THE IMPACT OF SOCIO-ECONOMIC ACTIVITIES ON THE HOUSING QUALITY INDEX (HCI) OF THE URBAN AXIS NETWORK IN ROMANIA CASE STUDY: URBAN AXIS IN BISTRITA-NASAUD COUNTY

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Abstract:

The size of the home is considered the most critical issue affecting the quality of life. This can be measured by the quality of the house and its environment. This paper highlights the housing quality index at the urban axis level in Bistrita-Nasaud county and the impact of socioeconomic activities on the index. The Household Quality of Life Index (HQLI) was calculated based on 11 variables. Household quality of life comprises two distinctive indices: the Housing Conditions Index (HCI) and the Asset Possession Index (API). The study found a variation in the housing condition variables across the urban focus areas. The impact of the socioeconomic environments is disproportionately dependent on the social-economic profile of the urban environments that make up the Urban Axis and the related economic activities that take place in the area of influence in the administrative-territorial units and the variability of the Housing Conditions Index This can be measured by the quality of the house and its environment. This paper highlights the housing quality index at the urban axis level in Bistrita-Nasaud county and the impact of socioeconomic activities on this index.

The study area comprises territories in the municipality of Bistrita. The socio-economic context of the area has been the basis for understanding the patterns of evolution identified in the urban landscape, and being a driver in ongoing urban transformations and processes.

The impact of the socio-economic is disproportionate to the socioeconomic profile of the urban environments that make up the Urban Axis and the economic activities related to the economic activities taking place in the catchment area in the administrative-territorial units, hence the variability of the Housing Conditions Index which is a system Housing Quality Indicator (HQI) is a tool for measuring and evaluating housing systems based on quality and not just cost.

Keywords: Housing Conditions Index, socio-economic environments, the impact of the socio-economic, urban axis.

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1. INTRODUCTION

The quality of life can be used as the most general aim of sustainable development, representing the economic, social and environmental dimensions. In this context, it is essential to assess the quality of life by evaluating the economic, social and ecological indicators of quality of life. (Albouy, Godefroy, and Lollivier, 2010,) (Boarini, Comola, De Keulenauer, Manchin, and Smith, 2010)

Indicators are a handy tool to develop policies and monitor the effectiveness and results achieved by these policies. Indicators are tools that measure, simplify and communicate significant issues and trends. They can help people understand the essence of sustainable development issues and their relationships. Indicators are practical means of measuring progress. They are also valuable tools to raise critical problem awareness among the public and policy-makers and help people understand what they need to do. The term quality of life is used to evaluate the general well-being of individuals and societies. (Dolan, Peasgood, and White,2010).

As this is a critical issue for sustainable development, it is essential to develop a system of measurement of quality of life. Quality of life is used in various contexts, including international development, healthcare, environment and politics. Quality of life should not be mixed with the standard of living based primarily on income.
(Helliwell and Barrington-Leigh,2010)

The type of house primarily depends upon the geographical environment and the socio-economic structure of the people (Sahay,2006). The housing environment includes housing conditions, household water supply, indoor air, and indoor noise pollution]. Housing structure and materials' quality are essential parameters for estimating (QOL) (Sahay,2006). Housing is reg important social determinant of physical and mental health and well-being (Streimikiene,2014). The concept of housing conditions is very comprehensive and encompasses both the dwelling's physical attributes and satisfaction with housing (Bhonsle, Adane,2013). Measuring housing conditions and their effects on people's well-being is a complex task because there are few comparable indicators (E.Diener, Helliwell, Kahneman,2010). Housing reflects the cultural, social and economic values of the society, as it is the best physical and historical evidence of the civilisation of a country (Omole, F.K,2010).

The standard indicators of quality of life usually include wealth and employment, the built environment, physical and mental health, education, recreation and leisure time, crime rate and social belonging.

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Another factor influencing the standard indicators of quality of life is the environmental component. Environmental degradation by economic activities is a major factor in determining the quality index.

The impact assessment in the Urban Axis is carried out in two main stages:

Identification of potential forms of impact - this stage will be carried out, based on a matrix used to identify the environmental components potentially affected by the specific activities of such a project. Note that this stage does not confirm the existence of impact forms, its role being to identify some of the directions to be analysed in the next stage.

In this stage, after researching the environmental components that present an increased risk of degradation as a result of social and economic activities that lead to oscillations in the quality index, a calculation system is developed that will evaluate the impact of the factors mentioned on the quality index, using Factor Analysis Methods in the construction of the calculation.

Qualitative and quantitative assessment of identified forms of impact - the purpose of this stage is to disprove or confirm the occurrence of some forms of impact while being able to identify new forms of impact that may arise as synergistic or cumulative effects of those initially identified this stage may disprove the occurrence of some impacts, but identify new forms of impact that arise as a synergistic or cumulative effect of the initially identified.

The assessment of the significance of the impact is based on the magnitude of proposed changes and the sensitivity of the area in which the study is proposed to be carried out.

The urban landscape brings together in a confined space several functionalities, such as residential, industrial, institutional, commercial, etc., which are sometimes incompatible with each other. By meeting the needs of the present generation, development makes it easier for future generations to make their own choices, which is sustainable growth. (G. Ionașcu 2003)

The urban landscape is a component of the cultural and economic landscape with the highest proportion of anthropic components compared to the natural landscape (Ciangă I., 2013).

It can be interpreted as an expression of the socio-economic environment of the city (Ciangă I., 2013). It shows the lifestyle of its inhabitants, together with the set of values and activities that characterize them, highlighting the adaptation of the urban area to the geographical conditions that result in the importance of the quality of housing index in urban environments. The attractiveness of the urban axis in Bistrita-Nasaud county depends on the variability of the index

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2. LITERATURE REVIEW

For the development of this study, a large body of literature on the Quality of Life Index was consulted. These include:

Basic Quality of Life Index and Advanced Quality of Life Index(Basic and Advanced QOL Indexes) Diener (1995). The first index was developed to differentiate between countries according to objective criteria and is applied to developing countries, the latter also contains a subjective component and is constructed for developed countries.

The Netherlands Living Conditions Index was initiated for the Netherlands in 1974 by the Netherlands Planning and Social Planning Office (Boelhouwer and Stoop, 1999), producing annual reports.

The components of the index are housing, health, purchasing power, leisure activities, mobility, social participation, sporting activities, holidays, education and employment. The index is an overall score for all components but can also be calculated for each of the domains.

Although it does not include either subjective component, this index has been validated by correlating with scores recorded by the happiness indicator in the research used.

World Health Organization Quality of Life Index WHOQOL) created by the World Health Organization includes six dimensions of quality of life: the physical, psychological, health and social dimensions. independence, social relationships, environment and spiritual dimension (WHOQOL Group, 1998a).

The index is based on representative sample surveys and includes perceptions of objective states ("How well you sleep") and subjective indicators (e.g. "How satisfied are you with your sleep").

The index has two versions, WHOQOL 100 based on 100 indicators and WHOQOL Bref based on 24 indicators (WHOQOL Group, 1998b).

Canadian Welfare Index (Canadian Index of Wellbeing (Michalos et al., 2010)

One of the most recent and well-documented attempts to express the multidimensionality of quality of life using a unidimensional scale based on a selection of indicators.

- Quality of life domains: standard of living, health, environmental quality, education, 'use' of time, community vitality, participation in the democratic process, leisure and culture. The index was designed as a tool for policy-makers, media, communities and ordinary people.

- This index is one of the most theoretically well-documented constructs and a measurement method that follows to the highest degree the basic principles of the quality of life model, combining objective indicators with subjective ones.

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3. METHODS AND DATA

Several calculation indices are used to determine the impact of social economic factors on the quality index. The calculation indices used are :

The household quality of life index was constructed using the proportional possession weighting technique. Possession weighting was suggested by (Peter Townsend 1979) in his study of poverty in the UK.

It involves measuring the normal level of possession for the standard of living or health measures and then weighting each component of an index by this level (or its inverse). European social researchers have widely used the method of weighing possessions, especially when comparing survey results from different countries or years in the same country.

The Household Quality of Life Index includes two major components, namely the Housing Conditions Index and the Household Quality of Life Index Asset Ownership Index. Each of these is composed of several indicators or subcomponents (Banu, N; Fazal, S, 2013) (Banu, N; Fazal, S,2016).

In the index analysis, we also add the Matrix identifying the main forms of potential (economic) impact on the component's environmental components. Factor Analysis is used for the mathematical transposition of linear statistical relationships of correlations between the studied index variables, which is a method of complex and systematic study and measurement of the impact of factors on the value of the actual indicator.

Methods for analysing the quantitative influence of factors on the change in the actual indicator

Differential calculation method. The theoretical basis for a quantitative assessment of the role of individual factors in the dynamics of the effective (generalising) indicator is differentiation.

In the method of differential calculus, it is assumed that the total growth of the functions (the resulting indicator) differs in terms, where the value of each of them is determined as the product of the corresponding partial derivative by the growth of the variable over which this derivative is calculated. Let us consider the problem of finding the influence of factors on the change in the resulting indicator by the method of differential calculus using the example of a function of two variables. Given a function ID= (x, y), then if the function is differentiable, its increment can be expressed as where is the change of functions; Where x represents the sum of the factors distributed by dividend by the total number of years resulting in the proportion of x

$$ID= ID_1+ID_2= (\text{ Proportion of } X \div \text{Total population in the urban axis}) + \text{Sum of } Y;$$

$$ID= ID+ID=HCI \text{ Urban Axis}$$

The formula aims at the mathematical analysis of indicators in the Urban Axis System.

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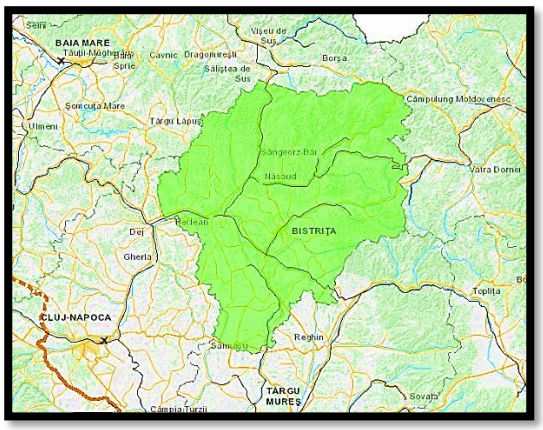
An infinitely small quantity of higher order than. The influence of factors x and y on the change of ID is determined in this case as and their sum is the principal part (linear concerning the increase of the factors) of the increment of the differentiable function.

It should be noted that the parameter is small for sufficiently small changes in the factors, and its values can differ significantly from zero with large changes in the factors.

4. STUDY AREA

Bistrița-Năsăud county is located in the central-northern part of the country, between coordinates 46 ^{0}48`-47 $^{0}$ 37` north latitude and 23^{0} 27`-25$^{0}$ 36` longitude east, at the contact between the Transylvanian Plateau and the Eastern Carpathians, with an area of 5355 km2. (I.Bâca, A. Onofreiu 2016) (See figure 1,2)



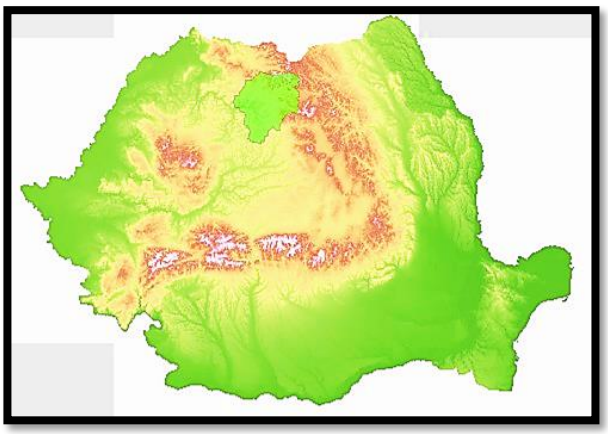


Fig.1 Location of Bistrița -Năsăud county at the regional level **Fig**.2 Location of Bistrița -Năsăud county at the national level

Source: https://geoportal.ancpi.ro/

The geographical elements that make up the link between references are the mountainous crown Țibleș-Rodna-Suhard-Bârgău-Călimani, the hilly foothills (Someșului Mare Hills, Someșului Mare Hills Bistriței, the Transylvanian Plain) and the upper course of the Someșului Mare, with tributaries draining almost the entire county (except the extreme south, which gravitates towards Mures). (I.Bâca, A. Onofreiu,2016)

The county's administrative neighbours are represented by Maramures to the north, Suceava to the east, Mures to the south and Cluj to the west. Bistrița-Năsăud county is part of the region of development region, together with Maramures, Satu Mare, Bihor, Sălaj counties, and Cluj, being connected to the national economic system by the railways Cluj-Beclean-Bistrița, Cluj-Beclean-Ilva Mică-Vatra Dornei, Bistrița- Beclean-Salva-Vișeu de Jos, Bistrița-Sărățel-Deda-Brașov-București, and a national roads DN 15 A (Bistrița-Reghin), DN 17-E576 (Dej-Bistrița- Vatra Dornei), DN 17 D (Dej-Beclean-Năsăud-Valea Mare) and DN 17 C(Bistrița-Năsăud-Salva-Moisei). (I.Bâca, A. Onofreiu, 2016)

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Functionally, the county occupies a territory located at the intersection of the geographical axes Oradea-Cluj-Napoca-Bistrița-Vatra Dornei- Suceava-Iași, Satu Mare-Baia Mare-Zalău-Dej-Beclean-Bistrița and Sighetu Marmației-Bistrița-Târgu Mureș, whose importance will increase in the coming years. (I.Bâca, A. Onofreiu 2016)

Location of the Urban Axis within the county

Bistrița is the municipality of Bistrița-Năsăud county, Transylvania, Romania, formed by the component localities of Bistrița, Ghinda, Sărata, Sigmir, Slătinița, Unirea and Viișoara. It is also the largest town in the county. (See figure 3)

Fig.3 Location of urban space at the county level

Source: https://geoportal.ancpi.ro/

Beclean, also known as Beclean on Someș, is a town in Bistrița-Năsăud county, Transylvania, Romania, consisting of the component town Beclean, and the villages Coldău, Figa and Rusu de Jos. (See figure 4)

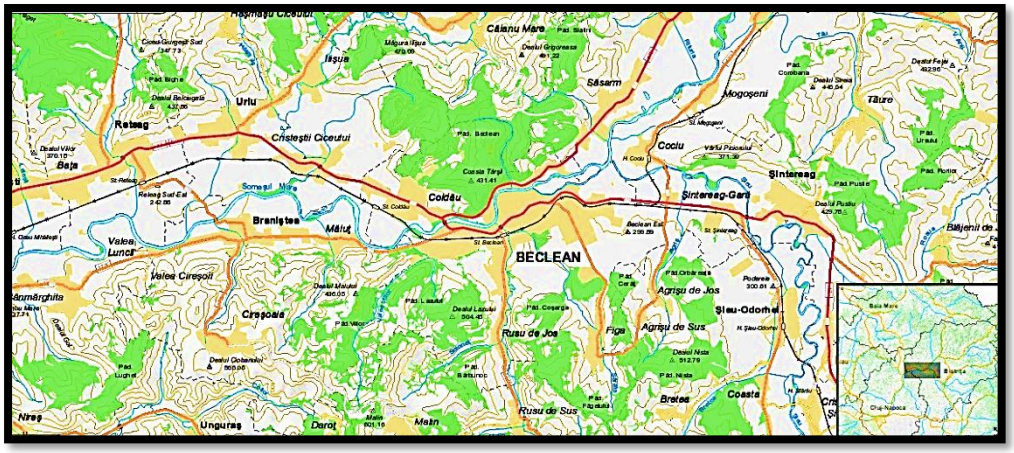

Fig.4 Beclean Location

Source: https://geoportal.ancpi.ro/

Năsăud is a town in Bistrița-Năsăud county, Transylvania, Romania, consisting of the component localities Liviu Rebreanu, Lușca and Năsăud (residence).(See figure 5)

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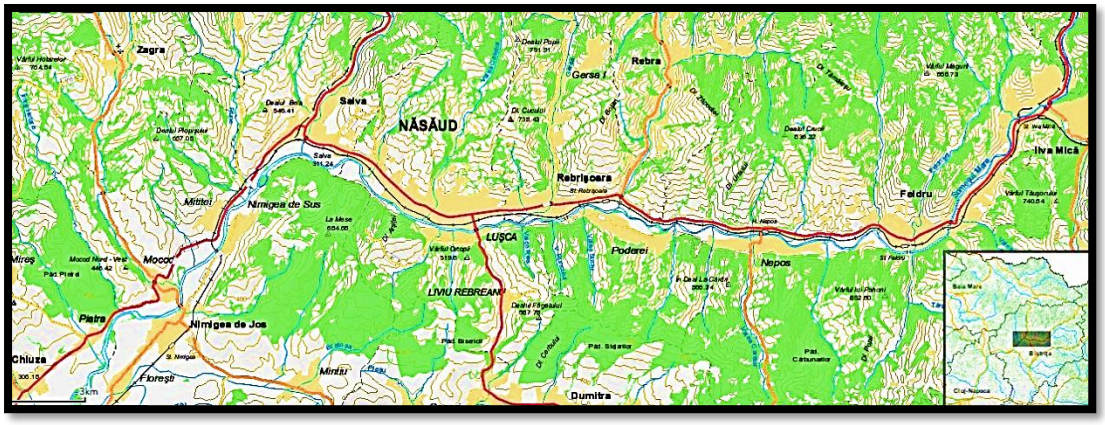

Fig.5 Nasaud location

Source: https://geoportal.ancpi.ro/

Sângeorz-Băi, formerly Sângeorzul Român is a town in Bistrița-Năsăud county, Transylvania, Romania, consisting of the component localities Cormaia, Sângeorz-Băi (residence) and Valley of Borcutului. (See figure 6)

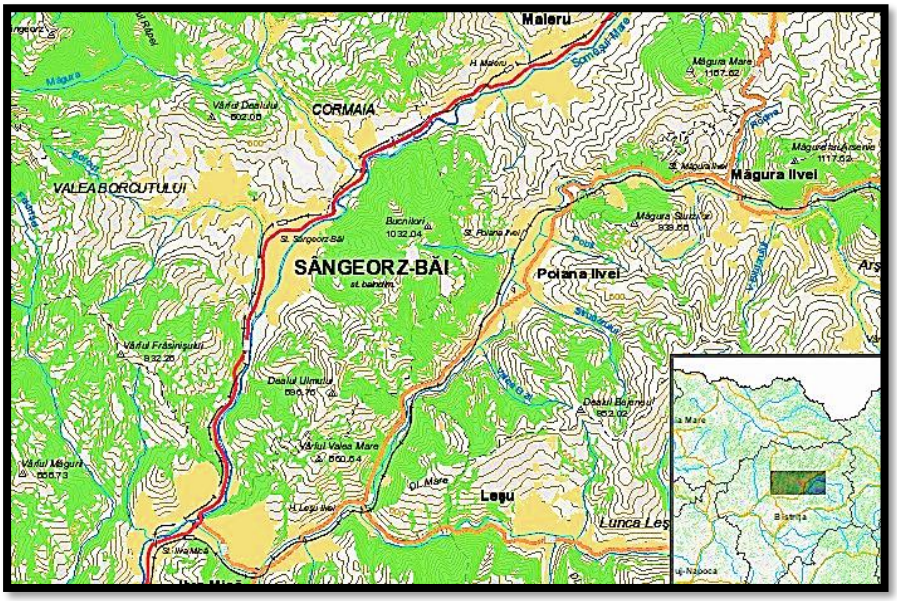

Fig.6 Sângeorz -Băi location

Source : https://geoportal.ancpi.ro/

Research support in the article is taken from the Urban Axis of Bistrita -Nasaud county formed by the administrative-territorial units: Bistrita -Beclean-Nasaud-Sangeorz-Bai.

In the research of the impact factors and the analysis of the interactive mode of the social and economic components, the specificity of the administrative-territorial units is considered: space, population, level of development and environmental quality.

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5. INFLUENCE OF SOCIO-ECONOMIC ACTIVITIES ON THE HOUSING QUALITY INDEX IN THE LOCAL URBAN AXIS

Functionality model of the social-economic components that have an impact on the housing quality index.

The model is organized into four compartments, each compartment representing the components with impact factors by specific symbols. At the centre of the model are the group of people and the components that interact with it. The functionality model presents factors that influence the quality index through interaction with the group of people and their relationship to the model.

The model presents and descriptively analyses the components to determine the influence of social and economic activities.

The constructed model presents the research basis for the mathematical analysis of impact factors and index value. (See figure 7)

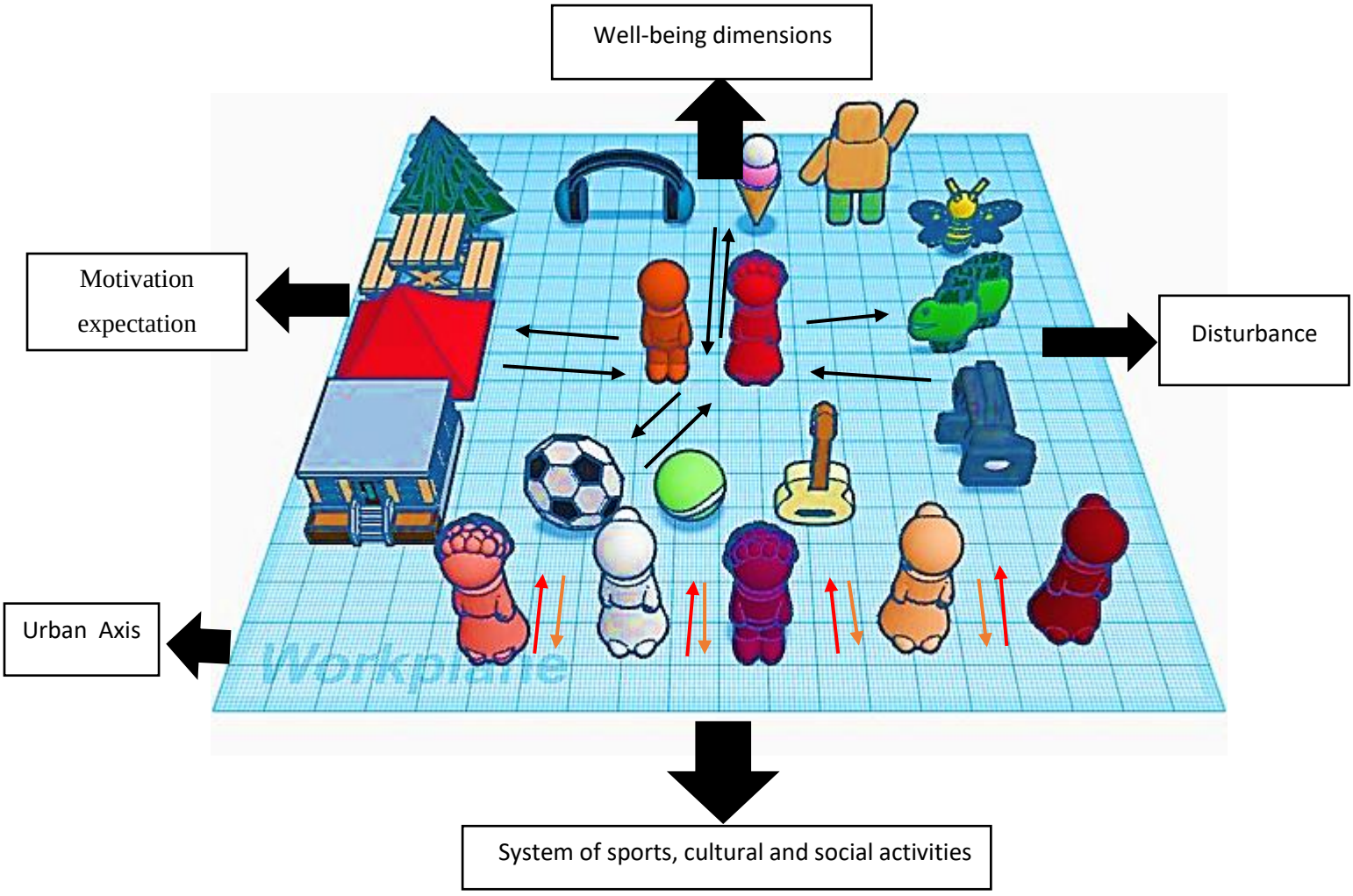

Fig.7 Module of interaction analysis between socio-economic components and population

Source: https://www.tinkercad.com/

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Additional explanation of the components and organisation of the analysis

1. **Motivation expectation**: This behaviour is made up of green spaces (forest, recreational forest, parks, botanical gardens), recreational activities (leisure time, access to recreational infrastructure), and real estate (access to any type of dwelling's house, villa, or apartment). The motivation and expectations component influences the housing quality indicator through social norms and economic purchasing power. If one of the structural components of the compartment is not in interaction with the group of people (lack of green spaces, the house you can't buy) it affects negatively the quality index of places by decreasing the quality.

2. Well-being dimensions, Disturbance, System of sports, cultural and social activities

These compartments represent social behaviour and economic preference elements in the urban axis housing area that influences the quality index. Separately analysed, each component represents a different character which methodologically can be put together for the mathematical evaluation of the quality index as a starting point for the evaluation of geographical axes in the urban area.

As conceptual analysis the following components are defined:

- Dimensions of well-being are made up of commercial and social elements of the local urban axis. Disruption of interactions between elements and collective leads to changes in the index;
- Disturbance consists of media, the internet, and pests that create social disruption. This component is part of the module because due to social challenges created by disruptive agents an economic adaptive response is made which can influence the index calculation;
- The system of sports, cultural and social activities is a component of the module which represents the level of development of the inhabited space in the urban axis. Within this system, infrastructures are built that allow territorial connectivity within the geographical axis. The level of infrastructure development in the system (economic effort and social involvement of the community) influences the housing quality index.

The urban axis is the geographical support where the interactions between the social-economic components with an impact factor on the index take place.

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6. ANALYSIS OF THE URBAN HOUSING QUALITY INDEX OF THE GEOGRAPHICAL AXIS AND QUALITY OF LIFE

Between urbanism and the environment, there is a complexity of theoretical and operational relationships that are difficult to define and quantify. These are explained by the fact that urbanism, refers to the totality of activities related to spatial planning and settlements that interferes on and in many sub-domains with the environment, both natural and man-made. influenced by the activities of human communities. Given the global nature of the two concepts, their interrelationships are complex. (C. Alpi, 2008)

The environment, both the natural environment and the environment influenced by human activities, does not have a value of its own; the value of the environment and its factors, including buildings of all kinds, can only be appreciated by man, whom both himself and his needs evolve. Under these circumstances, the key issue which also applies to the relationship between town planning and the environment is not to conserve, and preserve what it was in the past, but to control and direct this process daily and to influence it, within certain limits, especially with a prospective orientation. (C. Alpopi,2008)

The interdependence between the environment and the geographical axes of urban planning is reflected in the way in which industry and agriculture use natural resources and manage waste of all kinds resulting from these two economic processes; depending on the solutions offered by urban planning, the environment may or may not retain its natural capacity to absorb and transform part of the pollutants. (C.Alpopi,2008)

In the context of the urban planning-environment relationship, population growth and concentration, and the multiplication and diversification of technological processes, especially those and agriculture, are causing, relatively suddenly, imbalances ecological imbalances. This is the only passive way of protecting the environment, its natural self-defence capacity, pollution itself, and the way its natural self-defence capacity, pollution itself, the way distributed in the territory become threatening. Failure to take action could lead to irreversible or very long-lasting harmful effects of a return to a state of a normal state. (C. Alpopi, 2008)

Undeniably, the city's development has adverse consequences on the space, the environment, and people's quality of life.

One effect dramatic effect of the urbanisation process is linked to the transformation of the environment in a way and on a scale unparalleled in history. Changes have affected the environment, particularly the so-called 'environmental problem' and triggered the 'environmental alert' of the last century. decades. (C. Alpopi,2008)

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The main "disruptive phenomena" influencing the quality index are:

- consumption of space with impact on the ecosystem through deforestation, deforestation, drainage, erosion, and changes in the relationship between population and habitat;
- unrestricted exploitation of natural resources, especially those raw materials, water, and wood;
- the polluting effects of large cities on the waste problem pollution and degradation of green spaces, changes in climate, influences on wildlife, etc;
- increased car and air traffic and air pollution with substances particularly toxic substances;
- increasing quantities of untreated or incompletely treated fluids discharged into outfalls;
- fragmentation of natural ecosystems through over-expansion of barriers of man-made barriers such as motorways, large industrial platforms, etc;
- effects on human health through increased mental illness, increased cardiovascular disease, etc.

The continuing explosion of urban phenomena in the geographical axis has led to increased costs of equipment for housing, traffic, health, education, and leisure. (C. Alpopi,2008)

In parallel with the growing trends of cosmopolitanism and segregation, rising unemployment, poverty and social insecurity, land pressure and speculation, ultimately contribute to the degradation of the quality of life and the environment. (C. Alpopi,2008)

To achieve the actual impact indicator and apply the formula ID+ID=HCI Urban Axis analysis is structured as follows:

1. Air quality in urban agglomerations (Bistrita, Nasaud, Beclean, Sangeorz-Bai) and Health Effects and Noise Pollution

Studies show that pollutants emitted into the air above a certain concentration and exposure time limit affect health.

According to the data provided by DSP Bistrita-Nasaud, the evolution of mortality and illnesses for some diseases that have air pollution as a factor are shown in the graphs below.

According to data provided by the Public Health Department of Bistrita-Nasaud County, we can follow in the graphs below the evolution of cases of illnesses for diseases considered as being produced and/or influenced by noise pollution. (See figure 8,9)

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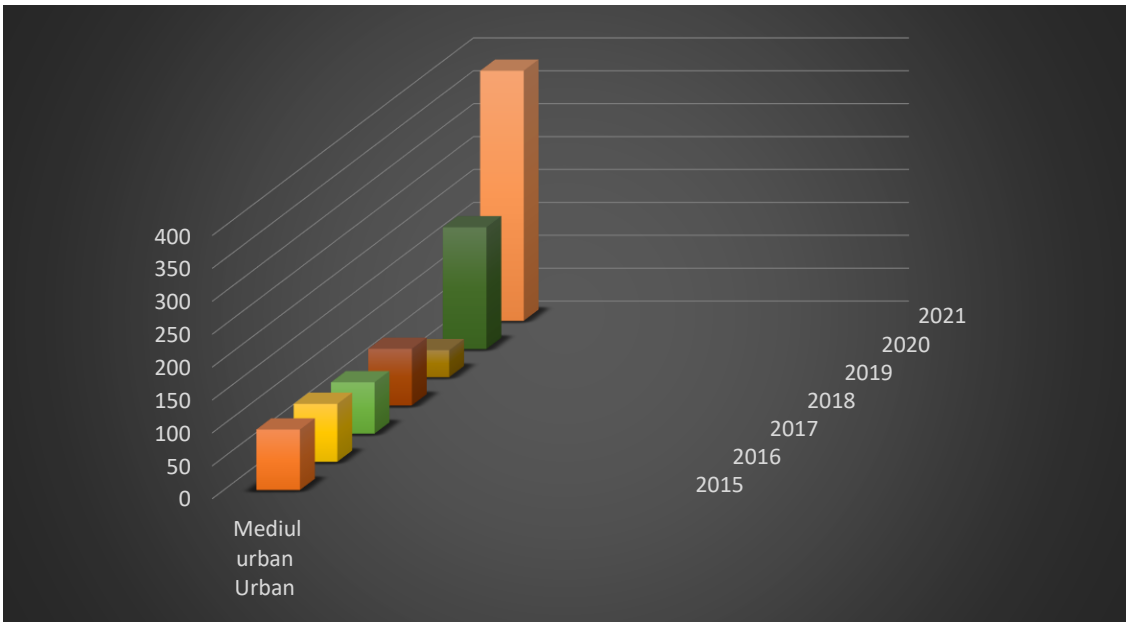

Fig.8 Evolution of mortality (number of persons) due to cardiovascular diseases and respiratory diseases, by residence environment (urban), Bistrița-Năsăud county

Source : Bistrita-Nasaud Public Health Departament

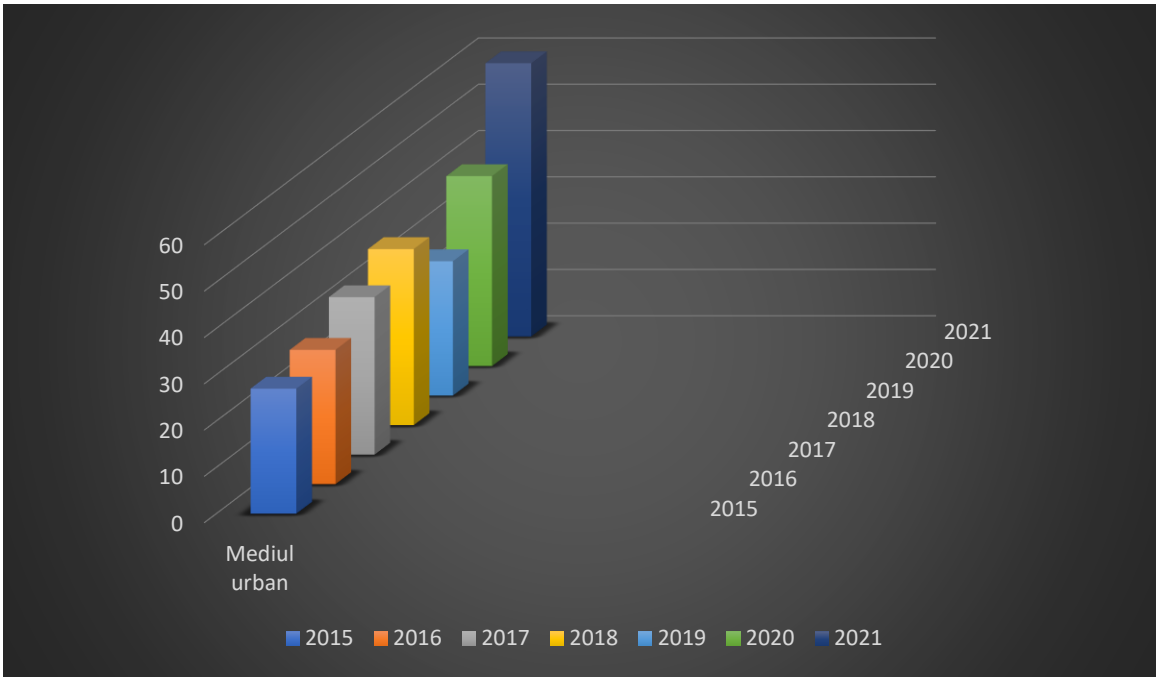

Fig.9 Evolution of illness (number of persons) with diseases related to noise pollution, Bistrita-Năsăud county (urban axis)

Source : Bistrita-Nasaud Public Health Departament

ID_1 = (Proportion Number of cases ÷Total population in the urban axis) +Sum of Y

- ID_1 = 950 (total number of people due to cardiovascular diseases and respiratory diseases), 7 (years) ;
- ID_1 = 270 (total number of people with diseases related to noise pollution),7 (years)
- Bistrita population : 94.631

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- Beclean population: 12.168
- Nasaud population: 11.411
- Sangeorz-Bai population : 11.970
- The total population in the urban axis – 94.631+12.168+11.411+11.970= 130.180
- Sum of Y - the result of the operation

ID1 950÷7 = 135,7 proportion number of cases

ID1 270÷7=36,7 proportion number of cases

ID1 135,7÷130.180 =1,04

ID1 270÷130.180=0,2

ID1 1,04+0,2 = 1,24

ID1 final = 1,24

1,24 is the value of the Urban Axis index. the first ID 1 index in the analysis took into account the impact of social activities in the urban environment that damage health noise and air pollution

2. Analysis of ID2 Green Spaces and the effects on the health, quality of life and population density per living space.

The area occupied by green spaces in the urban agglomeration in the geographical axis influences social and economic activities and therefore the quality index. (See figure 10)

According to data provided by urban municipalities, in 2021 the urban area will have 400.76 ha of green spaces distributed as follows (It is worth mentioning that in the period 2017-2021 the area of green spaces in the intra-village did not change):

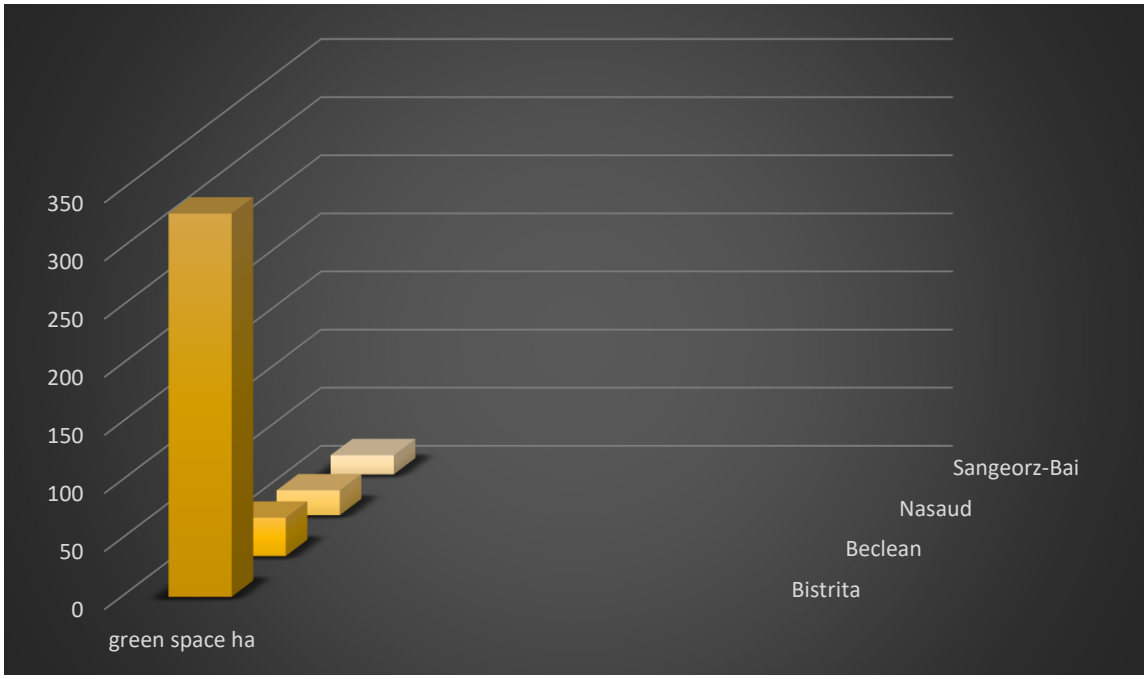

Fig.10 Area of green spaces in the urban agglomeration

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According to data taken from the INSSE website, at the end of 2021, there were Bistrița-Năsăud county 125116 dwellings, 3925 more than in the previous year

The habitable floor area (expressed as square metres of developed area) at the end of 2021 was 6477516 sq.m, 220766 sq.m more than in 2020. At the same time, there was also an increase in available living space per capita, in urban areas. (See figure 11,12)

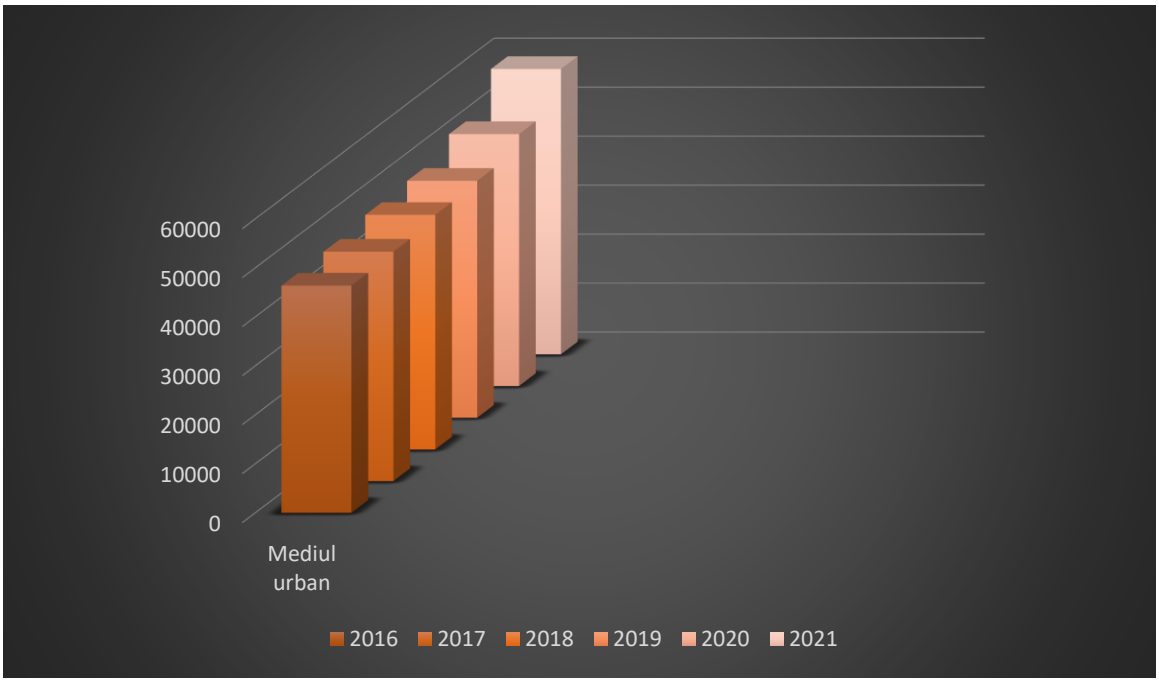

Fig.11 Evolution of existing dwellings at the end of the year, Bistrița-Năsăud county urban area

Source: http://statistici.insse.ro/

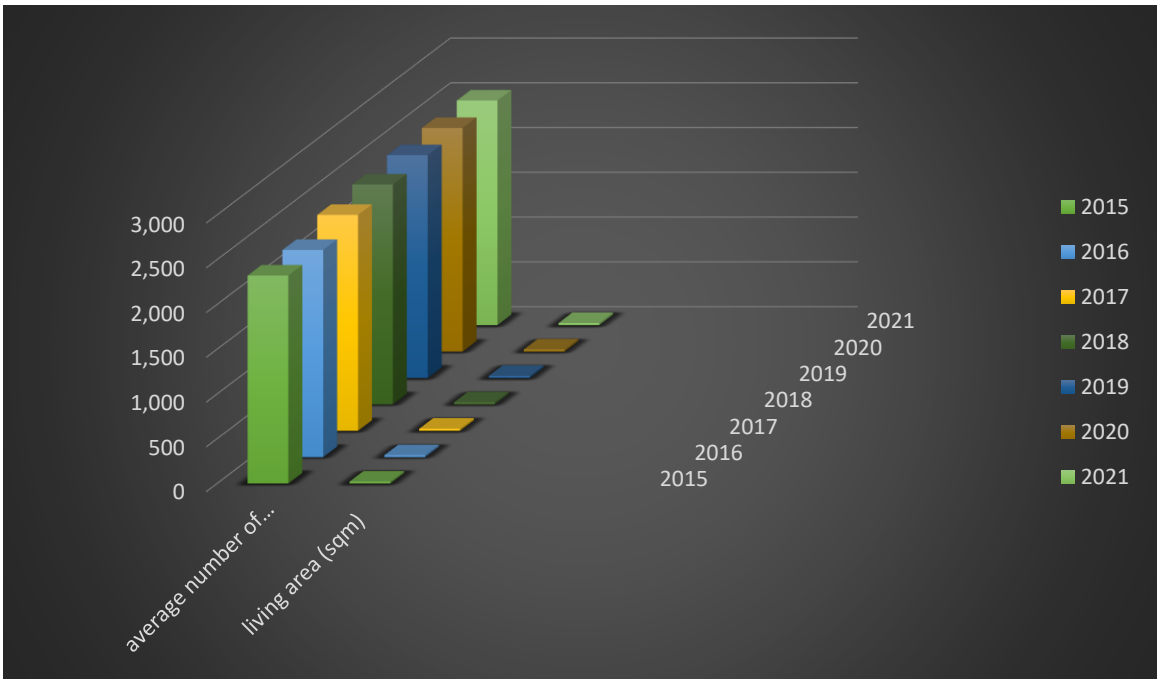

Fig.12 Evolution of the average number of inhabitants per dwelling and the habitable area (sqm) per inhabitant

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ID_2 = (Proportion of area ÷ Total population in the urban axis) +Sum of Y

- ID_2 400,76 (total ha of green spaces distribute)
- ID_2 299,085(total dwellings)
- ID_2 16,995 (total number of inhabitants per dwelling)
- ID_2 156,08 (total habitable area (sqm) per inhabitant)
- ID_2 130.180 (population urban axis)
- ID_2 7,6 years

ID_2 400,76÷130,180= 3,07

ID_2 299,085÷6= 49,84

ID_2 16,995÷130,180= 0,13

ID_2 156,08÷7 =22,29

$ID_{2\ final}$ 3,07+49,84+0,13+22,29=75,33

The housing quality index measurement scale uses the socio-economic component model that analyses the interaction between environmental components and the group of people. The following factors were investigated in the analysis of impact factors: 1. Air quality in urban agglomerations (Bistrita, Năsăud, Beclean, Sangeorz-Bai) and the effects on health and noise pollution, 2. Analysis of ID2 Green spaces and effects on health, quality of life and population density per living space.
Housing quality index scale using the socio-economic components model

The mathematical formula used: ID= ID1+ID2= (Proportion of X ÷ Total population in the urban axis) +Sum of Y;

ID= ID+ID=HCI Urban Axis

The proportion of X =sum of factors in analysis space and the number of people divided by total years of evolution analysis maximum of 7, minimum of 6 years.

Proportion X is a variable dependent on factors analysed time and population. The final result represents the characteristics of the Urban Axis of Bistrita-Nasaud County.

The resulting value represents a factor of analysis for future research of the Geographical Axes at the national level regarding the evaluation of the social-economic index of the axis. The final result represents a social value that indicates the direction of development regarding the quality of housing.

ID=1,24+75,33=76,57 HCI Urban Axis

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7. Geographical axis social economic evaluation index

The Geographical Axis Evaluation Index is the methodological support for research and analysis of the PhD thesis. The theme of the scientific paper is Dynamics of Geographical Axes on the Territory of Bistrita-Nasaud County and Sustainable Economic Development.

According to the definition, the index is an alphabetical or subject list placed at the end or the beginning of a book or published in a separate volume, including the subjects, authors or words contained in it, with an indication of the pages (and volumes) where they are found (https://dexonline.ro/definitie/index/sinteza).

Starting from the definition given by the DEX, the development of the Geographical Axis Index is analysed, within which the system components (list) are created, with the help of which geographical axes are evaluated from the point of view of social and economic development.

On this issue, we consider that RDAs also have the task of acting on the level of greater social integration and inclusion. (R. Galliano,2015)

Social sustainability is also obviously linked to economic sustainability. The goal of equality and equal opportunities for access to resources and work for the various social groups, even those most socially disadvantaged or with skills which have less market demand, is a goal of a "political" nature, and as such should be defined and carried out differently in each country. Some phenomena however seem, at least tendentiously, to be common to all countries. (R. Galliano,2015)

We are witnessing a downsizing of public services, largely, but not wholly, due to a lack of resources. The phenomenon has already been indicated as one of the factors behind the development of the social economy. It seems important, however, to underline the advantage of an RDA to further greater social integration and inclusion in its area. In brief, leaving aside the motivations of an ethical nature, although they are fundamental to principles of equity, we must emphasise that the local community with a high level of social inclusion enables a more harmonious growth of its components, lowering the level of internal conflict and hence improving the quality of life of its citizens and the attractiveness of the area. (R. Galliano,2015)

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8. CONCLUSION

Measuring housing conditions and their effects on people's well-being is complex. Measuring housing conditions and their effects on people's well-being is a complex task because there are very few comparable indicators.

In the formula for calculating the interaction between the social and economic components and the population, variables are introduced which take into account the geographical specificity of the territory in terms of space, population size, degree of urbanisation, etc.

An ideal set of indicators for measuring housing conditions should provide information about the physical characteristics of the dwelling and the environment in general the wider environmental characteristics of the areas in which dwellings are located (e.g. noise exposure, indoor pollution) and housing costs, which represent a large part of the household budget.

The proposed system of housing indicators relevant to the quality of life includes 2

housing quality indicators, 2 housing environment indicators and 2 housing cost burden indicators. The resulting value is an input for future research of the geographical axes at the national level in terms of the evaluation of the axis social-economic index. The final result is a social value that indicates the development directions in terms of housing quality. The housing quality of a place is determined by the population’s standard of living.

Taking into account the HCI urban axis resulting from the calculation of socio-economic indicators, we can confirm that the impact of the components on the indicators is visible, and we can investigate the creation of a methodological basis for calculating the evaluation scale of the urban axis on housing quality.

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