

## **LIVING CONDITIONS AS AN INDICATOR OF SOCIAL WELL-BEING. A STRUCTURAL ANALYSIS OF URBAN HOUSING IN PETROȘANI**

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**ABSTRACT:** *This article analyzes housing conditions in Petroșani from the perspective of the structure of the housing stock, housing typology, household size, and the pressure exerted on living space. At the same time, a derived indicator - housing overcrowding - was constructed by examining overcrowding in relation to family size, type of dwelling, and residential area.*

**KEY WORDS:** *living conditions, social well-being, urban housing stock, housing overcrowding, household size.*

**JEL CLASSIFICATIONS:** *I31, J11, R23.*

### **1. INTRODUCTION**

Romania, as a state, through the Constitution adopted in 1991, as well as through national legislation such as Housing Law no. 114/1996, and by adopting the recommendations of the Universal Declaration of Human Rights (1948) and other resolutions adopted at the European level, has committed itself to ensuring its citizens the right to housing.

It is necessary to clearly distinguish between the right to housing and adequate housing, even though it might be assumed that the first concept implies the second. In reality, specialized studies show that, at least in Romania, the right to housing is not considered violated, as it is understood to be fulfilled either through the right to ownership of a residential property - each individual being free to acquire a dwelling according to their needs and resources - or through renting.

It should be noted that Romanian citizens became the owners of the dwellings in which they had previously lived as tenants through Decree-Law no. 61/1990, paying

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for these properties at subsidized prices, often in installments. These rights were further extended through Law no. 85/1992, which allowed the sale of housing built with funds from economic or public institutions to their own employees.

The consequences were immediate: nearly 98% of Romanians became homeowners, far above the European average of 69%. However, the effects were not exclusively positive. This massive transfer of property ownership to individuals with relatively low incomes meant that, alongside the manifest function of these laws - understood as ensuring housing security - latent functions also emerged. The most significant of these has been the deterioration of the housing stock due to the difficulties encountered in maintaining these properties.

## **2. THEORETICAL CONTEXT**

Although some authors closely link housing conditions to the concept of quality of life, we deliberately chose to refer to social well-being, since the object of our research was not opinions regarding satisfaction with housing conditions, but rather factual data concerning these conditions.

Even though housing may be discussed as part of the broader process of urban development, this article focuses on housing conditions as a dimension of social well-being. Clearly, this approach required a major restructuring of the possible research perspectives, shifting from a large-scale multidimensional process (urban development) to a one-dimensional treatment of a concept (social well-being) that is nevertheless closely connected to the previously mentioned process and involves multiple criteria. We adopted this reduction because our aim was not to provide causal explanations - strongly anchored in structural-functionalism - of phenomena such as residential segregation based on economic criteria or gentrification, which are reflected in housing conditions. The motivation for this narrowing of scope lies in the fact that Petroșani is a relatively homogeneous locality in many respects. The historical context in which it developed until 1989 defined it as a mono-industrial area, while the processes of economic restructuring and deindustrialization led to a homogenization of the population that remained in the city. There are no significant development poles generating socio-economic disparities reflected in housing conditions, at least not in a sociologically significant way. Moreover, in Petroșani the process of urbanization was halted by deindustrialization, both in demographic terms and due to the lack of investment in major real estate projects. Consequently, housing conditions in Petroșani depend almost entirely on the residential infrastructure that existed before 1989.

Human habitation is a general concept encompassing both urban and rural housing. In the context of this article, we focus on urban housing, more precisely on the housing conditions specific to urban dwellings. Unlike rural housing, this type of dwelling can be approached from a structural-functionalist perspective that emphasizes its integration into the urban space dominated by multiple economic, institutional, and cultural interdependencies (Alpopi, 2008, p. 2).

From the perspective of the right to housing, as mentioned in the introduction, Romania ranks first in Europe in terms of homeownership. However, the emergence of the latent functions of the privatization process has highlighted the issue of adequate

housing, which affects even large cities that have not experienced mono-industrialization or extensive deindustrialization processes. Therefore, the issue of adequate housing represents a highly relevant research topic for small urban communities, especially former mono-industrial areas such as Petroșani, which have experienced the effects of deindustrialization.

Consequently, adequate housing does not merely refer to owning a dwelling but also implies fulfilling certain conditions that ensure decent living standards. These conditions relate to the provision of domestic comfort and include indicators such as the number of square meters per person, the number of persons per room, the number of persons per dwelling, access to and provision of utilities (running drinking water, hot water and heating, natural gas, indoor sanitation facilities), as well as durable household goods such as electrical appliances (Dan, 2003, p. 409).

Rueda approaches urban housing from a perspective centered on the concept of residents' quality of life, identifying four component dimensions without referring directly to housing conditions. The types of well-being considered are evaluated based on the level of satisfaction associated with them. This explains the difference between subjectively perceived well-being and social well-being resulting from fact-based evaluation. These dimensions are important and worth mentioning, even though they were not used in our research due to the objectives established in the methodology:

- a) general personal well-being, including internal (psychological) and external (social relations) components;
- b) environmental well-being, as a measure of the relationship individuals maintain with the natural environment, the built environment (where housing and housing conditions may be placed), and the urban environment;
- c) psychosocial well-being, a complex multicriteria dimension involving satisfaction with material conditions, relational conditions, security, and social status;
- d) socio-political well-being, referring to opportunities for and the extent of social participation (apud Vâlceanu & Zulaica, 2012, p. 48).

Based on factual data collected in the field, a clear distinction can be made between the right to housing and adequate housing. However, at the global level, according to United Nations documents, as previously mentioned, these concepts are considered interrelated, both aiming to fulfill the following conditions:

- a) security of tenure, referring to protection against expropriation or forced eviction for both owners and tenants;
- b) access to services and public utilities, including those ensuring domestic comfort and physical and psychological safety;
- c) habitability, meaning that the dwelling must provide adequate protection against environmental conditions and safeguard the health of its occupants;
- d) accessibility, a condition with strong social implications referring to the possibility for all members of society to have access to housing;
- e) affordability, meaning that housing costs should not prevent households from obtaining and satisfying other essential needs;
- f) location, or the optimization of the distance between the dwelling and the workplace, hospitals, schools, and shops, which positively affects both time budgets and financial savings at the individual or household level;

- g) cultural adequacy, understood as the possibility for individuals and families to conduct their lives in a manner compatible with cultural norms and family roles, without constraints.

Although national and international regulations establish the right to housing and the principle of adequate housing, a number of limiting factors exert pressure on these concepts when they operate in reality. This limitation is recognized under the concept of housing exclusion. In this way, both the right to housing and adequate housing are successively affected by:

- a) socio-demographic factors, including population growth and increased life expectancy, which together place pressure on the housing stock that no longer corresponds to residents' needs;
- b) socio-economic changes, which have objectively imposed financial constraints on both the state and private actors in addressing housing issues;
- c) social inequity and inequality, resulting from the structurally unjust distribution of welfare (Dan, 2005, pp. 6–8).

### **3. RESEARCH AREA AND METHODOLOGY**

The present research was conducted in the municipality of Petroșani, a locality that is part of the Jiului Valley urban micro-region in Hunedoara County. Petroșani is an urban area defined primarily by its mono-industrial character, based on coal mining. Before 1989, the locality experienced an extensive process of urban development, both demographically and in terms of housing. With the exception of two neighborhoods (Colonia and Bosnea, old workers' districts), the remaining neighborhoods were built after 1950, with construction continuing until the late 1980s. This chronological placement indicates a housing stock that is largely relatively new in the context of the locality's urban history, constructed according to the standards of the time but adapted to the rapid population growth of the Jiului Valley under the pressure of industrial development. As a result, many apartments proved unsatisfactory in terms of finishing quality or number of rooms, at least until the late 1970s.

After this period, the old city center (the northern part of the locality) underwent major urban redevelopment. It was almost entirely demolished and replaced by a new neighborhood consisting of modern apartment buildings with a greater number of rooms than those previously constructed. After 1989, the year that marked the change of the political and economic system in Romania, the process of urbanization came to a halt - initially in terms of housing development and later, following the restructuring processes of 1997, also demographically. Petroșani and the Jiului Valley as a whole became areas characterized by out-migration and entered a phase of premature negative deindustrialization.

The research has a descriptive quantitative character, focusing on the analysis of distributions and structural differences between groups, without attempting to establish causal relationships or test explanatory hypotheses. This approach is justified by the relative homogeneity of the population and the housing stock in Petroșani, produced both by the urbanization and industrialization processes that occurred before

1989 and by the restructuring and deindustrialization processes that followed after 1997.

The relative homogeneity of the housing stock has already been explained in the previous sections. The homogeneity of the population results from the mono-industrial character of the area, reflected in socio-professional categories primarily through technical education and the absence of strong polarization in monthly family incomes. At the same time, this homogeneity was influenced by the effects accompanying restructuring and deindustrialization, which had a major impact on all social strata of the population (layoffs, unemployment, employment below qualification level, and reduced family incomes compared with previous periods).

The fieldwork phase took place in May 2017, using the sociological survey method. The research instrument was a questionnaire administered to respondents by previously trained interviewers through face-to-face interviews conducted at the respondents' homes. The questionnaire was an omnibus-type instrument structured into three sections: human capital, employment, and housing conditions. An additional section containing socio-demographic questions was included both for constructing the sample and for conducting the statistical tests required for data analysis.

Our analysis focused on the section dedicated to housing conditions, which included items referring to the type and surface area of the dwelling (in square meters), the number of rooms, and the number of persons living in the household. These items were not selected arbitrarily but were aligned with key indicators and minimum thresholds used to validate urban areas as marginalized. In this article, all the above-mentioned criteria were considered, but two indicators proved particularly important for housing:

- the proportion of overcrowded dwellings (< 15.33 m<sup>2</sup> per person, with a minimum threshold of 54%), and
- housing insecurity, defined as the proportion of households that do not own their dwelling (with a minimum threshold of 12%).

In terms of housing, a community is considered to have precarious housing conditions if at least one of these two priority criteria exceeds the established threshold (according to the validation criteria for marginalized urban areas established by the Applicant's Guide – POCU, AP 5 / PI 9.iv / OS 5.1, 2016, pp. 11–12).

Respondents were selected using the multiple interrelated quota sampling procedure (sex, age, residential area, and street). The spatial dimension played both an organizational and control role, the city being divided into five zones, each having a specific share of the population reflected proportionally in the sample. Household selection was computer-assisted: age and gender quotas were randomly assigned, and for each zone a specific street and building number were generated, thus limiting interviewer subjectivity.

The sample size was initially projected at 1,000 respondents, but due to objective constraints encountered during the fieldwork phase, 931 questionnaires were validated, producing minor deviations from the initial proportional allocation. However, these deviations did not affect the structural representativeness of the sample, and the accuracy of the analysis and results was maintained, since the deviations occurred in the more densely populated and socio-residentially

homogeneous areas, while the remaining areas were covered according to the initial plan.

The data collected through the questionnaire were entered into a database and statistically processed using SPSS, employing procedures appropriate to the types of variables analyzed, including descriptive procedures and nonparametric statistical tests of association and comparison.

#### **4. DATA ANALYSIS AND INTERPRETATION**

In this subsection, we analyze and interpret the data regarding housing conditions, which will be presented according to the dimensions through which they were examined. The items are logically grouped within each dimension in order to facilitate the analysis and interpretation of the results.

##### **4.1. Structure of the Housing Stock and Housing Typology**

The distribution of dwellings, according to Figure 1, highlights the predominance of residential units located in apartment buildings, which account for more than two-thirds of the housing stock (68.2%, obtained by combining apartments and studio apartments). Individual dwellings such as detached houses account for nearly one-fifth (18.7%), while alternative residential forms such as row houses (attached houses) or semi-detached/duplex houses slightly exceed 13%.

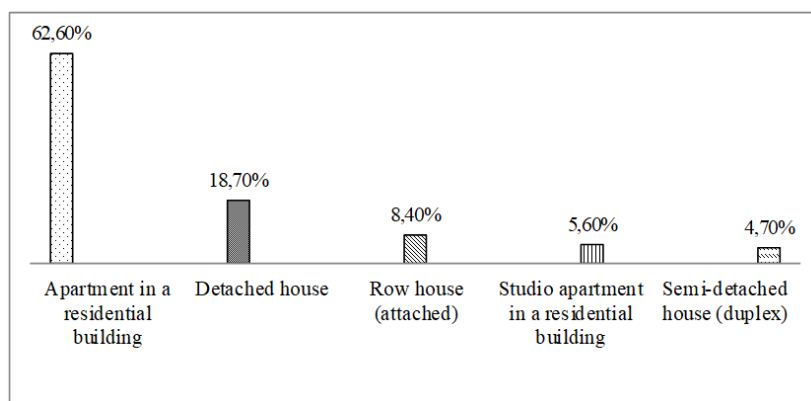
This reality supports our previous statements, as the structure of the housing stock in Petroșani reflects the characteristics of the industrialization and urbanization period specific to the communist era, when housing construction focused mainly on collective housing. Some perspectives in the sociological literature suggest that this type of housing was widely used before 1989 because such neighborhoods made it easier to supervise residents, with the intention of reducing private space and intimacy. These aspects were associated with the broader idea of social control and the creation of the so-called “new man” (Pintilie, 2010, p. 99).

This is not the place for an ideological debate; therefore, we neither confirm nor reject this interpretation. However, it is worth mentioning as a perspective on collective housing within the former communist Romanian context.

A defining aspect of the comfort provided by a dwelling to its occupants is the space it offers. In this context, we refer to the cultural adequacy that allows residents to conduct their daily lives at decent standards, depending on gender or age, without constraints. This criterion was analyzed by applying the Kruskal–Wallis nonparametric test, which is appropriate for independent samples when the dependent variable is quantitative but does not follow a normal distribution, as is the case with dwelling surface areas expressed in square meters (Labăr, 2008, p. 146).

The results of this test confirm the existence of statistically significant differences between types of dwellings in terms of total surface area (m<sup>2</sup>). The analysis of medians indicates a hierarchy in which detached houses rank first (median = 65.5 m<sup>2</sup>), followed by apartments (58 m<sup>2</sup>), semi-detached houses (50 m<sup>2</sup>), row houses (49 m<sup>2</sup>), and studio apartments (28 m<sup>2</sup>). The calculated effect size ( $\eta^2_h = 0.185$ ) indicates a

large effect, confirming that even in a relatively homogeneous urban context such as Petroșani, differentiation in living space occurs according to the type of dwelling (see Table 1 in the Appendix).



**Figure 1. Distribution of dwellings by housing type**

The structure of the housing stock can also be described according to the distribution of housing types by neighborhood. The application of the  $\chi^2$  significance test indicates a statistically significant association of moderate to strong intensity between housing type and residential area (Table 3). Contingency analysis allowed the identification of the predominant housing types in each residential area. In the Aeroport 1 and Aeroport 2 areas, the housing stock is dominated by apartment buildings (87% and 98%, respectively), followed by the Central area (67%). In contrast, the Colonie and Bosnea areas are characterized by house-type dwellings of various forms (detached, semi-detached, or row houses), accounting for more than 90% of the housing stock (Table 2).

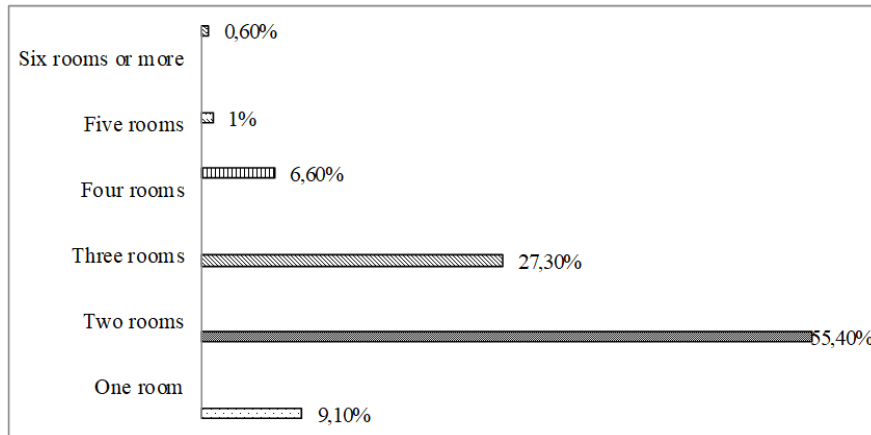
Although different residential patterns can be observed at the neighborhood level, they do not indicate economic segregation after 1989, as might be assumed through a projection effect of the observer, especially when the historical particularities of Petroșani's urban development are not taken into account.

In a particularly interesting study concerning housing aspirations, 75% of respondents indicated, among other preferences, a desired number of rooms ranging from three to five, motivating this choice through factors such as family size, household activities, and the possibility of carrying out professional activities within the dwelling (Cernescu & Cristescu, 2004, p. 135). In this sense, the number of rooms can be considered an indicator of the functional capacity of the dwelling, reflecting its adaptation to the needs of its occupants, rather than the reverse.

The data presented in Figure 2 highlight a housing stock characterized by a dominant core of dwellings with two and three rooms (82.7% of the total, when combined). One-room dwellings (9.1%) and those with a higher number of rooms - four or more - have a relatively marginal share (8.2% of the total, when combined).

When compared with the aspirations toward greater housing functionality mentioned above, it can be argued that these dwellings only partially met such

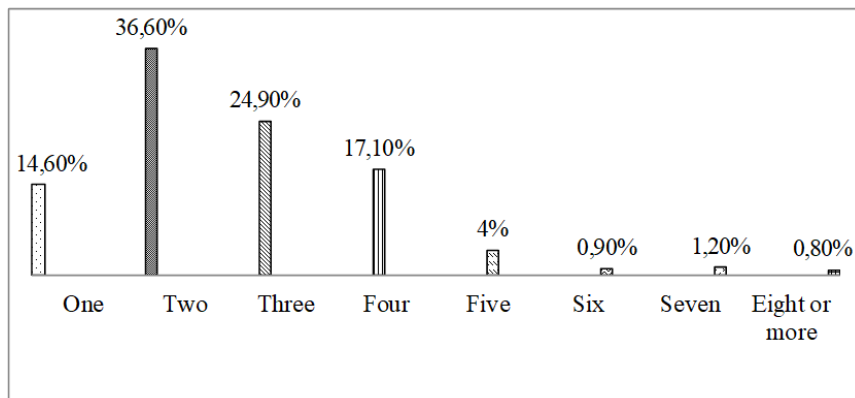
expectations, particularly considering that at the time they were built the population of Petroșani was significantly larger than it is today. It becomes evident that, as demographic pressure decreases, the housing stock becomes more functional - not through structural improvement, but rather as a phenomenon that can be interpreted as a perverse effect in Boudon's sense, or through the emergence of latent functions of depopulation, in Merton's interpretation.



**Figure 2. Distribution of Dwellings by Number of Rooms**

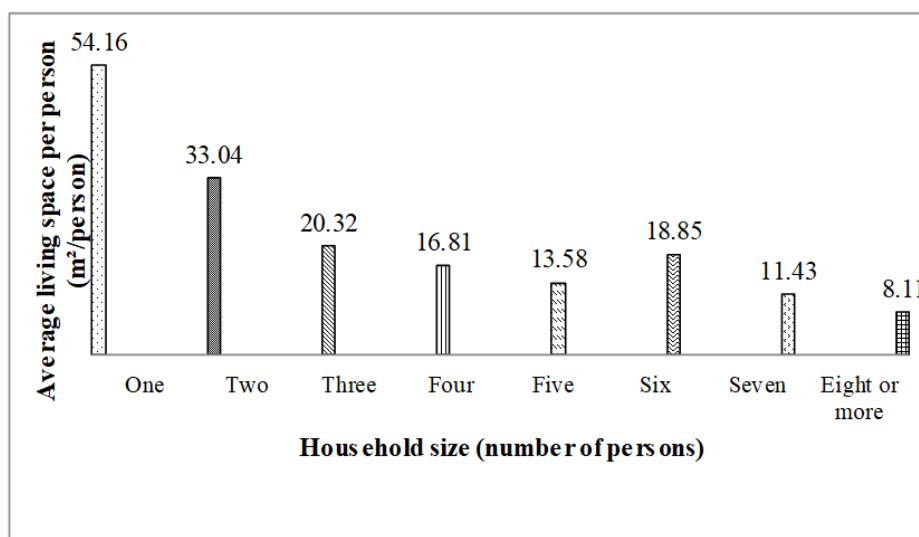
#### 4.2. Household Size and Pressure on Living Space

Figure 3 illustrates a positively skewed unimodal distribution of the number of persons in households in Petroșani, with frequencies concentrated around categories with a relatively small number of members. The observed structure may be interpreted as an expression of the significant depopulation of the locality, but also as a change in demographic behavior. Until 1989, the socio-economic and ideological context favored the model of the larger family with several children.



**Figure 3. Distribution of Households by Number of Persons**

Similarly to the distribution of households by number of persons, the distribution of the average living space per person according to household size is unimodal and positively skewed. As shown in Figure 4, higher values of the average living space are concentrated among households with a small number of members.



**Figure 4. Average living space per person by household size (m<sup>2</sup>/person)**

At the same time, the largest average living space per person is found in single-person households (54.16 m<sup>2</sup>/person), followed at a considerable distance by two-person households (33.04 m<sup>2</sup>/person). In this case as well, it is necessary to eliminate the projection effect that may occur when single-person households are incorrectly assumed to have higher incomes and housing conditions corresponding to those incomes.

Contingency analysis confirmed a finding that we had anticipated: most single-person households have a monthly income at or below the national net minimum wage in 2017 (1,065 RON; 55.1%) (see Table 4).

Most of these households are also located in apartment buildings - either apartments or studio apartments (54.4% and 20.6%, respectively) (Table 5), and most frequently occupy two-room dwellings (53.7%) (Table 6).

We continued the analysis by introducing the derived indicator of housing overcrowding. The average living space per person was calculated by dividing the total dwelling surface area by the number of household members. This continuous variable was then recoded in SPSS into a dichotomous variable using the threshold of 15.33 m<sup>2</sup> per person.

Based on this calculation, we established that 22.8% of households in Petroșani fall below the threshold of 15.33 m<sup>2</sup> per person, which allows them to be classified as overcrowded households. When compared with the 54% threshold discussed in the theoretical framework, it can be concluded that there are no grounds to

classify Petroșani as a locality structurally affected by precarious housing conditions (Table 7).

The analysis of overcrowding by household size shows that overcrowding is almost nonexistent in households consisting of one or two persons (5.7%), but it increases steadily with household size, reaching very high values among families with more than five members (73%) (Table 8.1). The  $\chi^2$  test confirms the existence of a very strong association between housing overcrowding and household size, while Cramer's V coefficient indicates a large effect size (Table 8.2).

The type of dwelling also plays an important role in highlighting overcrowding. It occurs most frequently in studio apartments (48.1%) and row houses (43.6%), whereas the level of overcrowding decreases in the case of apartments (18%) and detached houses (20.7%) (Table 9.1). The association between housing type and overcrowding is also statistically confirmed by the  $\chi^2$  test, although Cramer's V coefficient indicates a weak to moderate effect (Table 9.2).

By comparison, it can be concluded that housing overcrowding is influenced to a much greater extent by household size than by housing type.

From a territorial perspective, the highest levels of overcrowding are found in the Bosnea (47.9%) and Aeroport 1 (28.5%) areas, while the Central area records the lowest value (13.3%) (Table 10.1). This finding confirms our earlier observations regarding the construction of the new city center, with modern apartment buildings designed to include a greater number of rooms. The  $\chi^2$  test also confirms a statistically significant association between overcrowding and residential area, although Cramer's V coefficient indicates a weak effect (Table 10.2).

## 5. CONCLUSIONS

The structure of the housing stock in Petroșani is dominated by apartment buildings (62.6%), most of which contain two or three rooms (55.4% and 27.3%, respectively), while the structure of households is characterized primarily by families consisting of two or three persons (36.6% and 24.9%, respectively). On the one hand, the characteristics of the housing stock reflect the urban development plan implemented before 1989, while on the other hand, the distribution of households reflects the new realities generated by the deindustrialization and depopulation of the area.

In fact, the increase in the functional capacity of dwellings can be interpreted as an expression of the latent functions of these two phenomena, as confirmed by the derived indicator of housing overcrowding. This indicator does not classify Petroșani as a locality structurally affected by precarious housing conditions, when assessed against the minimum thresholds established as unacceptable, even though urban development has ceased and the housing stock is currently only being maintained rather than expanded.

Housing overcrowding affects the Central area the least, which represents the most recently developed urban zone of Petroșani (13.3%). By contrast, overcrowding is more visible in older neighborhoods such as Bosnea (47.9%) and Aeroport 1 (28.5%). Although these values remain below the 54% threshold, they still indicate a

certain level of housing pressure, particularly in the Bosnea area. Several decades ago, Bosnea could have been characterized as an overcrowded area, while Aeroport 1 would have been close to that threshold.

## REFERENCES:

- [1]. **Alpopi C.**, (2008) *Urban Housing*, în, *Theoretical and Empirical Researches in Urban Management*, Year 3, Number 8, București, pp.1-10
- [2]. **Cernescu T., Cristescu A.** (2004) *Aspecte calitative privind problematica aspirațiilor de locuire ale tinerilor*, în, Cernescu T., *Societate și arhitectură. O perspectivă sociologică*, Editura Tritonic, București
- [3]. **Dan A. N.**, (2005) *Locuirea în România. Dreptul la locuire*, în, *Calitatea Vieții*, XVI, nr.1-2, , Editura Academiei Române, București, pp.3-20
- [4]. **Dan A.**, (2003) *Accesul la locuire în România, astăzi*, în, *Calitatea Vieții*, XIV(3-4), Editura Academiei Române, București, , pp.409-429
- [5]. **Labăr A. V.**, (2008) *SPSS pentru științele educației*, Editura Polirom, Iași
- [6]. **Pintilie I.**, (2010) *Corpul-o utopie a interiorității. Disputa dintre corpul public și corpul intim în arta contemporană românească*, în, Grunberg L. (coord.), *Introducere în sociologia corpului*, Editura Polirom, Iași
- [7]. **Vâlceanu D. G., Zulaica L.**, (2012) *Indicele calității locuirii-instrument de evaluare a calității locuirii urbane*, în *Urbanism. Arhitectură. Construcții*, Vol. 4, nr. 3, INCD URBAN INCERC, București
- [8]. **Constituția României** (1991), republicată în *Monitorul Oficial al României*, Partea I, nr. 767/31.10.2003.
- [9]. **Decret-lege nr. 61/1990**, *Monitorul Oficial al României*, Partea I, nr. 22/08.02.1990.
- [10]. **Legea locuinței nr. 114/1996**, *Monitorul Oficial al României*, Partea I, nr. 254/21.10.1996.
- [11]. **Legea nr. 85/1992**, *Monitorul Oficial al României*, Partea I, nr. 180/29.07.1992.
- [12]. **Ministerul Fondurilor Europene.** (2016). *Ghidul solicitantului. Condiții specifice de accesare a fondurilor. „Sprijin pregătitor pentru elaborarea strategiilor de dezvoltare locală” – orașe/municipii cu populație de peste 20.000 locuitori*, AP 5 / PI 9.vi / OS 5.1. Programul Operațional Capital Uman 2014–2020,București.
- [13]. **Organizația Națiunilor Unite** (1948). *Declarația Universală a Drepturilor Omului*, adoptată de Adunarea Generală a ONU la 10.12.1948, Rezoluția 217 A (III).

## APPENDIX

**Table 1. Kruskal–Wallis Test for Dwelling Surface Area by Housing Type (N=931)**

Indicator	Value
Studio apartment – median (m <sup>2</sup> )	28.0
Apartment – median (m <sup>2</sup> )	58.0
Detached house – median (m <sup>2</sup> )	65.5
Semi-detached house (duplex) – median (m <sup>2</sup> )	50.0
Row house (attached) – median (m <sup>2</sup> )	49.0
H ( $\chi^2$ )	174.969
df	4
p	< 0.001
$\eta^2_h$	0.185 (large effect)

**Table 2. Residential Area and Housing Type (Contingency Table)**

Residential Area	Indicator	Studio apartment (building)	Apartment (building)	Detached house	Semi-detached house (duplex)	Row house (attached)	Total
Aeroport 1	N	22	211	30	2	2	267
	%	8.2%	79.0%	11.2%	0.7%	0.7%	100.0%
Aeroport 2	N	14	218	4	0	0	236
	%	5.9%	92.4%	1.7%	0.0%	0.0%	100.0%
Center	N	9	147	72	3	2	233
	%	3.9%	63.1%	30.9%	1.3%	0.9%	100.0%
Colonic	N	5	5	48	38	51	147
	%	3.4%	3.4%	32.7%	25.9%	34.7%	100.0%
Bosnea	N	2	2	20	1	23	48
	%	4.2%	4.2%	41.7%	2.1%	47.9%	100.0%
Total	N	52	583	174	44	78	931
	%	5.6%	62.6%	18.7%	4.7%	8.4%	100.0%

**Table 3. Chi-Square Test and Cramer's V Coefficient for the Association Between Residential Area and Housing Type (N = 931)**

Indicator	Value
Chi-square ( $\chi^2$ )	681.88
Degrees of freedom (df)	16
p-value (significance)	< 0.001
Cramer's V	0.428 (moderate effect)

**Table 4. Structure of Monthly Household Income in Single-Person Households**

Single-person households	≤1065 RON	1066–2130	2131–3195	3196–4260	4261–5325	Over 5325	Total
N	75	40	18	3	0	0	136
%	55.1%	29.4%	13.2%	2.2%	0.0%	0.0%	100.0%

**Table 5. Housing Type in Single-Person Households**

Single-person households	Studio apartment	Apartment	Detached house	Semi-detached house	Row house	Total
N	28	74	23	5	6	136
%	20.6%	54.4%	16.9%	3.7%	4.4%	100.0%

**Table 6. Number of Rooms in Single-Person Households**

Single-person households	1 room	2 rooms	3 rooms	4 rooms	5 rooms	6+ rooms	Total
N	34	73	23	6	0	0	136
%	25.0%	53.7%	16.9%	4.4%	0.0%	0.0%	100.0%

**Table 7. Distribution of Households by Housing Overcrowding (threshold <15.33 m<sup>2</sup>/person)**

Households	Cases above the minimum threshold (not overcrowded)	Cases below the minimum threshold (overcrowded)	Total
N	719	212	931
%	77.2%	22.8%	100.0%

**Table 8.1. Household Size (Grouped Categories) and Housing Overcrowding (m<sup>2</sup>/person < 15.33)**

Household size (grouped categories)	Indicator	Not overcrowded	Overcrowded	Total
1–2 persons	N	450	27	477
	%	94.3%	5.7%	100.0%
3 persons	N	193	39	232
	%	83.2%	16.8%	100.0%
4 persons	N	59	100	159
	%	37.1%	62.9%	100.0%
5 persons and over	N	17	46	63
	%	27.0%	73.0%	100.0%
Total	N	719	212	931
	%	77.2%	22.8%	100.0%

**Table 8.2. Chi-Square Test and Cramer’s V for the Association Between Household Size and Housing Overcrowding (N = 931)**

Statistical indicator	Value
Chi-square ( $\chi^2$ )	320.08
Degrees of freedom (df)	3
Significance level (p)	< 0.001
Cramer’s V	0.586 (large effect)

**Table 9.1. Housing Type and Housing Overcrowding (m<sup>2</sup>/person < 15.33)**

Housing type	Indicator	Not overcrowded	Overcrowded	Total
Studio apartment (building)	N	27	25	52
	%	51.9%	48.1%	100.0%
Apartment (building)	N	478	105	583
	%	82.0%	18.0%	100.0%
Detached house	N	138	36	174
	%	79.3%	20.7%	100.0%
Semi-detached house (duplex)	N	32	12	44
	%	72.7%	27.3%	100.0%
Row house (attached)	N	44	34	78
	%	56.4%	43.6%	100.0%
Total	N	719	212	931
	%	77.2%	22.8%	100.0%

**Table 9.2. Chi-Square Test and Cramer's V for the Association Between Housing Type and Housing Overcrowding (N = 931)**

Statistical indicator	Value
Chi-square ( $\chi^2$ )	46.61
Degrees of freedom (df)	4
Significance level (p)	< 0.001
Cramer's V	0.224 (weak effect)

**Table 10.1. Residential Area and Housing Overcrowding (m<sup>2</sup>/person < 15.33)**

Residential area	Indicator	Not overcrowded	Overcrowded	Total
Aeroport 1	N	191	76	267
	%	71.5%	28.5%	100.0%
Aeroport 2	N	194	42	236
	%	82.2%	17.8%	100.0%
Center	N	202	31	233
	%	86.7%	13.3%	100.0%
Colonie	N	107	40	147
	%	72.8%	27.2%	100.0%
Bosnea	N	25	23	48
	%	52.1%	47.9%	100.0%
Total	N	719	212	931
	%	77.2%	22.8%	100.0%

**Table 10.2. Chi-Square Test and Cramer's V for the Association Between Residential Area and Housing Overcrowding (N = 931)**

Statistical indicator	Value
Chi-square ( $\chi^2$ )	39.02
Degrees of freedom (df)	4
Significance level (p)	< 0.001
Cramer's V	0.205 (weak effect)