

The impact of distance to city center on housing prices

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ABSTRACT

This paper explores the impact of distance to city center on housing prices.

Among the consequences of the phenomenon of uncontrolled extension of urban territories are: spatial dispersion, social segregation of the city population, dysfunctionality of the bordering areas in relation to the central urban areas, disaggregation of the urban territory through the difficulty of accessibility and connectivity of the newly formed areas, the appearance of some types of residences – example: emergence of gated communities, new housing practices under the aspect of new urban culture, loss of local and global urban identity.

In order to prove the hypothesis presented, it is analyzed if it applies in the case of Arad Municipality. The price of the properties is influenced by the proximity of the city center. Each individual has their own needs and their own lifestyle. Therefore, the advantages and disadvantages do not weigh equally for each; varying according to the age, the location of the job, the present or absent functions in the housing area - these are variable factors that must be considered before a real estate investment.

Choice of residential location and the transport options that flows from those choices may have significant impacts on family budgets as the combined share of expenditure on housing and transport increases. Thus the perception that housing is cheaper on the urban fringe of cities may not be borne out by reality for income constrained households which are forced to spend a large share of their disposable income on transport to work.

Keywords: accessibility, sustainability, periphery, center, transport, urban sprawl.

I. INTRODUCTION

In the last decade, there has been an increasing concern about the spatial extend of the Romanian cities, the implications of this physical dimension for the daily commute, the impact on the environment. The morphology of the cities has shown a common tendency to expand by transferring territorial boundaries to the outside, as a process more or less controlled by urban development strategies and policies. The problematic issue was the depopulation / abandonment of some areas of the city and the fundamental change in the dynamics of the components of the urban structure. The spontaneous emergence of new poles of random urban growth was made possible by destroying and interrupting the evolutionary natural process of cities, by restoring a new center-periphery relationship, by inconsistent functional and territorial modulations, which will endanger the development of cities.

Among the consequences of the phenomenon of uncontrolled extension of urban territories are: spatial dispersion, social segregation of the city population, dysfunctionality of the bordering areas in relation to the central urban areas, disaggregation of the urban territory through the difficulty of accessibility and connectivity of the newly formed areas, the appearance of some types of residences – example: emergence of gated communities, new housing practices under the aspect of new urban culture, loss of local and global urban identity.

The fastest effect of this distance from the home is observed on the family budget, due to the distance that must be traveled daily by car. A main topic of thought would be the following: when the transport costs are taken into account, for a family living on the outskirts of the city or in the closest locality to the city, this choice is justified, or is it proven that in time does this choice become more expensive, to the detriment of living in the central areas of the city, where public transport is accessible? At the moment, people generally focus on the costs of buying or renting a home. Housing prices and commuting time are inversely correlated: the price of a short commute is correlated with a high price for the home, and the low cost of housing to a long commute.

Normally, our lives are split between two important poles: home and work. Therefore, the financial profile of every human is defined by these two poles, respectively by the shuttle between the two poles.

II. URBAN SPRAWL

The phenomenon of urban sprawl was first felt in America, along with the large infrastructure developments that allowed Americans to purchase a cheap home and a personal car. As the land inside the cities was expensive, and with strict regulations, the real estate developers were oriented towards the outskirts of the cities and outlying areas, with cheap land, low taxes and often unregulated from the urban point of view.

In particular, there were monofunctional residential neighborhoods to which people with average incomes went. On the one hand, these neighborhoods fulfilled the desire for a different lifestyle close to the city, but at the same time led to problems of sustainability and profitability of services and utilities, monotony, functional and social segregation [1].

The phenomenon spread to Europe, but with the industrialization, other types of housing structures adjacent to the urban core were born, in the context of migration of the rural population to the city, in search of a better life. The structure of these areas is different. It is a somewhat organic development, in the absence of a developer, a situation more difficult to control and manage [2].

From the urban point of view, the main causes of urban expansion are:

- the rapid and unequal development of the production forces in the territory - leads to the hyper-development of a certain spatial direction, in a short period of time. For example, hypermarkets and malls that require large areas of cheap land, then generate large flows of people and interest of real estate developers;
- urban networks - the cooperation of urban centers based on the availability of resources in the territory, which leads to the formation of agglomerations and metropolises. Medium cities develop as equilibrium poles in the territory;
- the tendency of decongestion of the center -

the center becomes an administrative pole, and its inhabitants and of the immediate vicinity are oriented, towards the outskirts, where they aspire to a different lifestyle, but close to the city [2].

From a social and cultural point of view, urban expansion has its explanation in:

- the demographic explosion;
- rural exodus - the attraction of large urban centers as agglomerations of economic opportunities and potential for social affirmation;
- low living conditions in rural areas (advanced impoverishment) - lead to the establishment of people in rural areas in the periphery, due to low costs;
- development of new models of urban life, which are often not possible in a dense tissue, already built.

Time spent behind the wheel does not seem to discourage suburban homebuyers.

Many people who live for decades in high blocks, in small and narrow apartments, eventually get to want a house with garden and yard to live in, when they get older.

Unfortunately, we live in an era where traffic is increasingly suffocating, and traveling a short distance is getting longer and longer.

Beyond these logistical issues, however, a house located at some distance from the city center offers advantages that cannot be found elsewhere. Perhaps the most important of these is silence. Near the city, the heavy traffic is not so dense, there are not so many noisy works and yards, and the air is also cleaner, due to the proximity of nature. A house on the outskirts is really a refuge for the tenant who does not want to have 24 hours a day from the urban agitation that never ends.

In addition, a house on the outskirts gives you the privilege of living among like-minded people, with the same idea of life, people who have bought a house to live for decades with families. The closer you are to the city center, the more colorful the community is.

In order to prove the hypothesis presented in the article, we analyze if it also applies in the case of Arad Municipality. Thus, analyzing the urban formations that complete the urban structure of Arad, we can identify areas that

gravitate semi-independently from the Municipality of Arad, respectively from its central area (Fig. 1). These localities were born together with the need to expand the residential area, but they do not have the functions that would allow them total autonomy from the functional center of the Municipality determining a series of characteristics that we are going to analyze.

The distance to the city center is essential in the possible development of these areas. They, with time, can develop as independent urban settlements, with functions that allow the self-support or extensions of the Municipality of Arad together with their development and union with the territorial limit.

In order to prove the hypothesis, the situation of the prices on the real estate platforms on the lands was analyzed. As an element of measurement and comparison, an average of the price per square meter of land is performed, this generating a conclusive analysis on the influence of the city center on the value of land (Fig. 2).

It can easily see a decrease in prices per square meter of land with the distance from the center. This also applies to the micro scale, inside the Municipality, at the level of the newly formed eccentric centers, having the case of Timisoara Municipality. With the accelerated growth and development of the city, the distance from the center becomes more difficult to travel, road traffic becoming more difficult, all these things leading to the need to implement complementary functions to the residential area that make it operate independently to the city center.

The price we have to pay for the purchase of a cheaper land, but at a distance to the city center must have behind it an analysis of the cost of later travel to the functions present in the city center.

In order for the study to be truly truthful, we extracted from the general urban plans of the Municipality of Arad and of the surrounding communes an analysis of the existing functions (Fig. 3, 4, 5 & 6). There is a clear share of the high residential function in terms of localities that revolve around the Municipality of Arad, contrary to this, there is a wider color scheme of the functional palette present in the center of Arad. This fact clearly supports the idea set

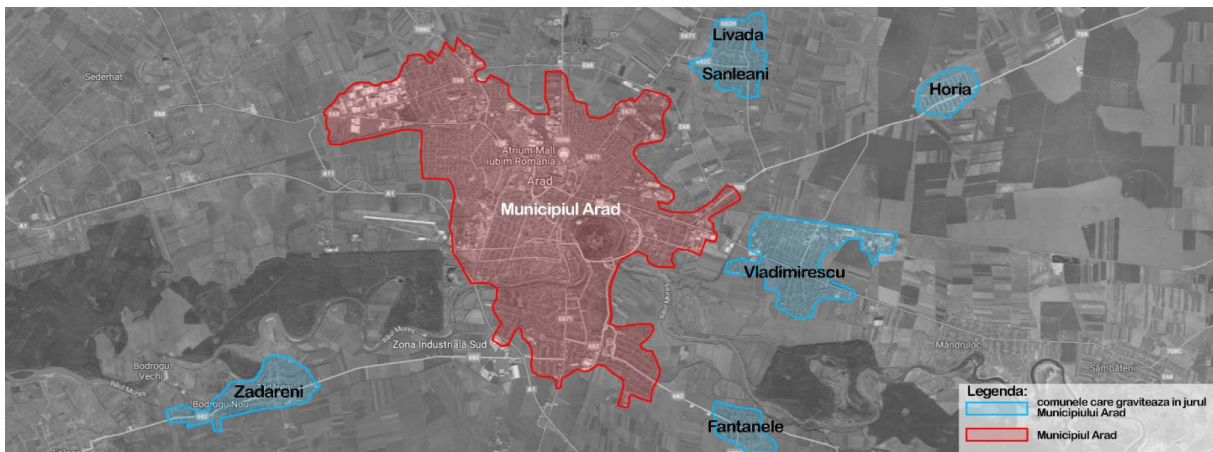


Fig. 1. The villages that gravitate around Arad

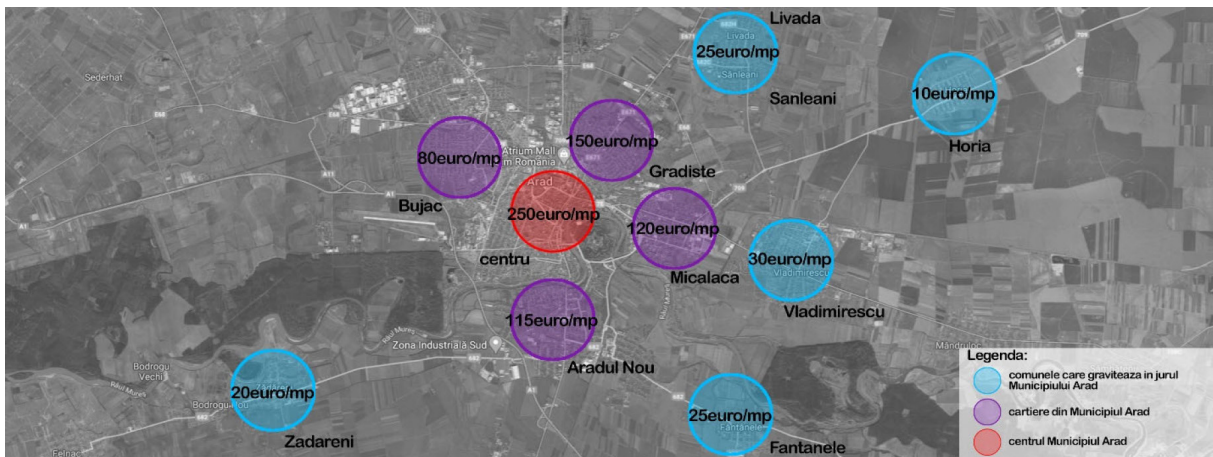


Fig. 2. The price of land for one square meter

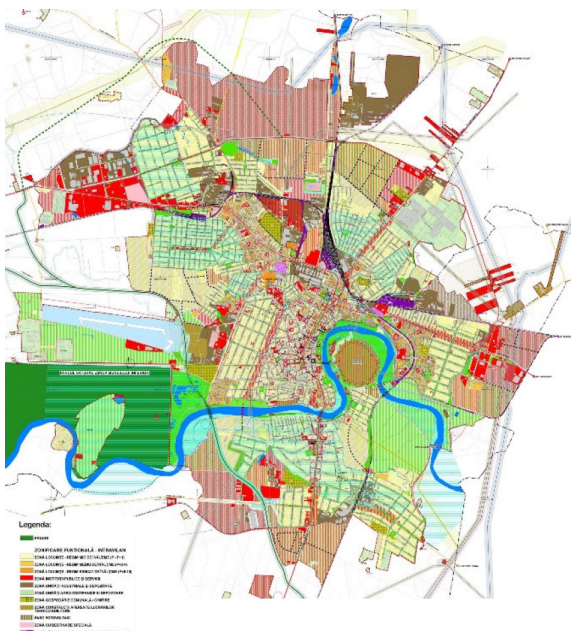


Fig. 3. Arad - existing functions

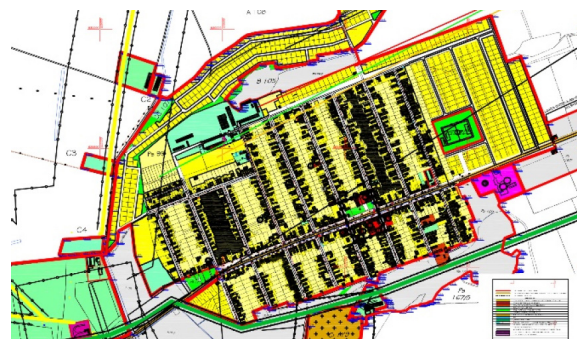


Fig. 4. Horia - existing functions

out in the title of the article, the distance to the city center brings benefits in terms of land price, but is subject to a functional dependence on the center, which generates additional transportation costs. In order to make a feasible investment, all these characteristics must be weighed and analyzed so that in the long run the investment made can be sustained.



Fig. 5. Livada - existing functions



Fig. 6. Vladimirescu - existing functions

III. HIGHER TRANSPORT COSTS

The effects of a change in the level of activities, such as changing the number of inhabitants in a certain area or the number of trips made, as well as those due to a new connection on the transport network are observable phenomena. A discussion on the link between urban form and mobility is increasingly needed on the background of global warming, rising fuel prices and increasingly common traffic congestion. The infrastructure built ends up being consumed, bringing with it a whole series of negative factors produced in this process. Cities around the world are beginning to feel these changes more and more, which is why questions are asked about the duration of the trip, the quality air, accessibility, number of accidents, types of infrastructure, but also social segregation and housing and mobility costs.

Despite all these aspects, most cities still focus on road infrastructure and especially on mo-

torized transport. A large number, both from developing countries and from developed countries, show uncontrolled growth on the outskirts of cities.

This massive expansion of the peripheries promoted by the continuous growth of the urban population worldwide, produces a great diversity of residential urban forms whose performance in the field of accessibility is often reduced.

The development of neighborhoods, cities and regions in such a way as to have as little dependence on the personal car as possible has shown that they produce sustainable urban forms with a healthier environment that offers a variety of transport options. The development of these sustainable transport and mobility systems is a priority mainly in highly urbanized areas.

IV. TIME LOST IN TRAFFIC

Beyond the economy, the decision to move is often an emotional one. Many suburban shoppers are motivated by the needs of the family - they want more space, a safe place to raise their children, spending more time with the family. Due to the daily commute, some of the family's needs become unfulfilled, as free time after work decreases and fatigue accumulates [3].

The manufacturer of navigation equipment, Tom-Tom, recently published the ranking of cities in terms of traffic congestion. The study included 416 cities from 57 countries. Bucharest ranks first in the EU and 14th in the world (Fig. 7). According to the traffic index, at peak hours, a road on the streets of the Capital takes twice as long as it should (Fig. 8). Specifically, a 30-minute itinerary lasts 58 minutes (morning) and 61 minutes (evening), respectively (Fig. 9).

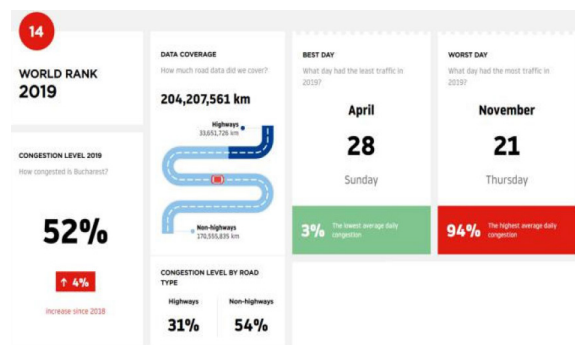


Fig. 7. Traffic congestion ranking Bucharest [4]

What days are best to avoid rush hour?

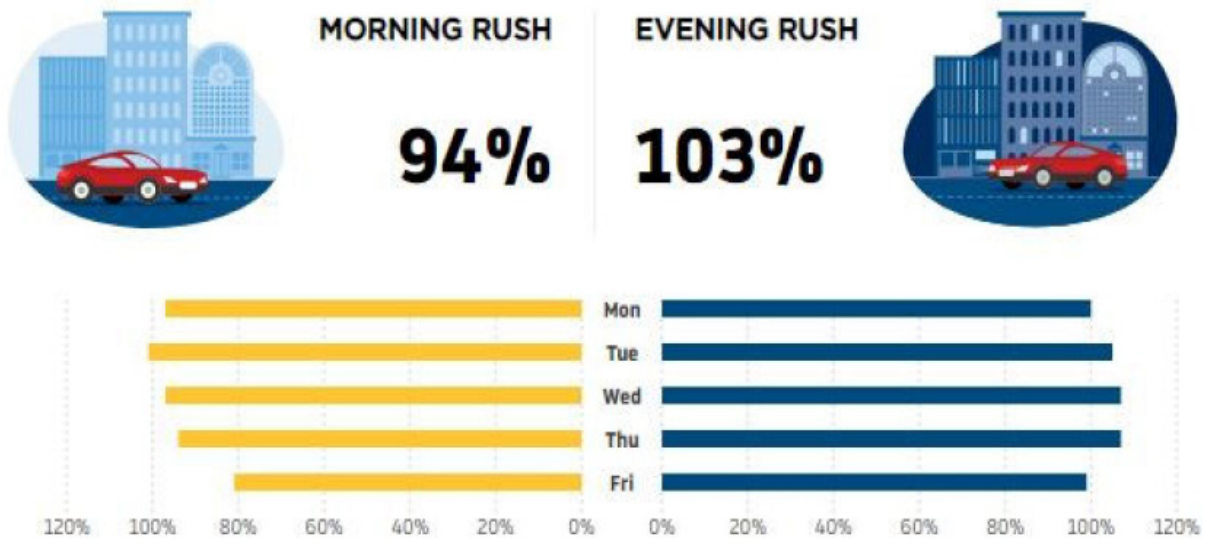


Fig. 8. Weekday rush hour [4]

How much extra time is spent driving in rush hour?

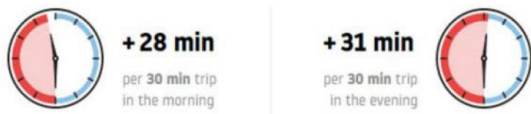


Fig. 9. Time lost in rush hour [4]

In Bucharest, last year, a driver lost an average of 227 hours in traffic (9 days and 11 hours – Fig. 10). Also on average, the busiest time is 17:00-8:00, on Wednesdays. The day with the least crowded traffic in 2019 was April 28 (Sunday), and the busiest day - November 21 (Thursday) [4].

TIME LOST IN RUSH HOUR - PER YEAR

How much extra time is spent driving in rush hours over the year?

227 hours = 9 days 11 hours



Fig. 10. Time lost in rush hour per year [4]

V. URBAN VILLAGE

Less known, but also appeared as a reaction to the dysfunctions of the contemporary city, the concept of urban village has its origins in Great Britain, where in 1989, The Urban Villag-

es Group was born. The concept is designed as a neighborhood unit with complex uses, which should include a wide range of facilities (including health, school and childcare center), whose extension allows the daily urban attractors within the range of pedestrian accessibility. The community should house a population of 3000-5000 inhabitants, on an area of about 40 ha. The series of attributes is complemented by a compact type spatial development, high quality of the urban ensemble, boundaries marked by green spaces, a 1:1 ratio between the number of residents and the jobs, favorability of the car, but without encouraging it's use [5].

With regard to community, it would be characterized by an increase in density towards the central part, where the values would be maximum, including in terms of height, while the large mass would be made up of small quarters, which would it offers high pedestrian accessibility.

Other buildings with community significance can be located in key points, so that they can be seen as visual landmarks, while the green spaces are relatively small size, have high frequency within the structure and increase in size towards the periphery.

The implementation of an urban village type

project involves three major milestones of the planning process:

1. Identification of the implementation area, which can be represented either by a new location or by an urban area that needs regeneration. Usually this process is carried out by public administration, and in collaboration with consulting teams, a preliminary audit and the general outline of the project are carried out;
2. The actual design, with six successive steps: preparation of the drawing, formulation of the main points of the planning, consultation and public participation, clarification of the land issues (properties, serviced, etc.), establishment of the sources of financing, establishment of any necessary forms of partnership for the realization of the project;
3. Implementation of the project (from the project phase to the physical concretization), including with the continuous and permanent management of the units with the neighborhood.

VI. CONCLUSIONS

The price of the properties is influenced by the proximity of the city center. Each individual has their own needs and their own lifestyle. Therefore, the advantages and disadvantages do not weigh equally for each; varying according to the age, the location of the job, the present or absent functions in the housing area - these are variable factors that must be considered before a real estate investment.

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One of the dreariest realities of suburban living is all that extra time spent in traffic. Whether you choose to drive your own vehicle or take transit, it's important to factor higher commuting costs into your household budget.

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