lack of urban green space is a factor that affects the health of the population. No respondents answered "No" to this question, while five respondents (5% of all respondents) were undecided and chose the option "I don't think so."

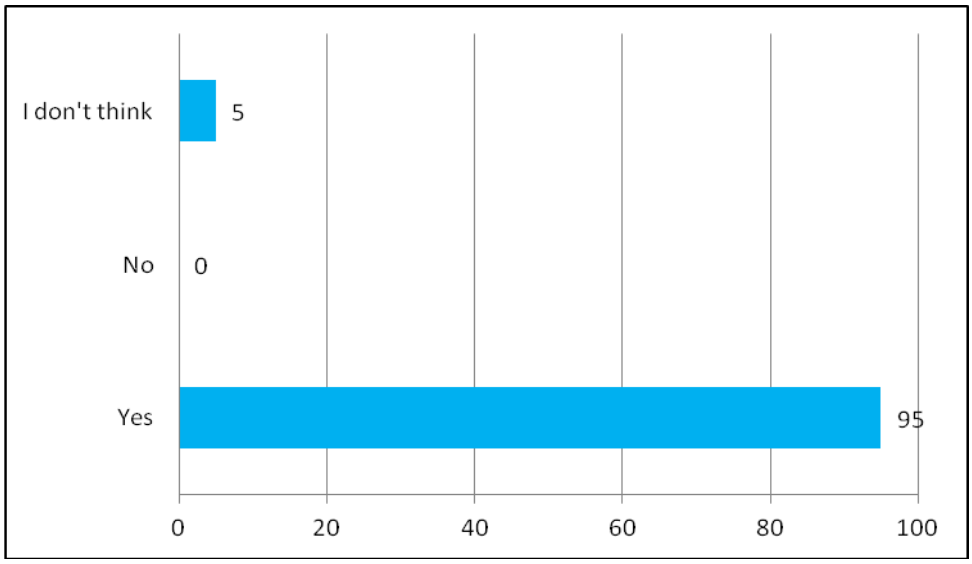

Figure 9. Is the lack of urban green space a factor that affects population health?
Source: Data processed by the authors using Microsoft Excel 2010.

In conclusion, the majority of respondents (95%) believe that the lack of urban green space has a negative impact on the health of the population, while a small proportion of respondents (5%) remain undecided on this issue.

Do you consider Nicolae Romanescu Park the largest green space area in the Oltenia region? Here, the respondents were asked to decide whether they consider Nicolae Romanescu Park the largest green space area in a given region, with response options of "Yes," "No," or "I don't know."

The graph in Figure 10 reflects the opinions of the respondents on whether they consider Nicolae Romanescu Park to be the largest green space area in the Oltenia region. The data show that 85 respondents (85% of the total respondents) consider Nicolae Romanescu Park to be the largest green space area in the Oltenia region; 7 respondents (7% of the total respondents) do not consider Nicolae Romanescu Park to be the largest green space area in the region; and 8 respondents (8% of the total respondents) do not know or are undecided.

In conclusion, the majority of respondents (85%) consider Nicolae Romanescu Park to be the largest green space area in the Oltenia region, while a smaller number of respondents (7%) disagree with this statement, and others (8%) do not have a clear opinion in this regard.

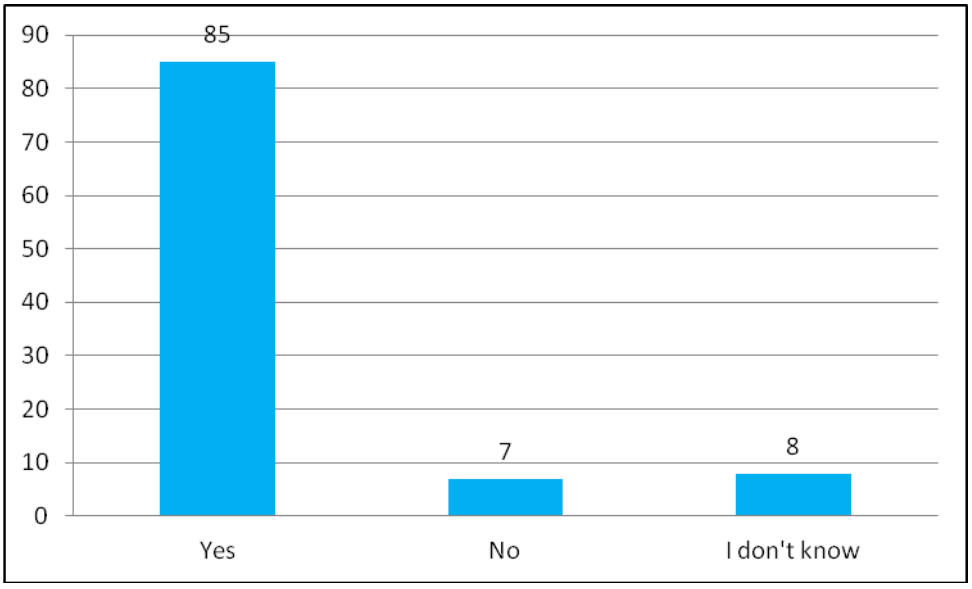

Figure 10. Do you consider Nicolae Romanescu Park the largest green space area in the Oltenia region?
Source: Data processed by the authors using Microsoft Excel 2010.

Which of the tourist attractions of Nicolae Romanescu Park do you consider to be the most important? Assign a number to each attraction (on a scale from 1 to 6). The respondents were asked to give a score from 1 to 6 to each tourist attraction in Nicolae Romanescu Park.

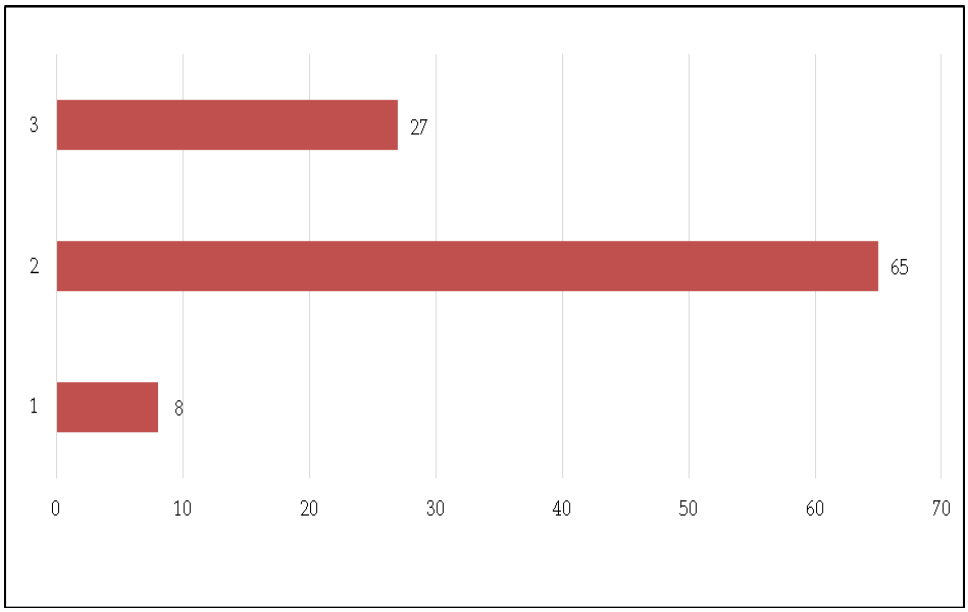

Figure 11. Which of the tourist attractions of Nicolae Romanescu Park do you consider to be the most important? Assign a number to each attraction (on a scale from 1 to 6). Source: Data processed by the authors using Microsoft Excel 2010.

This survey question was asked to assess the respondents' perceptions of the importance of the tourist attractions in Nicolae Romanescu Park using a 6-point rating scale for each attraction. After data collection, a total score was calculated for each respondent by summing the scores given for the six attractions. The total score reflects the overall assessment of the relevance of the tourist attractions in the eyes of each respondent. These total scores were then grouped into three ranges to quantify the degree of importance that respondents attached to the tourist attractions.

Interval 1 (total scores between 6 and 15) represents respondents who consider the attractions in Nicolae Romanescu Park to have a low potential for capitalization and do not believe them to be of significant importance in the context of the development of the city of Craiova.

Interval 2 (total scores between 16 and 25) represents respondents who perceive the tourist attractions to have an average potential for capitalization and believe them to be important for attracting tourists and developing local tourism.

Interval 3 (total scores between 26 and 36) represents respondents who consider the attractions in Nicolae Romanescu Park to have a high potential for capitalization and believe them to be of significant importance in attracting tourists and promoting the city of Craiova.

Figure 11 shows the distribution of the results across these ranges, which reveals that most respondents (65 out of 100) considered the attractions to have an average potential for capitalization (range 2), while 27 respondents considered the potential to be high (range 3), and 8 respondents considered it to be low (range 1).

These findings can serve as a basis for planning and development decisions for tourist attractions in Nicolae Romanescu Park, given the perception and expectations expressed by respondents regarding the importance of these attractions for the city of Craiova.

The city of Craiova (Figure 12), representing 1 of the 22 metropolitan areas in Romania, is among the most populated urban areas in the South-West Oltenia region (280,834 people, according to the National Institute of Statistics in Romania (NIS), on January 1, 2025). According to BĂDIȚĂ (2013a), "Craiova is currently considered in terms of functional hierarchy a "nodal center" or "urban growth pole of Oltenia" (BĂDIȚĂ, 2012a) – which is represented by large cities with a sphere of influence between 60 and 100 km". The studied city is an old center characterized by trade, administrative functions (the seat of Dolj county), industrial and cultural functions, i.e., the organization of festivals and concerts (organization of the Christmas Fair and the Easter Fair), and political entities, with a strong influence in its suburban area. Therefore, the city is an area with a complex functionality (BĂDIȚĂ, 2012b; BĂDIȚĂ, 2013b). The city of Craiova is located 229 km from the capital of Romania (Bucharest) and 334 km from Timișoara, the largest city in western Romania (NIȚĂ, 2021).

Data analysis and correlations in SPSS. In this section, we will explore the results obtained from the data analysis and identify significant trends, patterns, and correlations. We will illustrate the perceptions of the majority of respondents regarding urban green spaces, and we will investigate the influences of different variables, such as net monthly income, level of education, and background, on these perceptions. The analysis of the results will help us answer the research questions and test the hypotheses formulated in the initial stage of the study.

The analysis of the results represents an essential stage in the process of understanding the dynamics of the perception of urban green spaces. The results will contribute to the development of a clearer framework for future decisions and actions regarding urban development and green space management in the South-West Oltenia region and can be applied in other similar urban contexts.

H1. There is a significant correlation between the level of importance given to the development of green spaces, the appreciation of the quality of these green spaces, and the perception of the potential for the capitalization of green spaces.

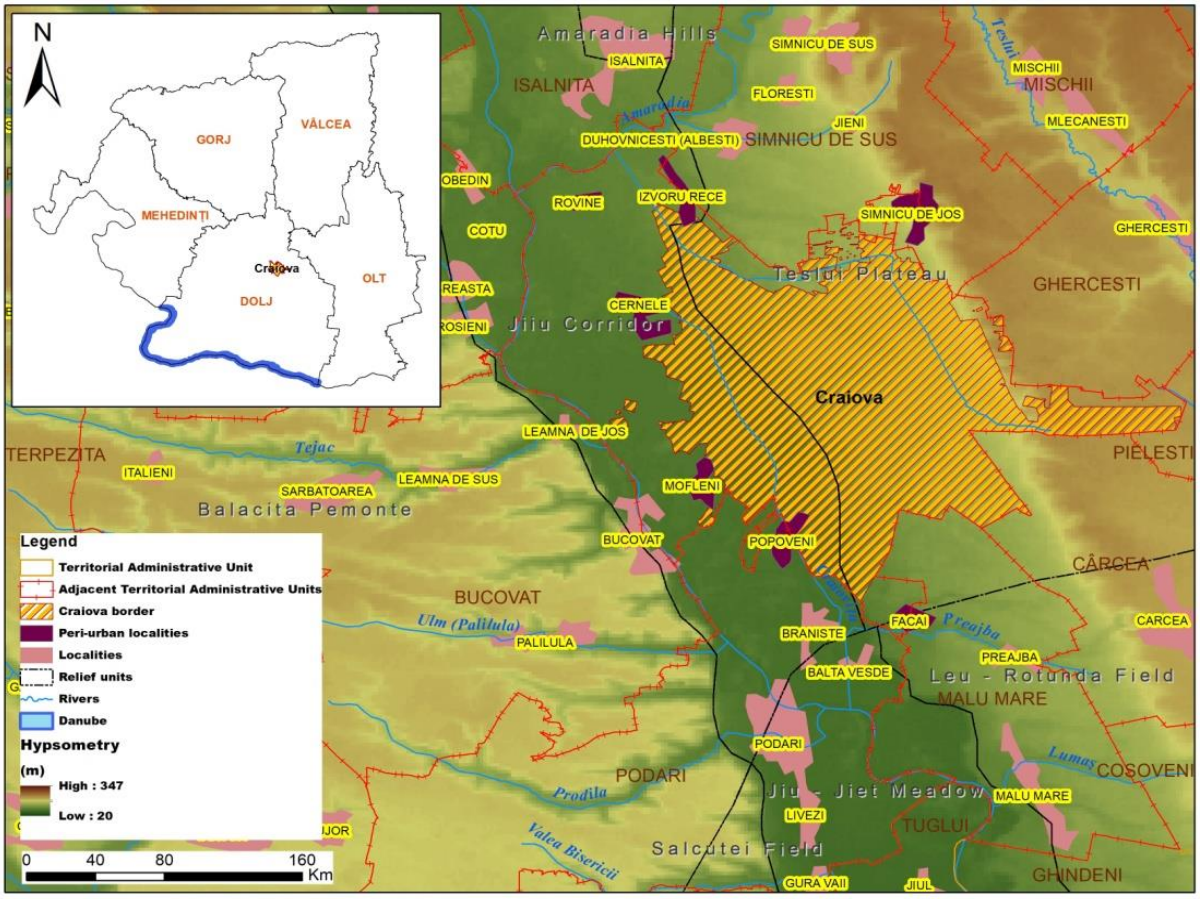

Figure 12. Location of the Craiova municipality in local and regional contexts. Source: Adapted from DRĂGULEASA, 2023c.

Table 2. Correlation analysis regarding green spaces.

		The importance of developing green spaces	**Assessment of the quality of green spaces**	**Perception of the potential for capitalizing on green spaces**
The importance of developing green spaces	Pearson correlation	1	0.266(**)	0.251(*)
	Sig. (2-tailed)		0.007	0.012
	N	100	100	100
Assessment of the quality of green spaces	Pearson correlation	0.266(**)	1	0.331(**)
	Sig. (2-tailed)	0.007		0.001
	N	100	100	100
Perception of the potential for capitalizing on green spaces	Pearson correlation	0.251(*)	0.331(**)	1
	Sig. (2-tailed)	0.012	0.001	
	N	100	100	100

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Source: data processed by the authors using the statistical program SPSS version 15.0.

There is a significant correlation between the level of importance given to the development of green spaces and the appreciation of the quality of these green spaces. The Pearson correlation coefficient is 0.266 (Table 2), which is significant at the 0.01 level (2-tailed). This means that there is a significant positive correlation between the importance given to the development of green spaces and how much these green spaces are appreciated.

There is also a significant correlation between the level of importance given to the development of green spaces and the perception of the potential for the capitalization of these spaces. The Pearson correlation coefficient for these two variables is 0.251, significant at the 0.05 level (2-tailed).

This result suggests that there is a significant positive correlation between the importance given to the development of green spaces and the perception of their potential for capitalization.

In addition, there is a significant correlation between the appreciation of the quality of green spaces and the perception of the potential for the capitalization of these spaces. The Pearson correlation coefficient is 0.331, significant at the 0.01 level (2-tailed). This result indicates that there is a significant positive correlation between how much green spaces are appreciated and the perception of their potential for capitalization.

In conclusion, these results suggest that there are significant positive correlations between the level of importance given to the development of green spaces, the appreciation of the quality of these spaces, and the perception of their potential for capitalization. In other words, residents who attach greater importance to the development of green spaces tend to better appreciate the quality of these spaces and see greater potential for their capitalization.

H2. There is a significant correlation between the net monthly income of residents, their perception of green solutions suitable for development, and their perception of the potential for the capitalization of green spaces.

Table 3. Correlations between net monthly income, the perception of green solutions suitable for development, and the perception of the potential for the capitalization of green spaces.

		Monthly net income	**Perception of timely green solutions for development**	**Perception of the potential for capitalizing on green spaces**
Monthly net income	Pearson correlation	1	-0.216(*)	0.140
	Sig. (2-tailed)		0.031	0.166
	N	100	100	100
Perception of timely green solutions for development	Pearson correlation	-0.216(*)	1	-0.260(**)
	Sig. (2-tailed)	0.031		0.009
	N	100	100	100
Perception of the potential for capitalizing on green spaces	Pearson correlation	0.140	-0.260(**)	1
	Sig. (2-tailed)	0.166	0.009	
	N	100	100	100

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Source: Data processed by the authors using the statistical program SPSS version 15.0.

The correlations between monthly net income, the perception of green solutions for development, and the perception of the potential for the capitalization of green spaces are described below.

The correlation between monthly net income and the perception of green solutions for development is negative and significant at the 0.05 level ($r = -0.216$, $p = 0.031$). This indicates that, in general, people with higher monthly incomes have a lower perception of green solutions for development.

The correlation between monthly net income and the perception of the potential for the capitalization of green spaces is not significant ($r = 0.140$, $p = 0.166$).

The correlation between the perception of green solutions for development and the perception of the potential for the capitalization of green spaces is negative and significant at the 0.01 level ($r = -0.260$, $p = 0.009$). This result suggests that people who have a more favorable perception of green solutions for development have a lower perception of the potential for the capitalization of green spaces (Table 3).

In conclusion, the results indicate a significant correlation between monthly net income and the perception that green solutions are appropriate for development, as well as between the perception of green solutions and the perception of the potential for the capitalization of green spaces. However, the correlation between monthly net income and the perception of the potential for the capitalization of green spaces is not significant. Thus, hypothesis H2 can be partially confirmed, since there is a significant correlation between some of the variables mentioned.

H3. There is a significant correlation between the age range of residents and their perception of the smart city as a model of urban development.

Table 4. Correlation between age range and the perception of the smart city as a model of urban development.

		Age range	**The smart city as a model of urban development**
Age range	Pearson correlation	1	0.237(*)
	Sig. (2-tailed)		0.018
	N	100	100
The smart city as a model of urban development	Pearson correlation	0.237(*)	1
	Sig. (2-tailed)	0.018	
	N	100	100
* Correlation is significant at the 0.05 level (2-tailed).			

Source: Data processed by the authors using the statistical program SPSS version 15.0.

The age range of the residents and their perception of the smart city as a model of urban development have a significant positive correlation, with a Pearson coefficient of 0.237 (Table 4). This result indicates that there is a significant positive relationship between the age of the residents and how they perceive a smart city as a model of urban development.

The p-value (0.018) is lower than the conventional significance level of 0.05, indicating that the correlation is statistically significant.

In conclusion, the results indicate that there is a significant correlation between the age of the residents and their perception of the smart city as a model of urban development.

However, the correlation is positive but moderate, which means that age may have a significant, but not very strong, influence on how people perceive a smart city.

H4. Monthly net income has a positive impact on the importance of tourist attractions in Nicolae Romanescu Park.

Table 5. Linear regression for the impact of monthly net income on the importance of tourist attractions in Nicolae Romanescu Park.

Exemplary Model	**R**	**R-Squared**	**Adjusted R-Squared**	**Std. Error of the Estimate**
1	0.302(a)	0.091	0.082	0.540
(a) Predictors: (Constant), monthly net income.				

Source: data processed by the authors using the statistical program SPSS version 15.0.

R represents the multiple correlation coefficient between predictors (in this case, only monthly net income) and the dependent variable (the importance of tourist attractions in Nicolae Romanescu Park). In this case, R is approximately 0.302 (Table 5), indicating a moderate correlation between the predictor (monthly net income) and the dependent variable.

R-squared represents the coefficient of determination and measures the proportion of variation in the dependent variable (the importance of tourist attractions) explained by the regression model. In this case, the R-squared is approximately 0.091, meaning that approximately 9.1% of the variation in the importance of tourist attractions can be explained by monthly net income.

Adjusted R-squared: This is the R-squared adjusted for the number of predictors. In this case, it is approximately 0.082.

The standard error of the estimate is a measure of the average error in predicting the values of the dependent variable by the regression model. In this case, the standard error is approximately 0.540.

These results suggest that monthly net income is moderately correlated with the importance of tourist attractions in Nicolae Romanescu Park, but this predictor explains only a small portion of the variation in importance. Other factors may have a greater influence on the importance given to these tourist attractions.

In the ANOVA, the "Sum of Squares" represents the sum of the variance in the data. For regression, it is decomposed into "Regression" (the variance explained by the regression model) and "Residual" (the variance left unexplained by the regression model). In this case, "Regression" has a value of 2.855 (Table 6), which represents the variance explained by monthly net income in terms of the importance of tourist attractions.

Degrees of freedom (df): This represents the number of degrees of freedom for each component of the ANOVA. The "df" for "Regression" is 1, indicating that there is one predictor (monthly net income) in the model.

Mean Square: For "Regression," the Mean Square represents the average variability explained by the model. In this case, the Mean Square for "Regression" is 2.855.

Table 6. ANOVA for the impact of monthly net income on the importance of tourist attractions in Nicolae Romanescu Park.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.855	1	2.855	9.806	0.002(a)
	Residual	28.535	98	0.291		
	Total	31.390	99			
(a) Predictors: (Constant), monthly net income. (b) Dependent variable: The importance of tourist attractions in Nicolae Romanescu Park.						

Source: Data processed by the authors using the statistical program SPSS version 15.0.

F (F-statistic): The F-statistic is a ratio of explained to unexplained variability. In this case, the F-statistic is 9.806, indicating that there is a significant difference in the importance attached to tourist attractions between residents with different monthly net incomes. However, it is important to note that the F-value must be interpreted in the context of the significance level (alpha), which is usually 0.05 or 0.01.

Sig. (p-value): The p-value (significance) is a measure of statistical significance. In this case, the p-value for "Regression" is 0.002 (second column, denoted by "(a)"). This small value indicates that there is a significant difference in the importance of tourist attractions depending on monthly net income.

In conclusion, the ANOVA suggests that monthly net income has a significant impact on the importance of tourist attractions in Nicolae Romanescu Park. The small p-value (0.002) and the significant F-statistic (9.806) indicate a significant difference between groups of residents with different monthly net incomes in terms of their level of importance attributed to tourist attractions in Nicolae Romanescu Park.

Table 7. Regression coefficients related to the impact of monthly net income on the importance of tourist attractions in Nicolae Romanescu Park.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	1.851	0.121		15.323	0.000
	Monthly net income	0.150	0.048	0.302	3.131	0.002
(a) Dependent variable: The importance of tourist attractions in Nicolae Romanescu Park.						

Source: Data processed by the authors using the statistical program SPSS version 15.0.

"Constant": This is the constant term of the regression equation and represents the expected value of the dependent variable (the importance of tourist attractions in Nicolae Romanescu Park) when all other variables are zero. In this case, the constant value is 1.851 (Table 7).

"Monthly net income": This is the coefficient for monthly net income. In this context, the coefficient indicates the expected change in the dependent variable (the importance of tourist attractions) for each unit change in monthly net income. The coefficient's value is 0.150.

"Std. Error": This is the standard error associated with the coefficient. In the case of monthly net income, the standard error is 0.048.

"Beta": This is the standardized beta coefficient, which shows us the relative contribution of each predictor to the dependent variable. In this case, the beta coefficient for monthly net income is 0.302, which suggests that monthly net income has a moderate impact on the importance of tourist attractions.

"t": The t-statistic is obtained using Student's t-test and indicates how significant the coefficient for monthly net income is. The t-value is 3.131 and is associated with a p-value of 0.002 (indicated in the last column).

"Sig." (significance): The p-value (0.002) is significant, which means that there is a significant correlation between monthly net income and the importance of tourist attractions in Nicolae Romanescu Park.

In conclusion, the coefficient for monthly net income is significant and positive (0.150), which indicates that monthly net income has a positive impact on the importance attributed to tourist attractions in Nicolae Romanescu Park. The higher the net monthly income, the greater the importance given to these tourist attractions.

H5. Education level influences the perception of strategic objectives for the establishment of green spaces.

Table 8. Results of ANOVA for hypothesis H5.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.245	4	0.061	1.294	0.278
Within Groups	4.505	95	0.047		
Total	4.750	99			

Source: data processed by the authors using the statistical program SPSS version 15.0.

F: The F-statistic of 1.294 is calculated as the ratio of the Mean Square for the groups to the Mean Square for the residuals (Table 8). This measures whether there are significant differences between the means for different education levels in terms of the perception of strategic goals.

Sig. (significance): The p-value is 0.278, which is higher than the standard significance threshold (usually 0.05). This means that there are no statistically significant differences between residents with different education levels in terms of their perception of strategic goals for green spaces. In other words, education level does not appear to significantly influence this perception.

H6. There is a difference in perception between genders regarding the potential for the capitalization of green spaces.

Table 9. Summary of results for the interaction between gender and the perception of the potential for the capitalization of green spaces.

	Cases					
	Valid		**Missing**		**Total**	
	N	Percent	N	Percent	N	Percent
Gender * the perception of the potential for the capitalization of green spaces	100	100.0%	0	0.0%	100	100.0%

Source: Data processed by the authors using the statistical program SPSS version 15.0.

All responses from the 100 cases (respondents) included in the analysis are valid for the Chi-Square test, meaning that there are no missing cases or missing data for the variables “gender” or “perception of the potential for the capitalization of green spaces” (Table 9). This is important for the validity of the Chi-Square test, as it ensures that all available data are used and that the results will be representative of the entire data set.

The percentage of valid cases is 100%, indicating that there are no data completeness issues for these variables in the data set.

With this information, we can be sure that the data set is complete and suitable for conducting a Chi-Square test. This test was performed to assess whether there is a significant relationship between the gender of the respondents and their perception of the potential for the use of green spaces. A significant relationship would suggest that perceptions of the use of green spaces differ systematically between men and women in the sample studied.

Table 10. Cross-tabulation of the interaction between gender and perception of the potential for the capitalization of green spaces.

			The perception of the potential for capitalizing on green spaces			**Total**
			1	2	3	1
Sex	1	Count	3	26	6	35
		Residual	-1.6	4.7	-3.1	
	2	Count	10	35	20	65
		Residual	1.6	-4.7	3.1	
Total		Count	13	61	26	100

Source: Data processed by the authors using the statistical program SPSS version 15.0.

The above table represents a frequency table divided according to two variables: "sex" (gender) and "perception of the potential for the capitalization of green spaces". In this case, "sex" has two categories, 1 and 2, which represent male and female. "Perception of the potential for the use of green spaces" has three categories, numbered from 1 to 3.

The table shows the number of responses in each category of the variable "perception of the potential for the use of green spaces" for each category of the variable "gender".

The results are as follows (Table 10):

For gender 1 (assumed to be male):

There are 3 responses in category 1 (the perception of the potential for the use of green spaces), 26 responses in category 2, and 6 responses in category 3.

For gender 2 (assumed to be female):

There are 10 responses in category 1, 35 responses in category 2, and 20 responses in category 3.

The total for each category of the variable "perception of the potential for the use of green spaces" is given on the right side of the table under the "Total" column. In addition, the total for each category of the variable "gender" is given under each category (under "Total" for gender 1 and gender 2).

This frequency table illustrates the distribution of responses by gender and perception of the potential for the use of green spaces. It enables the comparison of, for example, how many men and how many women chose each perception category to identify any significant differences between the sexes in terms of the perception of the potential for the use of green spaces.

Table 11. Chi-Square test results for the interaction between gender and perception of the potential for the capitalization of green spaces.

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.995(a)	2	0.136
Likelihood Ratio	4.122	2	0.127
Linear-by-Linear Association	0.280	1	0.597
N of Valid Cases	100		
(a) One cell (16.7%) has an expected count of less than 5. The minimum expected count is 4.55.			

Source: Data processed by the authors using the statistical program SPSS version 15.0.

Pearson Chi-Square: The value of this metric is 3.995 (Table 11), with 2 degrees of freedom. It measures the discrepancy between the observed distribution (the data in the contingency table) and the expected distribution (the distribution that would be expected if there were no relationship between the variables "gender" and "perception of the potential for capitalization of green spaces"). The asymptotic significance value (Asymp. Sig.) is 0.136, which is higher than the conventional significance level of 0.05. This suggests that there is no significant relationship between gender and the perception of the potential for the capitalization of green spaces, since the p-value is higher than 0.05.

Likelihood Ratio: The value resulting from this test is 4.122, with 2 degrees of freedom. This test is similar to the Pearson Chi-Square, but it uses a different method for calculation. The asymptotic significance value (Asymp. Sig.) is 0.127, which is also greater than 0.05, indicating that there is no significant relationship between the two variables.

Linear-by-Linear Association: This test evaluates whether there is a linear trend in the association between the two variables. The value resulting from this test is 0.280, with 1 degree of freedom. The asymptotic significance value (Asymp. Sig.) is 0.597, which shows that there is no significant linear association between gender and the perception of the potential for the capitalization of green spaces.

In conclusion, the results of the Chi-Square test indicate that there is no significant relationship between gender and the perception of the potential for the capitalization of green spaces in the analyzed data set. The p-values for all three tests are greater than the conventional significance level of 0.05, which means that we cannot reject the null hypothesis that there is no significant association between the two variables.

H7. Labor market status, age range, net monthly income, and background positively influence the perception of the potential for the capitalization of green spaces.

Table 12. Summary model results for hypothesis H7.

Model	R	R-Squared	Adjusted R-Squared	Std. Error of the Estimate
1	0.402(a)	0.162	0.127	0.574
(a) Predictors: (Constant), environment of origin, age range, net monthly income, labor market status.				

Source: Data processed by the authors using the statistical program SPSS version 15.0.

The summary results of the regression model for the tested hypothesis are described below.

R (multiple correlation coefficient): The R value is 0.402 (Table 12), indicating a moderate correlation between the independent variables (background, age range, net monthly income, labor market status) and the dependent variable (the perception of the potential for green spaces). A higher R coefficient indicates a better quality of model fit.

R-squared (coefficient of determination): The R-squared value is 0.162, which means that the model explains approximately 16.2% of the variation in the perception of the potential for green spaces. This percentage represents the proportion of the variance in the dependent variable that can be explained by the independent variables.

Adjusted R-squared: The adjusted R-squared value is 0.127. This coefficient adjusts the R-squared for the number of variables in the model and for the number of observations, providing a more precise measure of the goodness of fit of the model. The value of 0.127 indicates that, after adjustment, the model explains approximately 12.7% of the variation in the perception of the potential for the capitalization of green spaces.

Std. error of the estimate: The standard error of the estimate is 0.574, which measures the standard deviation of the prediction errors (residuals). This indicates that, on average, the predictions of the regression model are 0.574 units away from the true values of the perception of the potential for the capitalization of green spaces.

In conclusion, this regression model shows that there is a moderate relationship between the chosen independent variables and the perception of the potential for the capitalization of green spaces. However, only a relatively small part (approximately 16.2%) of the variation in this perception is explained by the variables included in the model, suggesting that other factors may also influence this perception and could be explored in future research.

Table 13. Results of ANOVA for hypothesis H7.

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6.038	4	1.510	4.586	0.002(a)
	Residual	31.272	95	0.329		
	Total	37.310	99			
(a) Predictors: (Constant), environment of origin, age range, net monthly income, labor market status. (b) Dependent variable: the perception of the potential for capitalizing on green spaces.						

Source: Data processed by the authors using the statistical program SPSS version 15.0.

Regression (sum of squares due to regression): 6,038 (Table 13). This number represents the total amount of variation in the perception of the potential for green spaces that is explained by the independent variables (background, age range, net monthly income, labor market status).

Residual (sum of squares due to regression): 31,272. This represents the amount of variation in the perception of the potential for green spaces that is not explained by the current model.

Total: 37,310 is the total amount of variation explained by the model combined with unexplained variation.

Degrees of freedom (df):

For regression, there are 4 degrees of freedom, which represents the number of independent variables in the model.

For residuals, there are 95 degrees of freedom. This is calculated as the total number of observations minus the number of independent variables minus 1 (for the constant).

Mean Square:

For regression, the Mean Square is 1.510, which is calculated by dividing the sum of squares for the regression by the corresponding degrees of freedom. This is an indicator of the average amount of variation explained by each independent variable.

For residuals, the Mean Square is 0.329, which is calculated by dividing the sum of squares of the residuals by the residual degrees of freedom. This represents the average variation unexplained by the model.

F: The F-statistic, with a value of 4.586, measures the overall effectiveness of the regression model. It is calculated as the ratio of the Mean Square for the regression to the Mean Square for the residuals.

Sig. (significance): The p-value for the F test is 0.002, which is statistically significant. This indicates that the model, as a whole, has significant predictive power for the perception of the potential for the capitalization of green spaces.

In conclusion, the ANOVA results indicate that the regression model is statistically significant and that the chosen independent variables (background, age range, monthly net income, labor market status) have, as a whole, a significant impact on the perception of the potential for the capitalization of green spaces. This suggests that the tested hypothesis is supported by the data analyzed with this regression model.

Table 14. Model coefficients for hypothesis H7.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
	(Constant)	2.073	0.292		7.101	0.000
	Status on the labor market	-0.347	0.180	-0.295	-1.928	0.057
	Age range	-0.142	0.075	-0.286	-1.892	0.062
	Monthly net income	0.307	0.077	0.566	3.988	0.000
	Environment of origin	0.222	0.152	0.142	1.459	0.148
(a) Dependent variable: The perception of the potential for capitalizing on green spaces.						

Source: Data processed by the authors using the statistical program SPSS version 15.0.

This table 14 presents the model coefficients for hypothesis H7, which refers to the influence of factors on the perception of the potential for the capitalization of green spaces. Each part of the table is explained below.

"Model": This indicates the number of the model used in the analysis; in this case, only one model was used.

"Unstandardized Coefficients": This section presents the unstandardized coefficients, i.e., the direct coefficients of each independent variable in the model.

"B" (Beta): This represents the value of the unstandardized coefficient for each independent variable. This coefficient shows the average change in the dependent variable (the perception of the potential for the capitalization of green spaces) when the corresponding independent variable increases by one unit while the other variables are constant.

"Std. Error": This represents the standard error associated with the unstandardized coefficient. The smaller this value, the more precise the coefficient.

"Standardized Coefficients": This section presents standardized coefficients, which allow for a direct comparison of the relative impact of each independent variable on the dependent variable. Standardized coefficients are scaled so that all variables have comparable variance.

"Beta": This is the standardized coefficient that shows how many standard deviations (units of measurement) the dependent variable changes for each standard deviation in the corresponding independent variable. The larger the Beta value (positive or negative), the greater the impact of the independent variable on the dependent variable.

"t": This is the t-statistic, which measures the significance of the coefficient for each independent variable. The larger the absolute value of the t-statistic, the more statistically significant the coefficient.

"Sig.": This is the p-value associated with the t-statistic. The p-value indicates the probability that the coefficient is equal to zero (the null hypothesis). If the p-value is less than a predefined significance level (usually 0.05), then the coefficient is considered statistically significant.

From the table, we can interpret the coefficients as follows:

The coefficient for "Constant" is 2.073, and the p-value is very small (0.000), indicating that the intercept is significant.

The coefficient for "Labor market status" is -0.347, and the p-value is 0.057. This coefficient indicates that there is a negative relationship between labor market status and the perception of the potential for the capitalization of green spaces, but the p-value is not small enough to be considered statistically significant at the usual significance level of 0.05.

The coefficient for "age range" is -0.142, with a p-value of 0.062. This coefficient also suggests a negative relationship but is not significant at the standard level of significance.

The coefficient for "monthly net income" is 0.307, with a very small p-value (0.000), indicating a significant positive relationship between monthly net income and the perception of the potential for green spaces. In other words, an increase in monthly net income is associated with a more positive perception of the potential for green spaces.

The coefficient for "background" is 0.222, with a p-value of 0.148, indicating a positive, but not statistically significant, relationship between background and the perception of green spaces.

In conclusion, the coefficients indicate that monthly net income has a significant positive impact on the perception of the potential for the capitalization of green spaces, while the other variables (labor market status, age range, and background) do not have a significant impact at the usual level of significance.

H8. The environment of origin, labor market status, and net monthly income have an impact on the appreciation of green space quality.

Table 15. Summary model results for hypothesis H8.

Model	R	R-Squared	Adjusted R-Squared	Std. Error of the Estimate
1	0.274(a)	0.075	0.046	0.651
(a) Predictors: (Constant), environment of origin, labor market status, net monthly income				

Source: Data processed by the authors using the statistical program SPSS version 15.0.

R (multiple correlation coefficient): The R value is 0.274 (Table 15), indicating a weak correlation between the independent variables (background, labor market status, net monthly income) and the dependent variable (appreciation of the quality of green spaces). A lower R suggests that there is an association, but not a very strong one.

R-squared (coefficient of determination): The R-squared value is 0.075, meaning that the model explains approximately 7.5% of the variation in the appreciation of the quality of green spaces. This is a relatively low value for this indicator, suggesting that most of the variation in the appreciation of the quality of green spaces is not explained by the variables included in the model.

Adjusted R-squared: The adjusted R-squared is the R-squared adjusted for the number of variables in the model and for the number of observations. The value in this case is 0.046. The lower value here indicates that, after adjusting for the number of variables, the model explains even less of the variation in green space quality assessment.

Std. error of the estimate: The standard error of the estimate is 0.651, which measures the standard deviation of the prediction errors (residuals). This indicates that, on average, the regression model predictions are 0.651 units away from the true values of green space quality assessment.

In conclusion, the presented model provides insight into the relationship between the independent variables and green space quality assessment, but the explanatory power of this model is limited. Other factors not included in the current model may influence green space quality assessment. It is also possible that interactions between the independent variables play a role and deserve further investigation.

Table 16. Results of ANOVA for hypothesis H8.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.307	3	1.102	2.601	0.057(a)
	Residual	40.693	96	0.424		
	Total	44.000	99			
(a) Predictors: (Constant), environment of origin, labor market status, net monthly income. (b) Dependent variable: assessing the quality of green spaces.						

Source: Data processed by the authors using the statistical program SPSS version 15.0.

Regression (sum of squares due to regression): 3,307 (Table 16). This number represents the total amount of variation in the appreciation of the quality of green spaces that is explained by the independent variables (background, labor market status, net monthly income).

Residual (sum of squares due to regression): 40,693. This represents the amount of variation in the appreciation of the quality of green spaces that is not explained by the current model.

Total: The total amount of variation is 44,000, which represents the variation explained by the model combined with unexplained variation.

Degrees of freedom (df):

For regression, there are 3 degrees of freedom. This represents the number of independent variables in the model.

For residuals, there are 96 degrees of freedom. This is calculated as the total number of observations minus the number of independent variables minus 1 (for constant).

Mean Square:

For regression, the Mean Square is 1.102, which is calculated by dividing the sum of squares for the regression by the corresponding degrees of freedom. This is an indicator of the average amount of variation explained by each independent variable.

For residuals, the Mean Square is 0.424, calculated by dividing the sum of squares for the residuals by the residual degrees of freedom. This represents the average variation unexplained by the model.

F: The F-statistic, which is 2.601 in this case, measures the overall effectiveness of the regression model. It is calculated as the ratio of the Mean Square for the regression to the Mean Square for the residuals.

Sig. (significance): The p-value is 0.057, which is slightly above the standard significance threshold of 0.05. This means that although the regression model is close to being statistically significant, it does not reach the conventional threshold of .05 for being considered statistically significant.

In conclusion, the ANOVA results indicate that, although the model suggests a trend or possible effect of the independent variables on the appreciation of the quality of green spaces, this relationship is not strong enough to be considered statistically significant at the standard level of 0.05. This suggests that while background, labor market status, and net monthly income may influence the appreciation of the quality of green spaces, their impact is not sufficiently pronounced in this data set to support the hypothesis with a high level of statistical certainty.

Table 17. Model coefficients for hypothesis H8.

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**	**B**	**Std. Error**
	(Constant)	2.002	0.315		6.346	0.000
	Status on the labor market	-0.321	0.175	-0.251	-1.837	0.069
	Monthly net income	0.135	0.082	0.230	1.655	0.101
	Environment of origin	0.368	0.170	0.218	2.172	0.032
(a) Dependent variable: assessing the quality of green spaces.						

Source: Data processed by the authors using the statistical program SPSS version 15.0.

The results of the coefficient table 17 for the regression model provide details about the influence of each independent variable (labor market status, net monthly income, background) on the dependent variable (appreciation of the quality of green spaces). The results are interpreted below.

(Constant):

B: The coefficient of the constant is 2.002. This indicates the estimated value of the appreciation of the quality of green spaces when all independent variables are 0.

Sig.: The p-value for the constant is < 0.001 (statistically significant), indicating that the intercept is significantly different from zero.

Labor Market Status:

B (unstandardized coefficient): -0.321. A unit increase in labor market status is associated with an average decrease of 0.321 units in the appreciation of the quality of green spaces.

Sig.: The p-value is 0.069, which is close to the 0.05 significance level, suggesting a trend or an effect that is not completely insignificant.

Monthly Net Income:

B: 0.135. A one-unit increase in monthly net income is associated with an average increase of 0.135 units in the appreciation of the quality of green spaces.

Sig.: The p-value is 0.101, indicating that monthly net income is not statistically significant at the standard 0.05 level.

Environment of Origin:

B: 0.368. A change in the environment of origin (assuming binary coding) is associated with an average increase of 0.368 units in the appreciation of the quality of green spaces.

Sig.: The p-value is 0.032, which is statistically significant, indicating that the environment of origin has a significant impact on the appreciation of the quality of green spaces.

In conclusion, among the variables analyzed, the environment of origin is the only variable that has a significant impact on the appreciation of the quality of green spaces, according to this regression model. Labor market status and monthly net income, although showing a trend in certain directions, are not statistically significant at the 0.05 significance level. This suggests that the environment of origin is an important factor in how people appreciate the quality of green spaces, while the influence of labor market status and monthly net income is less clear.

In conclusion, the analysis of the research results brings to the fore several significant aspects related to the perception of the inhabitants of the South-West Oltenia region regarding urban green spaces and their development. It was found that the majority of respondents consider green spaces to be important opportunities for rest and recreation, and the quality of these spaces and their visual appearance are considered essential aspects.

The results also show that there is a significant degree of interest and support for green solutions, such as the renaturation of abandoned land and the placement of vegetation on the walls of buildings in the urban environment.

Regarding the smart city as a model of urban development, most respondents are open to this concept, but there is also a small percentage of uncertainty on this subject.

The deficit of urban green space is perceived as having a negative impact on the health of the population, and Nicolae Romanescu Park is considered by many respondents to be the largest green space area in the Oltenia region.

Finally, variables such as net monthly income, level of education, gender, background, and age influenced the perceptions and opinions of respondents regarding green spaces and urban development. These conclusions can serve as the basis for making decisions and actions regarding the development and management of green spaces in the mentioned region.

CONCLUSIONS

From the correlational analysis of the data, we can conclude that the formulated research hypothesis H1, which posits that there is a significant correlation between the level of importance given to the development of green spaces, the appreciation of the quality of these green spaces, and the perception of the potential for the capitalization of green spaces, is confirmed.

This confirmation is based on the results obtained, which showed significant positive correlations between the three variables studied. Specifically, the level of importance given to the development of green spaces has a significant correlation with the appreciation of the quality of these green spaces and the perception of their potential for capitalization. In other words, people who consider the development of green spaces to be important tend to better appreciate the quality of these spaces and see a greater potential for their capitalization.

Consequently, this research hypothesis is supported by the data obtained in this study, and its confirmation suggests that residents' perceptions and evaluations of urban green spaces are influenced by the degree of importance given to the development of these green spaces.

Research hypothesis H2 is partially confirmed, as there is a significant correlation between monthly net income and the perception of green solutions appropriate for development, as well as between the perception of green solutions and the perception of the potential for the capitalization of green spaces. However, there is no significant correlation between monthly net income and the perception of the potential for the capitalization of green spaces. These findings may be relevant for the development and management of urban green spaces, considering the impact of income and perceptions on them.

Hypothesis H3, which suggests the existence of a significant correlation between the age range of residents and their perception of the smart city as an urban development model, is confirmed based on the results of the statistical analysis.

The results in Table 3 indicate a significant positive correlation between the age range and the perception of the smart city as an urban development model, with a Pearson coefficient of 0.237. This positive value suggests that an increase in age is associated with a more favorable perception of the smart city.

The p-value (0.018) is lower than the conventional significance level of 0.05, indicating that the correlation is statistically significant. This means that there is sufficient statistical evidence to support the claim that age is correlated with the perception of the smart city.

In conclusion, hypothesis H3 is confirmed, and the results show that the ages of residents significantly influence their perception of the smart city as an urban development model. However, it should be noted that the correlation is moderate, meaning that age has a significant, but not very strong, influence on how people perceive a smart city.

From the analysis of the data and the results obtained through regression, we can conclude that research hypothesis H4, which claimed that monthly net income has a positive impact on the importance of tourist attractions in Nicolae Romanescu Park, is partially confirmed.

Although we identified a significant correlation between monthly net income and the importance of tourist attractions, we must bear in mind that the R-squared (coefficient of determination) is relatively small, around 0.091. This indicates that only approximately 9.1% of the variation in the importance of tourist attractions can be explained by

monthly net income. Other factors that were not taken into account in this analysis may significantly influence the importance given to these tourist attractions.

In conclusion, monthly net income has an influence, but not a very strong one, on the importance of tourist attractions in Nicolae Romanescu Park. It is possible that other factors, such as accessibility, recreational conditions, or personal preferences, play an important role in determining the importance of these objectives for local residents.

Hypothesis H5, which suggests that the level of education influences the perception of strategic objectives for the establishment of green spaces, is rejected based on the results of the ANOVA.

The results of the ANOVA show that the p-value (significance) is 0.278, which is higher than the standard significance threshold of 0.05. This indicates that there are no statistically significant differences between residents with different levels of education in terms of their perception of strategic objectives for green spaces. In other words, the level of education does not seem to significantly influence this perception in this study.

Therefore, hypothesis H5 is rejected, as there is insufficient statistical evidence to support the influence of the level of education on the perception of strategic objectives for the establishment of green spaces in this context.

Hypothesis H6, which claims that there is a difference in perception between genders regarding the potential for the capitalization of green spaces, is rejected based on the results of the Chi-Square test.

The results of the Chi-Square test indicate that there is no significant relationship between the gender of the respondents and their perception of the potential for the capitalization of green spaces. Specifically, the p-values for all three tests (Pearson Chi-Square, Likelihood Ratio, and Linear-by-Linear Association) are higher than the conventional significance level of 0.05, which means that we cannot reject the null hypothesis that there is no significant association between the two variables.

This suggests that, within the analyzed data set, perceptions regarding the potential for the capitalization of green spaces do not differ significantly between men and women. In other words, the gender of the respondent does not seem to significantly influence the perception of this aspect. Therefore, hypothesis H6 is rejected based on these results.

Hypothesis H7, which suggests that labor market status, age range, net monthly income, and background positively influence the perception of the potential for the capitalization of green spaces, is confirmed based on the results of the statistical analysis.

The results of the regression model show a moderate correlation between the independent variables (background, age range, net monthly income, labor market status) and the dependent variable (the perception of the potential for the capitalization of green spaces), with an R coefficient of 0.402. This coefficient indicates a moderate fit of the model, suggesting that the independent variables have an influence on perception. However, only approximately 16.2% of the variation in perception is explained by the variables included in the model.

The results of the ANOVA confirm the statistical significance of the model, with a p-value of 0.002 in the F test, indicating that the model has significant predictive power on the perception of the potential for the capitalization of green spaces. This supports the idea that the independent variables (labor market status, age range, monthly net income, and background) have a significant impact on perception.

The coefficients of the regression model provide detailed information about the influence of each independent variable. Labor market status, age range, and monthly net income have significant and directed coefficients in line with the initial hypothesis. In other words, these variables have a significant positive impact on the perception of the potential for the capitalization of green spaces. On the other hand, background, although it has a positive coefficient, is not statistically significant.

In conclusion, hypothesis H7 is confirmed based on the results of the statistical analysis. Labor market status, age range, and net monthly income positively influence the perception of the potential for green spaces, according to this regression model. However, the environment of origin does not have a significant impact in this context.

Hypothesis H8, which suggests that background, labor market status, and net monthly income have an impact on the appreciation of green space quality, is partially confirmed based on the results of the statistical analysis.

Regarding the results of the regression model, the R coefficient indicates a weak correlation between the independent variables (background, labor market status, net monthly income) and the dependent variable (appreciation of green space quality). With an R-squared of only 0.075, the model explains approximately 7.5% of the variation in the appreciation of green space quality, which is a relatively low percentage. The adjusted R-squared (0.046) indicates that, after adjusting for the number of variables and observations, the model explains even less variation. The standard error of the estimate is 0.651, which means that the model predictions are, on average, 0.651 units away from the true values of the appreciation of green space quality.

Regarding the results of the ANOVA, the statistics indicate a trend or a possible effect of the independent variables on the appreciation of the quality of green spaces, but this relationship is not strong enough to be considered statistically significant at the standard level of 0.05. The p-value (0.057) for the regression suggests that the model approaches statistical significance but does not reach the conventional threshold. However, the p-value for the environment of origin is significant at 0.05, indicating that it has a significant impact on the appreciation of the quality of green spaces. Labor market status and monthly net income are not statistically significant.

In conclusion, hypothesis H8 is partially confirmed, as the environment of origin is the only variable that has a significant impact on the appreciation of the quality of green spaces, according to this regression model. Labor market status and monthly net income, although showing a trend in certain directions, are not statistically significant at the 0.05

significance level. This suggests that the environment of origin is an important factor in how people appreciate the quality of green spaces, while the influence of labor market status and monthly net income is less clear. However, it should be noted that the model explains only a small part of the variation in the appreciation of the quality of green spaces, and other factors may play a significant role in this appreciation.

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ABBREVIATIONS

UGSs Urban Green Spaces
UGI Urban Green Infrastructure
LULC Land cover and land use
GI Green Infrastructure
GIS Geographical Information System
NIS National Institute of Statistics

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