

## STATISTICAL ANALYSIS OF PRICE EVOLUTION FOR RESIDENTIAL LAND OF URBAN CADASTER OFIASI

**Daniel LEPADATU<sup>1</sup>, Loredana JUDELE<sup>1</sup>, Gabriel SANDULACHE<sup>2</sup>, Viorica MOCREAC<sup>3</sup>**

e-mail: ljudele@yahoo.co.uk

### **Abstract**

In the last years the financial crisis has touched all areas of activity but we can say that especially the residential segment and is far from land to recover and register significant price declines throughout the national territory. Especially the land for real estate developments is a relative potential resource or very high speculative limited but for this type of property investment appetite led to a particularly being well above their real value during real estate "bum" period. The residential land market can be defined as the interaction between persons (individuals or companies) that change property rights against other assets such as cash. This market is defined based on the type of property, the potential to produce income, location and investors characteristics. The residential land market has experienced a downward trend in recent years due to the global financial crisis with a stagnation tendency. Thus, was noted that property values have continued to decrease in recent years in Romania, but in a slower tempo. One of the consequences of the national economy general decline can be assimilate with continues degradation of housing built quality and quantity. This is due, primarily, by the impossibility of individuals persons or companies to maintain a high quality standard. The purpose of this paper is to present a statistical analysis of prices evolution for urban residential land market of Iasi. Thus we present the evolution of prices for the years 2012 - 2013 for urban residential land market of Iasi.

**Key words:** residential urban land estate market, statistical analysis, prices evolution

Valuation of land is often considered the easiest of the evaluation, some real estate appraisers seeking to apply techniques geared more towards mathematics, to the detriment of analysis and then quantifying factors that can influence the real behavior of market participants. (Licurici G., 2012) Evaluation of residential land, and the site, however, requires careful analysis of a variety of factors that influence such property, in practice, it can be the most difficult evaluation process. The value of these types of land is substantially affected by supply and demand game, but one that ultimately determine a market value is the economic use of the site. However, besides the basic utility of residential land, there are many principles and factors to be taken into account in their evaluation.

In residential land evaluation practice there are some important principles that form the understanding of a company's value of these properties. These principles are the foundation of a rational analysis of market behavior and therefore explains the changes in the value of such property. These principles are: to anticipate

change, supply and demand, competition, substitution, balance, contribution, best use, compliance and conditions.

Besides these principles residential land value is influenced by the interaction of the elemental forces that motivate human activity, such as social trends, economic situations (the economic indicators of supply and demand), various regulations and restrictions imposed by state (public services, real estate development zone, fiscal policies and laws specific property) and environmental conditions (climate, topography, soil, natural barriers to development, availability of transport systems and the advantages of location based links and accessibility of the area).

These influences are by dynamic nature, pressuring them to human activities and are in turn affected by these activities. Their interaction can greatly affect the value of each property making the work of the evaluator very difficult (Matis D. and Timbus R., 2013).

Thus great care must be attributed to the influence of these factors so that the final value of

<sup>1</sup> Gh. Asachi Technical University of Iasi, Faculty of Hydrotechnics, Geodesy and Environmental Engineering, Iasi

<sup>2</sup> Gh. Asachi Technical University of Iasi, Faculty of Civil Engineering and Buildings Services, Iasi

<sup>3</sup> Agricultural University of Moldova, Faculty of cadastre and law, Chisinau

residential land to be closer to the real one with acceptance because they can determine the intensity, duration and limits of these trends.

## MATERIAL AND METHOD

The steps followed in estimating market guidance values for these lands:

- it performed a detailed analysis of the market for this category of land. They were considered offers to sell land for the years 2012 and 2013, taking into account the specificities of each type of site, monitoring the evolution of the market, setting a trend and estimating future developments. Particular attention was paid to recent tenders, being

closest to the report date for all other corrections being made on the date of publication. They have been grouped in *table 1* (Darian, 2013).

- depending on the specific type of property, requested in the offers for sale were reduced by percentages ranging between 10-15%. This proved was necessarily in the analysis of bids and interviews with those deals. It thus noticed a difference between price and value on offer called to the transaction and obtained by negotiation (Anevar, 2014);

- atypical tenders with properties whose prices were situated far above or below average values of the real estate market were not included in this study.

Table 1

### The price evolution of residential land of urban cadastral of Iasi

LANDS	2012 Sem 1		2012 Sem 2		2013 Sem 1		2013 Sem 2	
	Price min	Price max						
<b>AVERAGE HEIGHT LANDS</b>								
Ultracentral / Central	170	430	160	430	160	430	155	430
Semicentral	70	150	70	140	70	140	70	140
Peripheral	23	55	20	55	18	55	15	55
<b>HEIGHT LANDS</b>								
Ultracentral / Central	240	470	240	460	240	460	240	460
Semicentral	160	300	160	300	150	300	150	280
Peripheral	17	85	17	80	15	80	15	80

### The market value of a real estate

In order not to create confusions and interpretations on the assessed value, according to the International Standards 2011, the market value is defined as the estimated sum for which a property could be exchanged at the date of the evaluation between a firm buyer and a determined seller in a transaction of an objectively determined price, following an adequate marketing activity in which both parties acted consciously, cautiously and unconstrained.

It is important to mention that the professional estimation of the market value is an objective evaluation of the property rights over some assets at a certain date. In this definition there is implicit the concept of the market on the whole which reflects the activity and motivation of more than one party rather than the image or the preconceived interest of a certain party. The market value is a market based estimate determined according to these Standards.

The real estate market can be defined as being the interaction between the (physical or legal) persons who exchange property rights for other commodities like money. This market is (Padure D., 2013; Petcu-Lovin D. R., 2011, Cardei M., 2011) defined based on the type of property, its potential of producing incomes, location, the characteristics of the investors and typical tenants.

### RESULTS AND DISCUSSIONS

In this paper we analyzed the evolution of prices for residential land of Iasi during 4 semesters between 2012 to 2013. Thus we have seen that lands with great height have minimum prices between 15 euros and 240 outlying lands for the central and downtown. We see also a decrease of 2 euros / sqm respectively EUR 10 respectively for those at the periphery of the semi-central and central and downtown stagnation (*figure 1*).

For lands with medium height mode there is a greater variation of their prices, as follows:

- for central and downtown land we have decreased by 10 euro sem II in 2012 and stagnation in the first semester of 2013 as the second semester of 2013 to have another 5 euro down them. For semicentral land see a stagnation of prices throughout the two years in exchange for the peripherals have a gradual decline from 23 euros/sqm in the first half of 2012 to 15 euro/sqm him semester II of 2013 which It represents a decrease of approximately 35% of the initial price.

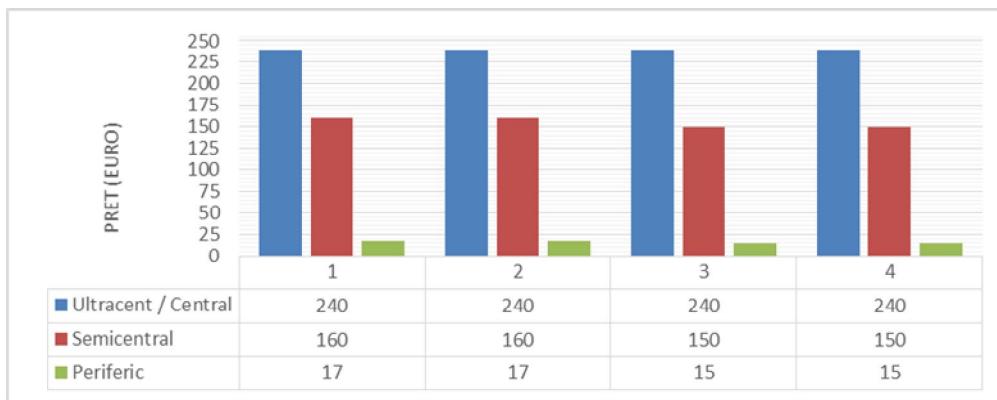


Figure 1 Lands with great height mode - minimum prices

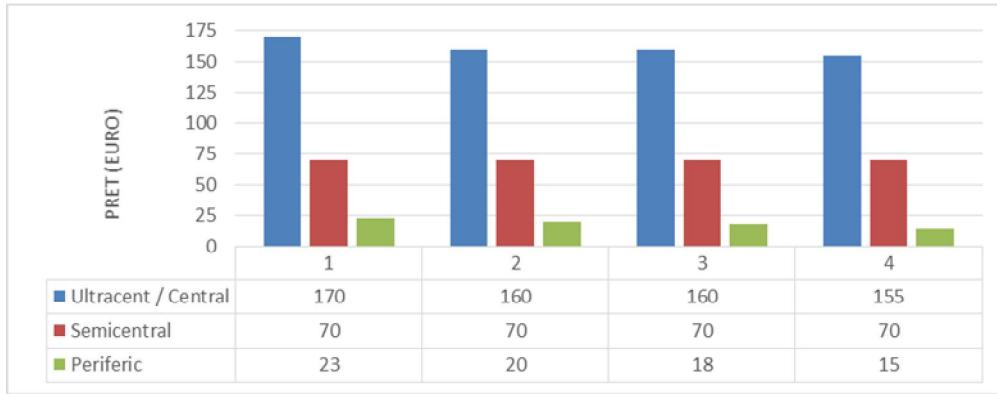


Figure 2 Lands with great height mode - minimum prices

Lands with medium height mode have maximum prices between 55 euros and 430 land located on the periphery to the central and downtown. We see also a decrease of 10 euro/sqm for those located in semi-central areas (figure 3).

For lands with higher height mode we have a smaller price variation, as follows:

- for central and downtown land have

decreased by only 10 euro sem II in 2012 and stagnation on the other three semester analyzed. For semicentral land see a stagnation of prices throughout the three semesters and a slight decreased by 20 euros last semester. The same thing is observed for peripheral lands which have decreased by 5 euros in the first semester and stagnation on the other three semesters (figure 4).

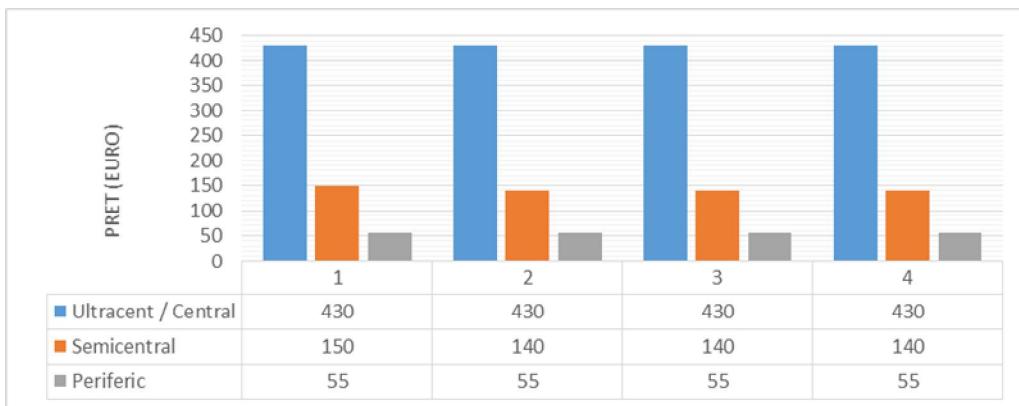


Figure 3 Lands with great height mode - minimum prices

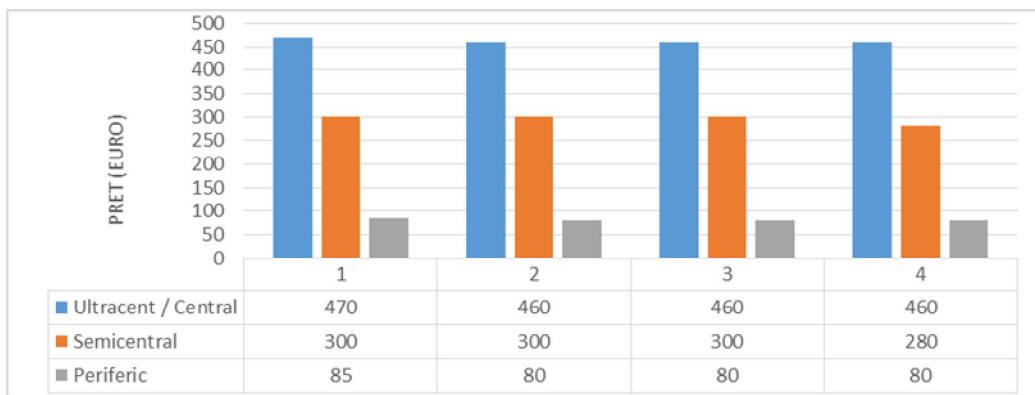


Figure 4 Lands with great height mode - minimum prices

## CONCLUSIONS

This paper presents a statistical analysis of the evolution of prices for the residential land of urban cadastral of Iasi during four consecutive semesters between years 2012-2013. Thus, we noticed that the prices slightly decrease with 5-10 euros /semester, which indicates a decrease of the real estate market of Iasi.

In the estimation of the average prices of various real estates, certain inherent errors may occur due to situations like:

- differences between the documented situation and real life;
- use of different currency;
- elements that are not analyzed in the process of price estimation and their occurrence probability;
- significant variations connected to the non-analyzed elements.

These errors can be minimized if one chooses methods and information which improve the quality of these data.

In the future, we intent to use a more complex data base with data from more sources so the accuracy of this kind of analysis should be closer to real life.

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