

Romania's urban policy in the context of COVID-19 pandemic time

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Abstract: Under the conditions of frequent changes, of some edifying transformations and perpetual challenges, urban policy undergoes changes/adjustments/updates over certain time intervals. These changes generate increasingly more complex requirements that impose drafting a flexible multidisciplinary framework able to support the future development of a territory. In full debate-process, the new urban policy of Romania promotes sustainability, resilience and inclusive growth, on the background of a critical period under the dominance of the SARS-CoV2 pandemic. This new policy brings around the discussion table experts from relevant fields: decision factors, urbanists, economists, architects, citizens, civic initiative groups, etc. The national urban policy must address all categories of urban areas (defined as a city area considered as the inner city plus built-up environs, irrespective of local body administrative boundaries), being fundamental in implementing the goals set by the New EU Urban Agenda, approved in the framework of the Habitat III conference of the United Nations (2016) and the new provisions of the New Leipzig Charter (2020). Urban policy must ensure a single planning framework that would support the implementation of the programs and projects financed from European and national funds, preparing thus the financial exercise 2021-2027. Considering the above mentioned, the present paper aims to review the important and strategic elements of the future urban policy from Romania and its role in promoting and supporting balanced territorial development under the conditions of the SARS-CoV2 pandemic crisis which is far from over.

Key words: urban policy, regional development, territorial resilience, social cohesion, COVID-19 crisis

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1. INTRODUCTION

In spite of the restrictions imposed by the COVID-19 pandemic, the New Leipzig Charter titled *The transformative power of cities for the common good* adopted on 30th November 2020 begins to produce its effects by establishing a general urban development framework applicable to all member-states and urban areas of the EU.

Developed in relatively difficult conditions, characterized by the SARS-CoV2 pandemic, by the visible and unpredictable climate changes, by economic, social, political, etc. uncertainties, the Leipzig Charter requires from the cities to set up integrated strategies of urban development for the period 2021-2027, which subsequently will contain programs and projects financed by the new regional policy. The mentioned document is directly correlated with the *Cohesion and Regional Development Policy* of the European Union, urban areas being regarded as core elements of this policy.

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The New Leipzig Charter covers three classic dimensions of community development: *sustainability (ecologic)*, *just (socially equitable)* and *prosperous (productive)*, determining thematic fields of action for each of them. At the same time, it proposes a compact, multifunctional urban planning and an architectural urban environment of high quality that would ensure welfare and prosperity. Moreover, digitalization is the common denominator of all three dimensions and as opportunities are mentioned here smart mobility, energy efficiency or efficient public services.

The principles of this strategic document are correlated with good, integrated, operational governance at multiple levels and focused on the concept of *place-based approach*. The New Leipzig Charter does not derail from the 2030 Agenda for Sustainable Development, and especially from the Objective no. 11 regarding sustainable development, an objective dedicated to inclusive, safe, resilient and sustainable cities. Due to its profound community character, the Charter overlaps with the principles and objectives established by the New European Urban Agenda, based on the Paris Agreement, and the Green Pact of the European Commission. Here should be mentioned also the Green Deal, as it aims for Europe to become the first climate-neutral continent. Synthetically, the New Charter establishes a unitary and shared policy framework, built on all European agreements and on those assumed at global level, that target in particular and directly the urban level (the urban area).

In the current pandemic context, the Charter indicates also associated risks, risks related to protecting private life and a new spatial and social division [1]. Taking into account the pandemic phenomenon and the global health crisis the New Leipzig Charter approaches also the issues triggered by the COVID-19 infection (shown mostly in high urban agglomerations and affecting these stronger than other categories of territories), by giving more power to cities and assisting them in unlocking their transformative power of adjusting to the new conditions. By attempting to provide viable solutions, here are reminded the restrictions and the additional requirements related to hindering the outspread of the virus, including the decrease/increase in migration flows, various blocks, total or partial lockdown, the high pressure on urban medical centers, closing some companies, and shifting to telework, etc.

The COVID-19 crisis highlighted, as well, the interdependency between urban and rural areas, especially regarding the organization of food chains in Europe and the need of increased mobility in the urban areas and a new organization of work.

Next to the Charter, an important role has the cohesion and regional development policy which comes to strengthen the role of urban areas in the period 2021-2027. The five goals of the cohesion policy are centered on smart, ecologic, more connected and social development, and on the closeness to citizens, allotting substantial funds in urban areas investments and policies (8% of the ERDF resources).

Joining the large EU urban area, Romania's cities play an important role in the national economy being regarded as engines of economic growth, pillars of resilience and inclusion. This fact is supported also by the report drawn by the World Bank which shows that the eight large cities of Romania, Bucharest, Braşov, Cluj-Napoca, Constanţa, Craiova, Iaşi, Ploieşti and Timişoara gather 50% of Romania's population and 75% from the fixed incomes of the country [2].

2. STATE OF THE ART

Urban policy and planning are part of a trans-and multidisciplinary approach which pursues by territorial arrangement actions to identify the specific issues of cities (environment-pollution, financial-unemployment, poverty, social segregation, etc.) and to provide viable recovery solutions (innovative, creative, etc.). The perspective of high quality of urban life is, as a rule, evaluated with the help of some relevant economic and social standards and indicators.

From the definition point of view, the urban area is defined in a World Bank Report (2009) as all settlements above a certain minimum population size and minimum population density that are within a certain travel time by road. The Organisation for Economic Co-operation and Development (OECD) approach are similar but more elaborate approach. The OECD methodology consists of three main steps: identifying contiguous or highly interconnected densely inhabited urban cores; grouping these into functional areas; and defining the commuting shed or 'hinterland' of the functional urban area. The OECD uses population size cutoffs (50,000 or 100,000 people, depending on the country) as well as population

density cutoffs (1,000 or 1,500 people per sq. km.) to define the urban cores, and then selects those areas from which more than 15% of workers commute to the core as hinterland.

A notion vaster and more complex than urban policy, territorial arrangement is about urbanism activities, being regarded as the main tool in investigating and knowledge, for forecasting and planning, of nurturing and permanent readjustment of the human capital, and of the material framework created by society and indispensable for its existence.

Without detailing too much the theories about territorial planning, we might remind here one of the earliest formulated by Ernest Burgess for explaining the structures of land use in the cities (1923) [3]. The theorists (urbanists, architects, economists, sociologists, etc.) attempted to explain the fundamental aspects of urban life by resorting to the tools employed in applied research (general and specific). We might remind here a methodologic analysis pattern used by A. Campbell, W. Rogers, Th. Convers by which the characteristics of urban life might refer to the satisfaction degree regarding the needs of the inhabitants. The perspective of a certain urban image has at the basis psycho-sociologic researches realized and based on the analysis of perceptions, symbols, and images with the aid of which the inhabitants of the city understand "the place" [4].

In certain researches and analyses, we identified highlighted three important moments that occur in urban planning: formulation of the issues, enunciating the policy and its implementation. One of the most renowned forerunners of urban planning, Kevin Lynch, in his work *City Sense and City Design* [5] is pioneering the field by highlighting the importance of the design principles in urban planning. The sensorial elements that individuals meet in the cities where they live are closely linked to the general principles of urban design, to the way in which the city is structured and operates. Lynch launches the so-called concept of *imaginability* supported by the theory of urban spatial design. Many cities in America that Lynch K. researched and explored in his works were to a certain degree successful because they had as focus the people, and planning pursued to so-called humane design (in spite of the fact that the majority of cities all over the world are strongly dependent on cars) [6].

Out of analyzing urban theories, is detached the so-called global perspective of urban development, that studies how and in which way global trends affect the development of a city. The relationships at local and national level are analyzed, in order to pursue subsequently based on the so-called dependent urbanization the connections between the urban communities at national level, and the ones at international level. Out of this analysis are deducted various definitions of the city: bazaar-city, jungle-city, city-as-body, or the engine-city [7].

The specialized literature finds that there is a certain divergence in the way of evaluating urban systems at global level. As regards the databases, the literature uses the following key-words: "indicators for smart and sustainable city", "indicators of urban metabolism", "sustainable development indicators", "standardization for smart city" and "urban indicators" (Annex 1) [8].

Urban planning has as its core focus the city defined with the aid of three major criteria: critical minimum size, often linked to a necessary threshold of the demand for urban services, a certain level of population density, the presence of some technical-municipal endowments that meet the requirements of the inhabitants.

According to the Guide for Developing Integrated Strategies of Urban Planning territorial planning has at the basis the following principles [9]:

1. *Compact development* – compact urban development requires pro-active, balanced planning, as well as limiting uncontrolled urban expansion and defining some priority zones of development where local policies of densification and diversification are applied.
2. *Urban regeneration* – aims to increase the attractiveness of the urban nucleus by revitalizing the public space, the quality of life in the residential districts and valuation of the urban assets for strategic investments (including in disaffected industrial zones).
3. *Improving connectivity and access to services within the development zones and between the urban and peri-urban zones* – aims to diminish the dependency on automobiles, facilitating non-motorized mobility, increasing the accessibility to services inside the districts (using the principle of pedestrian accessibility of 15–20 minutes), and equitable access to public services.

In regard to the actual pandemic crisis, there is not sufficient exploratory evidence on the existing effects upon city design and public spaces [10,11]. Nevertheless, there have been many debates in the media regarding the link between the prevalence of COVID-19 and urban design.

The existing literature do not indicate in detail how different design measures can affect the capacity of urban areas to respond effectively to the pandemic although the planners are strongly recommending to keep supporting the development of urban areas [12]. In this matter, the World Economic Forum (2015) suggests that the planners should be provided with the following strategic recommendations. [13] (Table 1):

Table 1. Eurostat preventive measures and recommendations for urban areas.

Preventive measures	Recommendations
Zoning regulations (e.g. land-use control, sensitive pattern models, building design, city configuration)	Long term: physical planning of urban area should be revised by the involved stakeholders Short term: disease prevention protocols that define maximum occupancy in comercial and recreational facilities need to be followed, planning policies need to be more flexible, reorganization of buildings and space to enable people to work safely
Informal settlement	Long and short term: suburbs redevelopment, change the pattern of land ownership for green and open space, integrate urban factory strategy.
Inclusive planning	Long and short term: a participatory, holistic and sustainable approach should be developed for communities through recovery plans, job creation, promoting the efficient and green technologies, renewable energy; mixed solutions can be also developed to reducind plastic pollution.
Resilient urban feature	Long and short term: to highlight the importance of qualitative studies regarding the pandemic-resilience in the urban area through the collaboration of urban experts. Furthermore, the quantitative studies can explore the link between city resilience and pandemic propagation.

Source: Bezzo, F.B., Silva, L., & van Ham, M. (2021)

The COVID-19 pandemic crisis has hit people and companies in different situations, in different ways and at different levels. Economic, social, psychological and health-related outcomes have been significantly affected by both the concrete risk of getting the virus, and the policies adopted by governments to stop its spread. Among these, lock-down measures in particular, which have limited people's mobility beyond their house and local area, have been found to crucially affect individual's mental health and well-being [14].

In actual context of COVID-19 pandemic, it is necessary to develop a pandemic-resilient urban strategies through analyzing the published literature. Short - and long - term solutions for pandemic resilience urban planning and design have also been provided related to different response phase. In the mitigation phase, new technological approaches can be adopted for better management of pandemics.

The physical (urban access, infrastructure, environmental factors, and land use patterns) and non-physical (socio-cultural, governance, and economic factors) aspects of resilient urban strategies have been focusing on health- and disaster-related risks in pandemic. In the preparation phase, proactive measures (capacity building of people towards any outbreak, different simulation processes, models of transmission pattern) can be adopted for future pandemics [15].

The COVID-19 pandemic has shifted the perception of local governments to the emergence of incorporating resilience into their response and recovery approaches. It has also raised a pivotal issue on changing perception towards resilience, focusing on major lessons learned to make communities against extreme coming shocks, and economic, environmental, and social impacts.

3. THE COVID-19 CRISIS AND URBAN AREAS

The COVID-19 crisis affected cities all over the world. The most severe effects of the illness are recorded in the urban areas, where the death rates were higher because of a complex combination of factors, including population density, national and international connectivity and the answers given to

public health. In Great Britain, and the US, for instance, large urban areas have higher death rates than other types of settlements, and the size of the city proved to play also an important role in determining the infection rates [16].

Throughout history, epidemic crisis (for instance the Asian cholera (1826-1937) and the Spanish Flu (1918-19) have affected frequently cities, but these recovered rapidly. However, often, "city paupers" were the ones who suffered most in the immediate pandemic period. The cholera epidemic in 1854 London, for instance, had a substantial economic impact on those living near the outbreak point over a decade or even more [17].

Previous pandemics in urban areas contributed to the development of urban areas, by improving construction and architecture standards and, implicitly, the health of the inhabitants (Annex 2). The most known example in this respect is the large London metropole where the Great Fire of 1666 occurred, a fact that led to the creation of new construction codes and to the wide-scale use of fireproof tiles. Just as well, the cholera epidemic by mid-19th century triggered the sanitation of the Thames River and the building of the sewage infrastructure, determining the emergence of the modern sanitizing process. The tuberculosis epidemic contributed to the birth of a modern movement in architecture: large windows by which sunlight could penetrate, white and clean terraces, etc. Moreover, all these consequences, fireproof buildings, sewage, green parks, wide windows, etc. (and not just in London) led to an increased quality of life in the urban areas [17].

By the beginning of the 19th century, when a series of cholera epidemics hit the world, urban life was deplorable. In the year 1850, in London, one of the main reasons for the cholera outbreak was the mixing of drinkable water with waste water [17].

Over the period 1918-1919, the most lethal pandemic based on a respiratory virus occurred (the Spanish Flu) which killed over 50 million people, with obvious impact on slowing down urban development and limiting public life for a period, in order to slow down the disease outbreak. Thus, public transport was replaced with walking on the streets, and the majority of the population stayed at home, an aspect comparable with the current pandemic situation [17].

In 1908, in Philadelphia, typhoid fever and the cholera outbreaks triggered by the sewage and the water source in the river Schuylkill led to moving the houses and the businesses from the banks of the river, and building there a very wide park (Fairmount Park) [17].

COVID-19 is added to a long list of infectious diseases with rapid outspread which represented a new challenge for cities and triggered a new way of efficient planning.

Already, we might notice a similar impact of COVID-19 as its effects are forecasted by the World Bank implying that about 49 million people will be in the category of extreme poverty.

The leaders of the cities, regions and the decision factors are faced, consequently, with a "perfect storm" and must mitigate as good as possible, and manage the recovery after COVID-19 in parallel with the existing pressures resulting from climate changes, resources' exhaustion, and the continuing increase in the socio-economic inequalities.

Regarding to territorial implications, the COVID-19 pandemic crisis has a strong dimension with significant policy implications for managing its effects. Two central considerations for policy makers in urban planning are considered:

1. *the regional and local impact of the crisis is highly asymmetric within countries.* Some regions, particularly the more vulnerable ones, such as deprived urban areas, have been harder hit than others. Certain vulnerable populations, too, have been more affected. In economic terms, the impact of the crisis is differing across regions, at least in its initial stages. Differentiating factors include a region's exposure to tradable sectors, its exposure to global value chains and its specialisation, such as tourism.

2. subnational governments (regions and municipalities) are responsible for critical aspects of containment measures, health care, social services, economic development and public investment, putting them at the frontline of crisis management. Because such responsibilities are shared among levels of government, coordinated effort is critical.

The COVID-19 pandemic will have short- medium- and long-term effects on territorial development and subnational government functioning and finance. One risk is that government responses focus only on

the short term. Longer-term priorities must be included in the immediate response measures in order to boost the resilience of regional socio-economic systems [18].

4. METHODOLOGY

The methodology is simple, based on analyzing the specialized literature, the strategic documents specific to urban development, and the interpretation of some indicators existing in the Eurostat databank and in Romanian official statistics (NIS). At EU-level, the data about European cities are gathered by means of the Urban Audit and by the Audit Project for large cities. At city level, the Urban audit contains over 170 variables and more than 60 indicators. These indicators are derived from the variables collected by the European Statistical System (Annex 3). The data are published in 20 tables in the framework of 2 main groups, plus a perception survey table:

For Romania, the statistical data corresponds to the 35 cities (URBAN AUDIT), respectively Bucharest, Cluj-Napoca, Timișoara, Craiova, Brăila, Oradea, Bacău, Arad, Sibiu, Târgu-Mureș, Piatra Neamț, Călărași, Giurgiu, Alba Iulia, Constanța, Iași, Galați, Brașov, Ploiești, Pitești, Baia Mare, Buzău, Satu Mare, Botoșani, Râmnicu Vâlcea, Suceava, Drobeta-Turnu Severin, Focșani, Târgu Jiu, Tulcea, Târgoviște, Slatina, Bârlad, Roman, and Bistrița.

In order to present the recent stage of the COVID-19 pandemic, has been selected a relevant indicator that reflects the influence of the virus upon the urban population: the number of cases of COVID-19 to 1000 inhabitants. The analysis of the number of cases of COVID-19 will reflect the difference in the impact of the pandemic between large cities and towns.

5. RESULTS AND DISCUSSIONS

A brief look on the evolution of the resident population in the urban areas shows that at national level there is an important decreasing trend for this indicator (as of 2021 compared with the year 2014) by about 4.34%, from 10,752,617 inhabitants (in 2014) to 10,285,960 inhabitants (2020) [15]. The majority of counties that have in their competence urban areas (towns and municipalities) underwent decreases, the highest being reported in the counties Mehedinți (-13.63%), Brăila (-12%), Hunedoara (-11.08%). There are three counties that did not follow the diminishment trend, respectively Ilfov with an increase by 24.35%, Iași by +3% and Bistrița-Năsăud by +1.74% (Figure 1).

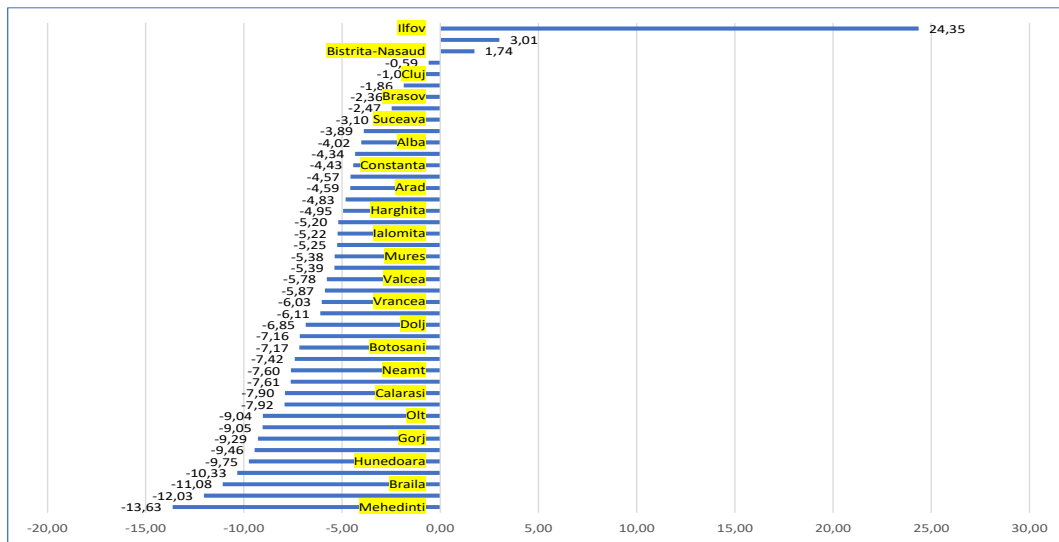


Figure 1. Dynamics of urban population in Romania, 2014-2021 (%) (resident population).

Source: National Institute of Statistics, Data Tempo-online [19].

Although urban population is on decrease, the analyses show that the total number of built houses is on increase, from 4,821,567 (in the year 2014) to 5,005,544 (2020), and an increase by 3.82%. As might be seen in figure 2, the highest increase in the number of houses was in the county Ilfov, by 29.08%, followed by Brașov (+9.4%) and Constanța (+8.76%) (Figure 2).

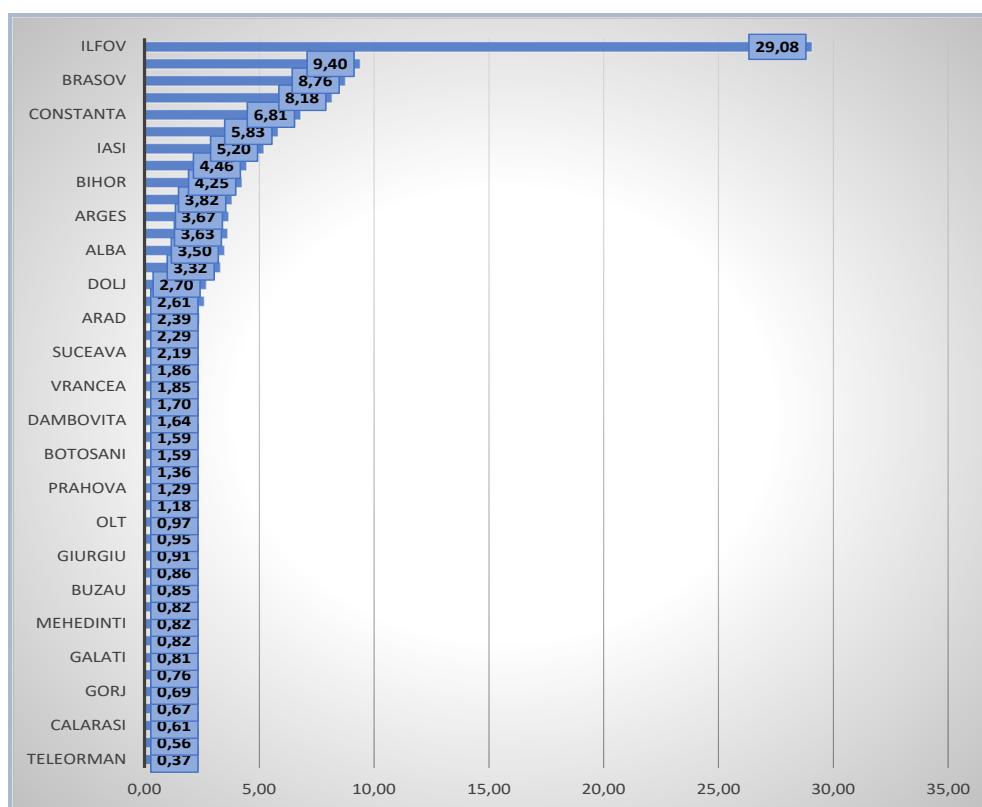


Figure 2. Dynamics of housing in urban regions in Romania, 2014-2021 (%).

Source: National Institute of Statistics, Data Tempo-online [19].

A study titled Audit Urban – Quality of life in the cities from Romania (2020)¹ had as purpose to collect comparable statistical data at European level for a considerable number of indicators, for the following spatial levels in view of substantiating urban policies [9]. Here, 134 variables were monitored at various levels, out of which 72 are available at various levels (cities, FUA or national).

Hereunder, we present some of the variables corresponding to four relevant fields (at city level) which characterize the quality of life in a society: demographics and structure on ages, housing, education and tourism (2018 is the year of reference). In the framework of the study were selected 35 cities.

1. Demographics

The 35 cities selected in the framework of the project reunite about 35.03% from Romania's population (7,76 million inhabitants), while functional urban areas reunite about 41.72% from Romania's population. The Bucharest Municipality gathers about 9.61% from Romania's population, and the functional urban area of the Bucharest Municipality reunites about 11.18% from Romania's population. An in-depth analysis of the population data indicates that the population in the functional urban area of 34 cities, without the Bucharest Municipality, represents about 30.54% from Romania's population. The population aged between 0 and 19 years is on decrease, and the population aged 65 and over is on increase, leading to a slow ageing process. The age dependency rate for elderly is relatively low, at locality level, being around the average by 23.17%, while the dependency rate for the young, at locality level, is around the average by 26.42%. The total age dependency rate is around the average by 49.60%.

2. Housing

The increase in the number of dwellings is noticeable, due to the increase in the demand for housing especially in the urban area. The living space: The space existing in 2018 in Romania was by 430,008,586 square meters, while the average living space at national level was by 19.40 sqm/person. The average living space at city level was by 18,95 sqm/person. Even though the average living conditions space increased at each 10 years, for actual development and improvement in the quality of life, investments are necessary not only for increasing the living space, but also for developing the infrastructure. The increase in this indicator originates from building new dwellings and developing cities,

¹ Important initiative of the Directorate General for Regional Policy of the European Commission.

both horizontally and vertically. This development, and the growth in the numbers of the inhabitants in the city, might attract huge issues from the viewpoint of the infrastructure, city agglomeration and even the 'suffocation' of some areas depending on their load degree.

3. Education

From the available data at both national and local level, it is highlighted that even though the number of students increased for the last 4 years, their number remained further lower against the numbers from the period preceding the economic crisis. A drop in the numbers of students, means that the society generates less and less high-skilled labor force based mostly on brains, which in the current competitive economy represents a weakness. The descending demographic trend contributes to the drop in the number of students which Romania is facing. The demographic crisis triggered by the decrease in the birth rate is not reflected yet at major level, but in the following years this descending trend will become increasingly more marked.

4. Tourism

Focused most on natural landscapes and its rich history, it has a significant contribution to the country's economy, as well. Domestic and international tourism ensured about half of million jobs (5.8% from total jobs). After trade, tourism is the second important activity within the services sector. From the economic sectors of Romania, tourism is a dynamic and rapidly developing one, and is characterized also by huge expansion potential. From the available data, we notice an average increase over the last four years, by about 2.45% of the tourist accommodation capacity. It is noticed that the increase in the number of overnight stays, from one year to the other, between 5.42% and 7.55%. The average increase for the last four years is by about 6.35% with a high development potential.

In Romania (and not only), cities can no longer be analyzed strictly within their administrative limits, without taking into account the support role of the peri-urban territory in supplying the basic elements (goods, labor force, land resources, etc.). In this respect, some typologies of functional urban areas were created, formed out of strong urban centers, together with their adjacent territory displaying the polarizing forces, and used as integrated planning units. This new grouping might improve considerably territorial management and the urban-rural relationship. These new groups of urban areas are presented hereunder (Table 2).

Table 2. Criteria of grouping cities from Romania (2018).

Criteria	No. of urban localities	Income/employee (euro)	% of income from agriculture	% income from industry	% of income from services	% of changes in no. of employees
1. Poles of urban growth²	14	54,932	1%	44%	54%	6%
2. Suburban cities (peri-urban)³	12	57,254	1%	47%	52%	38%
3. Industrial cities	46	48,717	2%	61%	27%	19%
A. Mixed industrial cities	25	50,998	3%	44%	53%	23%
B. Specialized industrial cities	21	46,002	1%	82%	17%	5%
4. Agro-city	76	38,661	12%	47%	42%	4%
A. Cities exclusively agro ⁴	9	67,123	41%	15%	45%	4%
B. Agro-cities with industry	35	38,745	7%	66%	27%	12%
C. Declining agro cities	32	31,451	8%	35%	57%	-5%
5. Tourist cities	24	34,305	3%	42%	55%	16%
6. Developing cities	100	32,882	4%	50%	45%	11%

² Urban growth poles: Bacău, Braşov, Bucharest, Cluj-Napoca, Constanţa, Craiova, Galaţi, Iaşi, Oradea, Piteşti, Ploieşti, Sibiu, Suceava, Timişoara.

³ Suburban cities: Bragadiru, Buftea, Chitila, Cisnădie, Eforie, Măgurele, Năvodari, Ocna Sibiului, Otopeni, Ovidiu, Pantelimon, Popeşti-Leordeni, Râşnov, Ştefăneşti, Tăuţii-Măgheruş, Voluntari.

⁴ Amara, Băileşti, Căzăneşti, Gătaia, Însurăţei, Negru Vodă, Pogoanele, Segarcea, Tăşnad, Zimnicea.

A. Developing industrial cities	52	34,448	3%	64%	33%	5%
B. Cities with a strong public service sector	39	31,240	5%	35%	61%	2%
C. Cities with expanding labor markets	9	33,581	40%	23%	36%	18%
7. Cities with internal labor reserves	23	30,651	8%	55%	36%	30%
8. Small agro-cities	9	33,581	40%	23%	36%	18%
9. Moderately expanding cities	23	30,651	8%	55%	36%	30%
10. Cities with households⁵	15	33,106	3%	56%	41%	11%

Source: National Institute of Statistics [21].

Another study, titled URBAN BAROMETER – Quality of Life in Cities from Romania (in the period 1 July – 15 August 2020) realized a comprehensive survey at the level of 41 urban localities from Romania [22]. The cities included in the survey were Bucharest, Cluj-Napoca, and Piatra Neamț. The perception survey had a number of 13,380 respondents and just as many households. The survey is representative at national level for the urban environment, with a statistical error margin by +/-1% for a confidence interval by 99%. In the following we present the most interesting conclusions drawn from this survey. The analysis regarding the satisfaction of the inhabitants with the urban quality of life showed the results presented hereunder:

1. About 80% from the respondents are satisfied with the city they live in; most satisfied are those in the urban centers from the Centre Region (87%), and most dissatisfied those in the cities in South-Muntenia (74%). Satisfaction regarding urban living tends to increase together with the urban size, age, and individual incomes.

2. Urban transport is priority by car (44%) and its use increases together with the size of the city, of the incomes and educational level. In the majority of localities, the public transport use is positioned below its level of satisfaction. Eight cities record satisfaction values above 70%, in three of them the satisfaction exceeds 80% from total population: Cluj-Napoca (88%), Oradea (82%) and Brașov (81%).

3. Regarding the quality of health services, a bit more than half of the urban population (52%) declares its satisfaction with them. In six of the selected sample cities satisfaction levels were recorded above 60%: Iași (70%), Drobeta-Turnu Severin (67%), Oradea (67%), Alba Iulia (66%), Cluj-Napoca (66%), Târgu Secuiesc (64%) and Slatina (61%). At the other end of the distribution, another six localities record satisfaction levels below 40%, out of which is noticeable the locality Baile Herculane with a satisfaction degree of only 18%. Târgu Jiu (41%) and Piatra Neamț (37%) are county seat cities at the level of which are registered the lowest degrees of satisfaction.

4. Cultural facilities: 63% from total urban population declares its satisfaction with this type of facilities at the level of their city. Five urban centers record satisfaction levels above 80% from total population: Cluj-Napoca (88%), Oradea (85%), Drobeta-Turnu Severin (83%), Iași (82%) and Vatra Dornei (81%).

5. Educational facilities – about 67% declare that they have a high satisfaction level regarding schools and educational facilities to which they have access in their locality of residence. Three urban localities register a weight of satisfaction regarding educational services over 80%: Drobeta-Turnu Severin (86%), Băilești (85%) and Sinaia (82%). At the opposite pole of the hierarchy are concentrated three urban localities, which cumulated a weight of the satisfaction below 50%: Caransebeș, Ștefănești (Argeș) and Mihăilești.

6. The state of streets - 52% from the urban population declares its satisfaction with the state of the streets in the locality. The highest level of satisfaction regarding the state of streets is registered in the South-East region (66%), and the lowest level in the region South-Muntenia (37%).

⁵ Bechet, Cajvana, Darabani, Dolhasca, Dragomirești, Flămânzi, Liteni, Milișăuți, Răcari, Salcea, Săliște de Sus, Sângeorz-Băi, Săveni, Solca, Vicovu de Sus.

7. State of buildings - satisfying for about half of the urban population from Romania (56% from total). A satisfaction level over 70% from the population is recorded in eight urban localities: four county seat cities Alexandria, Suceava, Drobeta-Turnu Severin and Oradea; three cities: Bicz, Sinaia and Isaccea, and one municipality Vatra Dornei. Below 40% as regards the satisfaction level, was measured in four urban localities, and the only county seat city at this threshold was Ploiești (24% satisfaction).

8. Public spaces - satisfaction with public spaces is determined regarding residing in the city. 65% of the urban population is satisfied with the available public spaces. The satisfaction with public spaces is high, in general. The North-West Region registers the highest satisfaction (71%), while the lowest satisfaction is in South-Muntenia (57%). Satisfaction exceeds 80% in total in Oradea (88%), Drobeta-Turnu Severin (84%), and Sinaia (82%). Below 50% regarding the satisfaction degree was measured in four urban localities: Bicz (50%), Caransebeș (48%), Bolintin Vale (46%) and Ploiești (42%).

9. At national level, 66% from the respondents declared they are satisfied with the green areas such as parks and gardens in the cities where they live. The highest level of satisfaction regarding the quality of green areas was recorded in the Region South-East (71%), and the lowest in South-Muntenia (49%). In four municipalities which are county seats, the satisfaction level exceeds 80%: Oradea (80%), Drobeta-Turnu Severin (81%), Cluj-Napoca (82%) and Iași (82%). Alexandria is the county seat which records values below 40% (respectively 38% satisfaction).

10. 60% of Romania's urban population is satisfied with the air quality in county seats. The highest satisfaction degree regarding air quality was recorded in the Regions North-East and South-East (75%), and the lowest satisfaction in the region Bucharest-Ilfov (34%). The distribution of the satisfaction regarding air quality shows high disparities at national level, from 91% satisfaction in Suceava, to 14% satisfaction in Ploiești.

11. A bit more than half of the urban population (57%) declares itself satisfied with the noise level in the urban locality where they reside. Leaving outside the region Bucharest-Ilfov, which is ranks last in the hierarchy regarding satisfaction with the noise level, the first nine cities recording satisfaction levels over 80% include two county municipalities Suceava (85%) and Piatra Neamț (81%). Below 40% satisfaction level is registered in Bucharest (33%), and Ploiești (29%).

12. The weight of those declaring themselves satisfied with the cleanliness in their city is by 57%. At regional level, South-Muntenia ranks last regarding satisfaction with urban cleaning (42%), followed by Bucharest-Ilfov (46%). The highest weight of satisfaction was registered in South-East (71%). Three localities record levels of satisfaction above 80%: Sinaia (88%), Suceava (84%) and Bicz (81%). Five of the county seats, including Bucharest, are below the average of the satisfaction measured at national level. Below 40% satisfaction level was recorded for seven localities, Ploiești being the only county seat ranked on the last position (16% total satisfaction degree).

78% of the employed urban population is satisfied or very satisfied with the workplace. In cities with more than 300.000 inhabitants, the satisfaction level recorded was by 86%. At the opposite pole, in cities with less than 20.000 inhabitants, the average degree of satisfaction is by 69%. Bucharest is ranked below the average, by 77% total regarding the satisfaction degree. The highest satisfaction degree was recorded in North-West (82%), and the lowest in South-Muntenia (66%). As trend, the satisfaction level regarding workplace increases together with the active age from 77%, value recorded for the age group 18-24 years, to 80% satisfaction for the age groups over 55 years. Women with higher education, who have a child in their care, with incomes above average, and employed in the budgetary system are significantly more satisfied in relation to the population average, as trend (Figure 3).

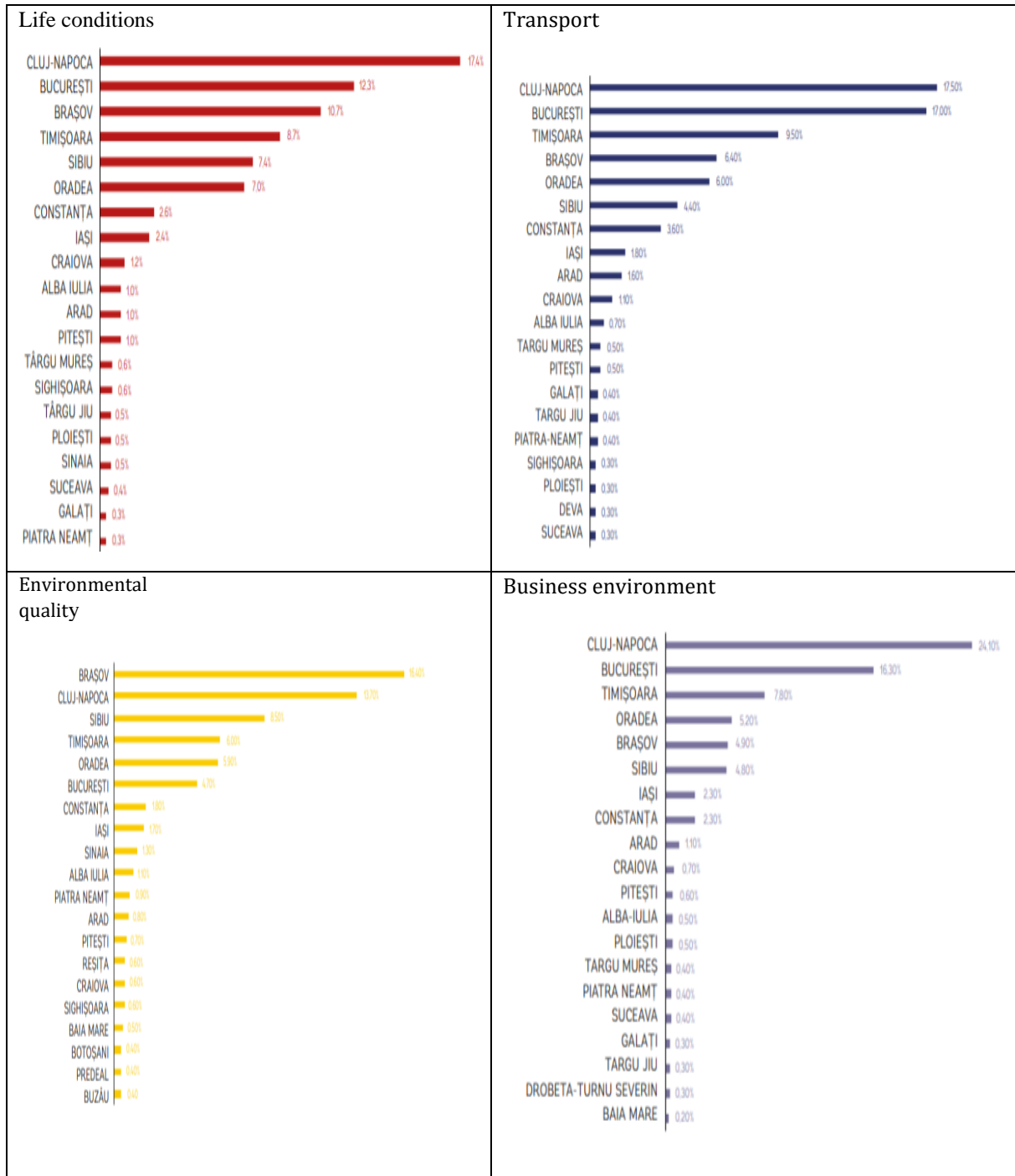


Figure 3. Top cities after some field.

Source: Ministerul Lucrărilor Publice, Dezvoltării și Administrației (2020). Politică urbană a României. Barometru urban - Calitatea vieții în orașele din România [22]

As result of this survey, priorities were set for the urban policy in Romania, as follows: health services, air pollution, road infrastructure, lack of jobs, education and training, noise, public transport, housing safety, social services, development opportunities for businesses, connectivity with neighboring localities, lacking green areas, aspect, and architectural quality of the buildings.

From the analysis of the relationship between the degree of urbanization and the incidence of SARS-CoV2 virus, it can be seen that there is a relatively low correlation between a high incidence of the number of diseases (per 1000 inhabitants). Thus, the first places (the highest incidence) are occupied by smaller cities and not by large urban centers. The only exception is the city of Timișoara, one of the most

important urban centers in Romania, which holds the first place for infections, after a period in which they had decreased (Figure 4).

The only effect with economic impact on big cities is determined by the increase of prices on the real estate market. Thus, according to specialists in the field, the price of apartments will register average increases of up to 8-10% in 2021, already being recorded an increase of 3% over the previous year, and the pace of deliveries and sales, reaching a historical record, will continue in 2021 and 2022. The average amount requested at national level by sellers amounted to 1,507 euros per usable square meter, down 0.1% compared to August 2021, from 1,508 euros per usable square meter. Five of the six big cities constantly monitored (Bucharest, Timișoara, Iași, Arad, Constanța, Cluj-Napoca, Brașov) registered increases of the average listing values on the apartments segment, the most significant growth margin being observed in Iași. The exception to the rule is Brașov, where the general downward trend was supported exclusively by the new housing segment (Figure 4).

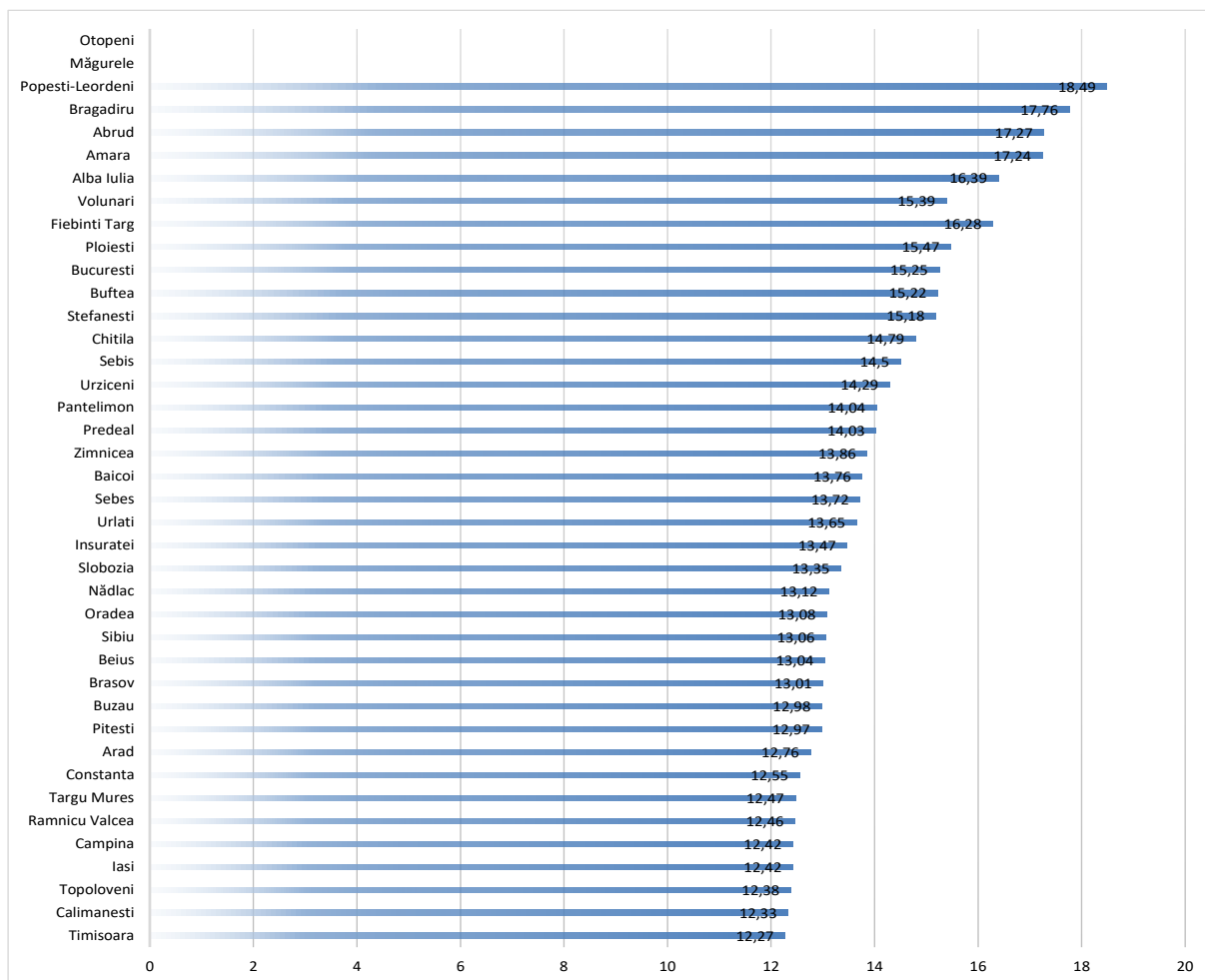


Figure 4. List of cities with SARS-CoV2 virus incidence greater than or equal to 3/1000 inhab. - 29.10.2021.
Source: <https://stirileprotv.ro/stiri/actualitate> [24].

6. ELEMENTS OF NEW URBAN DEVELOPMENT POLICY IN ROMANIA 2021-2035

In general, the role of urban policy is to set national priorities in the field of urbanism, and to guide local urban authorities so that their cities attain the required state. Among the main objectives of urban policy are counted: increasing quality of life next to a wide range of opportunities.

The territorial development policy represents an efficient and effective tool of public authorities pursuing to coordinate a certain area (city, municipality, metropolitan area). It reflects the fundamental social agreements regarding the way in which cities are built and transformed, and the nature of the interactions between inhabitants. In brief, urban policy is nothing else but a group of initiatives of public policy aimed to impact the life of urban residents.

In Romania, the pillars of the urban development strategy are the following:

1. Green and resilient city - the strategies will include elements of climate change mitigation, adjustment and increased resilience to natural hazards. The priorities are: creating access to green space, reducing the risk of overheating, conserving water resources, increasing air and water quality, reducing air pollution, enhanced biodiversity, enhanced environmental skills, local community capacity and cohesion, enhanced connectivity between green spaces and encourage walking and cycling.
2. Competitive and productive city – actions will ensure a healthy and attractive environment for workers and residents, promote decent jobs, an adequate investment in infrastructure and basic services, eliminate inadequate business regulations, invest in education, develop skills and develop technical efficiency and financial services of urban authorities, etc.
3. The inclusive city - ensures that each individual has an equitable access to services of general interest. It focuses on inclusion and equality, with a particular focus on promoting results for groups that are particularly at risk of disadvantage and social exclusion.
4. The well governed city – it is proactive and efficient, ensuring the accessibility of governance processes for co-creating solutions (Figure 5).

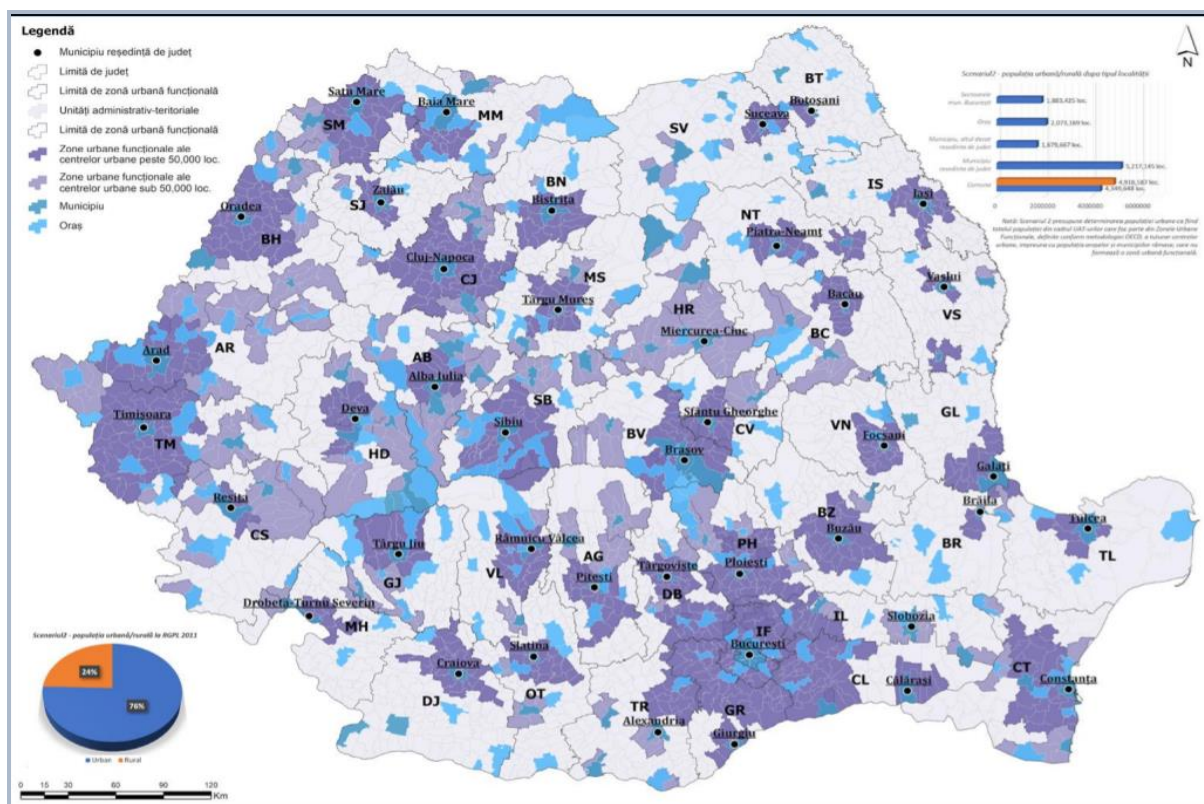


Figure 5. Urban system in Romania.

Sursa: Ministerul Lucrărilor Publice, Dezvoltării și Administrației (2020) [25].

Urban policy in Romania aims to achieve the following five development objectives:

PRIORITY OBJECTIVE 1 – Territorial sustainability.

PRIORITY OBJECTIVE 2 – Creating inhabitable and climate smart cities, by improving green and blue infrastructure for attenuating and adjusting to urban risks.

PRIORITY OBJECTIVE 3 – Improving economic activity, providing quality living environments, well-served business locations and more work opportunities.

PRIORITY OBJECTIVE 4 – Improving living conditions especially by expanding access to housing and public services.

PRIORITY OBJECTIVE 5 – Improving public capacity and cooperation between jurisdictions and sectors.

The expected impact of urban policy is shown based on the following elements: territorial sustainability, inhabitable and climate smart cities, increased economic activity, improved living conditions, improved governance.

Main activities are: land reconversion, expanded public areas, multimodal urban infrastructure, rehabilitated buildings, green and blue infrastructure, attenuating and adjusting to urban risks, urban sustainable mobility, seismic heat waves, air pollution, skilled labor force, improved quality of life, high RDI intensity, improved transport connectivity, adequate training, PPP, cultural infrastructure, health and social services, TEN-T infrastructure, social housing, price thresholds, universal access infrastructure, ITC infrastructure, personnel training, digital tools.

The urban development policy provides a beneficial development framework for the cities, thus supporting local public authorities.

7. POSSIBLE FINANCING RESOURCES

For the next years, Romania has the historic opportunity to benefit from funds from EU in the amount of 79.9 billion euros, broken down as follows [25]:

- 46.4 billion euros from the Multiannual Budget 2021-2027;
- 33.5 billion euros from the Economic Recovery Package (of which 16.8 billion euros in the form of grants and 16.7 billion euros in loans).

Architectural proposals for the Operational Programs 2021-2027:

1. The Regional Operational Program (ROP) 2021-2027 – succeeds the Regional Operational Program 2014-2020 and is one of the programs through which Romania will be able to access the European structural funds and investments from the European Regional Development Fund (ERDF) in the current period programming [19].

2 Fair Transition Operational Program (POT))

3. Sustainable Development Operational Program (PODD)

4. Transport Operational Program (POT)

5. Intelligent Growth, Digitization and Financial Instruments Operational Program (POCIDIF)

6. Health Operational Program (SOP)

7. Education and Employment Operational Program (POEO)

8. Operational Program for Inclusion and Social Dignity (POIDS)

9. Technical Assistance Operational Program (OPTA).

Another financing source is the National Recovery and Resilience Plan (NPRR). In addition to the European budget for 2021-2027, the EU has launched the Recovery and Resilience Mechanism (#NextGenerationEU), a temporary financial instrument in the form of loans and grants available to support reforms and investments at national level. The goal is to mitigate the economic and social impact of the pandemic caused by the coronavirus, to make savings and European societies more sustainable, more resilient and better prepared for the challenges and opportunities of the green and digital transitions.

Investments and reforms financed by NPRR funds must contribute to the achievement of the objective 20% digitization, together with attaining the climate change target, in proportion of 37%. Thus, the digital component of the projects underlying the smart city concept, as well as the green one will be advantages for the eligibility of the projects formulated in the *Strategies Integrated Urban Development*. National financing programs according to the objectives of the Urban Policy Green and resilient cities are presented in the next.

- Programs financed by the Environment Fund - Ministry of Environment, Waters and Forests (MMAF)
- Programs to increase energy efficiency of residential buildings - MDLPA
- Disaster Risk Management (DRM) Programs - MDLPA
- National Program of Constructions of Public or Social Interest (PNCIPS) - MDLPA
- National Local Development Program (PNDL) – MDLPA.

For *Competitive and productive cities*, the financing funds are:

- The National Program of Constructions of Public or Social Interest (PNCIPS)
- The National Local Development Program (PNDL).

Housing programs administered by the National Agency for Housing (Housing for young people, for rent, Program for the construction of service housing for civil servants and staff of central and local public institutions, social housing for Roma communities) – MDLPA.

Other housing programs (social housing, housing for evicted persons from nationalized housing) – MDLPA; National Local Development Program (PNDL); Well-governed cities: Elaboration and / or updating of General Urban Plans and Local Urban Regulations – MDLPA.

8. CONCLUSIONS

The territorial development policy represents an efficient and effective tool of public authorities pursuing to coordinate a certain area (town, municipality, metropolitan area). It reflects the fundamental social agreements regarding the way in which cities are built and transformed, and the nature of the interactions between the inhabitants. In brief, urban policy is nothing else but a group of initiatives of public policies aimed to impact the life of urban residents.

The present paper had as main purpose to present an overview of about the future urban policy from Romania for the period 2021-2027, by identifying the objectives, measures and actions required for its implementation. At the same time, it pursued to highlight the relevance of this policy as viable instrument, useful in particular during the process of territorial development planning.

In Romania of the year 2021, in ongoing pandemic crisis, urban development should continue the trend of the past years, but by taking into account the new issues emerged in greater cities and adjacent metropolitan areas as result of the SARS-CoV2 effects, issues that are not considered by the urban policy yet.

The three issues identified at the level of the cities in Romania - health services, air pollution, and road infrastructure – must be managed as quickly as possible, so that their negative impact is diminished in the subsequent period, as the NPRR does not include such objectives, as well. If in some areas new business, residential, mixt districts emerge, in others modernization is but incipient or lacking. Logistical parks developed around larger cities, but both urban and metropolitan areas have infrastructural problems that fall in the responsibility of local and national authorities. Several projects consider urban regeneration so that areas with tradition from the cities return to life.

According to the conclusions and results, three strategic recommendations can be provided to planners for the new urban policy:

1. First of all, the incorporation of spatial planning at national and urban level: the main purpose of such spatial planning for urban development would be the implementation of strategic urban and housing infrastructure and the facilitation of local and national governance.

2. Designing a policy framework in urban infrastructure for domestic investment: when investors obtain ideal conditions for their investment, national bodies should observe the availability of tools, for example, private-public can invest for the strategic development of urban infrastructure.

3. Developing institutions can induce capacity building among people to enrich public-private partnerships: various organizations are needed to support private groups to increase the quality of jobs in order to attract more investments in the capacity development.

The COVID-19 crisis has differentiated effects at territorial level. The differentiated impact at regional level requires a territorial approach to responses on the health, economic, social, fiscal. The COVID-19 crisis has also accelerated several mega trends and transformations, such as digitization. The response of the government's digital policy to the COVID-19 crisis has different time horizons: it reacts in the short term, resolves in the medium term and reinvents in the long term.

Immediate and effective responses to COVID-19 focus on supporting businesses and households at the national and regional levels. Thus, many national governments have announced large economic recovery packages, focusing largely on public investment. These investment recovery packages prioritize three areas: strengthening health systems, digitizing and accelerating the transition to a carbon-neutral economy.

Investing in quality infrastructure is part of the response to the COVID-19 crisis. In this context, national and sub-national governments need to invest more, making better use of existing and potential investment resources for investment and mobilizing private investment. Local, regional and national governments also need to invest smarter by prioritizing needs, focusing on post-crisis priorities in health, digital and environmental infrastructure and better managing public investment at all levels.

The differentiated impact of COVID-19 on individuals, communities and regions gives new urgency to a place-based approach to regional development and generates greater inclusion. The role of effective partnerships and trust between different categories of actors, the need for flexibility and adaptability and the importance of a balance between top-down and bottom-up actions serve to strengthen these urgencies. It also rethinks political dialogue on regional resilience. The pandemic crisis will induce the changing in regional development priorities towards strengthening territorial resilience.

ANNEXES

Annex 1. Thematic approached by urban analyses at international level.

Economics	Environment	Social	Pandemic crisis
Jobs/employment	Air quality	Education	% in box office revenues
Innovation	Biodiversity	Governance	Job vacancies
Trade	Energy	Health	Level o reservation
Capital investments	Water, soil, and noise	Housing	Occupancy rate
Knowledge economy	Ecologic mobility	Population and social conditions	Revenue in tourism
Productivity	Agriculture and food safety	Recreation, sport and culture	No. of infectations
Savings	Emissions	Social security	Np. of deaths of SARS_CoV_2
Export/import	Land administration	Urbanism	No. beds in IT
Transports	Waste treatment	Openness and public participation	No. of Immunology doctors
Telecommunications	Use and availability of resources	Bribe and corruption	

Source: UrbanizeHub (2021) [8].

Annex 2. The History of Pandemics.

Name	Time period	Type / Pre-human host	No. of death
Antonine Plague	165-180	Believed to be either smallpox or measles	5 M
Japanese smallpox epidemic	735-737	Variola major virus	1 M
Plague of Justinian	541-542	Yersinia pestis bacteria / Rats, fleas	30-50 M
Black Death	1347-1351	Yersinia pestis bacteria / Rats, fleas	200 M
New World Smallpox Outbreak	1520-onwards	Variola major virus	56 M
Great Plague of London	1665	Yersinia pestis bacteria / Rats, fleas	100,000
Italian plague	1629-1631	Yersinia pestis bacteria / Rats, fleas	1 M
Cholera Pandemics	1817-1923	V. cholerae bacteria	1 M+
Third Plague	1885	Yersinia pestis bacteria / Rats, fleas	12 M (China and India)
Yellow Fever	Late 1800s	Virus / Mosquitoes	100,000-150,000 (U.S.)
Russian Flu	1889-1890	Believed to be H2N2 (avian origin)	1 M
Spanish Flu	1918-1919	H1N1 virus / Pigs	40-50 M
Asian Flu	1957-1958	H2N2 virus	1.1 M
Hong Kong Flu	1968-1970	H3N2 virus	1 M
HIV/AIDS	1981-present	Virus / Chimpanzees	25-35 M

Swine Flu	2009-2010	H1N1 virus / Pigs	200,000
SARS	2002-2003	Coronavirus / Bats, Civets	770
Ebola	2014-2016	Ebolavirus / Wild animals	11,000
MERS	2015-Present	Coronavirus / Bats, camels	850
COVID-19	2019-Present	Coronavirus – Unknown (possibly pangolins)	848 K (Johns Hopkins University estimate as of 10:28am PT, Aug 31, 2020)

Source: LePan, N. (2020, March 14). Visualizing the History of Pandemics [17]

Annex 3. Eurostat indicators for urban areas.

Cities and greater cities (urb_cgc)	Functional urban area (urb_luz)
Population on 1 January on age groups and gender – cities and greater cities (urb_cpop1)	Population on 1 January by age groups and gender – Functional urban areas (urb_lpop1)
Population structure – cities and greater cities (urb_cpopstr)	Population structure – Functional urban area (urb_lpopstr)
Population by citizenship and country of birth – cities and greater cities (urb_cpopcb)	Population by citizenship and country of birth – Functional urban area (urb_lpopcb)
Fertility and mortality – cities and greater cities (urb_cfermor)	Fertility and mortality - Functional urban area (urb_lfermor)
Living conditions - cities and greater cities (urb_clivcon)	Living conditions - Functional urban area (urb_llivcon)
Education - cities and greater cities (urb_ceduc)	Education - Functional urban area (urb_leduc)
Culture and tourism - cities and greater cities (urb_ctour)	Labor market - Functional urban area (urb_llma)
Labor market - cities and greater cities (urb_clma)	Transport - Functional urban area (urb_ltran)
Economy and finance - cities and greater cities (urb_cecfi)	Environment - Functional urban area (urb_lenv)
Transport - cities and greater cities (urb_ctrans)	Perception survey result (urb_percep)
Environment - cities and greater cities (urb_cenv)	Population on 1 January by age groups and sex - Functional urban area (urb_lpop1)

Source: European Commission. *City statistics (urb)*. Eurostat metadata [18].

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