

## DETERMINATION OF LAND'S MARKET VALUE - CASE STUDY - BÂRLAD, VASLUI COUNTY

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### Abstract

Through the approach manner, was followed the formulation of some features of rural goods evaluation and the requirements of this field and which will ultimately allow the fair value of the land to be determined. The methodological system that was used in the process of processing the collected information, the presentation of the results and the formulation of some conclusions, has specific methods and procedures for the evaluation of the lands. The purpose of this paper is to identify and correctly assess the value of the land market on the basis of all the information necessary to achieve this. The paper analyzes punctual and methodological the land assessment in the town of Barlad through the method of comparing and the extraction. The values for the comparable properties are reconciled to a value by arranging these comparable in a relative ranking relative to the property under evaluation. The property evaluated ranks between the highest value in the group of properties comparable to the positive corrections (comparable to C) and the lowest value in the group of comparable negative (comparable B). Given the characteristics of the land, the location in the area, crossing place, the utilities at its disposal, its condition at the date of evaluation, the value obtained by this method and which can be taken into account is 24 € / sqm. The market value of the land determined by the market comparison method was:  $V_p = 1000 \text{ sqm} \times 24 \text{ € / sqm} = 24000 \text{ €} \times 4.53 \text{ lei / €} = 108.720 \text{ Lei}$ . By the extraction method, the value of the land is deducted from the sale price of a property by deducting the value of the construction contribution estimated by the cost method. According to the information from the construction companies, the prices for a square meter of building are between 400-500 € / sqm depending on finishing. The market value of the subject land determined by this method is obtained by the difference between the value of the property and the value of the constructions. The market value of the subject land by the extraction method was:  $V_p = 34372 \text{ €} = 155.705 \text{ Lei}$ .

**Key words:** market value, the method of comparing, the method of extraction, land assessment

There are many reasons why a landowner might need to know the value of his/her property. You may want to estimate potential estate tax liability to assist you in your estate planning (Boghiță, E., 2016). Or you may want to know the value of your property for sale purposes. As landowners, we can and do receive widely varying messages about the market value of our property. The local assessor's office assigns one value to our property for taxation purposes. This amount is often only a percentage of the actual market value. These appraisals are not done regularly, may not be updated for unusual market changes and are often based on broad general conclusions about local real estate values.

### MATERIAL AND METHOD

At the basis to achieve the work was the paper of classical and contemporary economists and the work of specialists in the field of rural

estimations. Among the most important research techniques on which the paper is based, we mention:

- Documentary analysis;
- Comparative analysis;
- Case study.

The methodological system used in the paper for the processing of the collected information, has the specific methods and procedures for land evaluation, such as:

- the method of comparing;
- the method of extraction.

### RESULTS AND DISCUSSIONS

The purpose of the valuation is to establish the value of a plot of land located in the municipality of Barlad, Vaslui County, covering an area of 1000 square meters.

The use of the evaluation is: BRD-Barlad Branch. For the 1,000 sqm plot which is the subject of this report, the landlord has submitted the following documents proving the property:

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- Civil Sentence no. 472 / 10.08.2014
- Land Book Extract no. 998 / 02.15.2015
- Situation plan

Location of real estate: The land is located near the Puiești barrier.

Ambience is quiet, civilized, favorable to the present destination of property. Facilities and utilities: there is the possibility of connection to the electricity network, methane gas and running water in the immediate vicinity (50-100 m). From an urban point of view, the area is a less circulated residential area.

Vaslui County has been affected by economic change and has been marked by the economic downturn, resenting a sharp decline in investment, especially in rural areas.

The national economic growth has also influenced the economic growth of the county and, implicitly, the purchasing power of the population, which implicitly affects the real estate market of any kind (Borza, Mioara, 2004). With the emergence of foreign investors, which invest primarily in the textiles and agriculture industry, there is an increase in the economic potential and the purchasing power of the population. The area demand for real estate for land or housing purposes is at a relatively low level but with growth prospects in the coming years. In the long run, the outlook is uncertain at this point. There is an increase in all the activity carried out in the commune, but only if the locals and potential owners invest in the rehabilitation and modernization of buildings and lands and bring them at the optimal operating parameters. For the proper functioning of the real estate market, it is necessary for all activities to develop progressively and to create new jobs, and in agriculture to increase production and quality.

The competitive offer focused on analyzing the data obtained by conducting the area inspection by consulting the registers in the town of Barlad with the permits issued in recent years, through discussions with designers, real estate agents, contractors, as well as consulting the media. Sales prices of the free lands in the area have decreased in recent months from 25-35 € / sqm at prices ranging from 15 to 25 €/ sqm. There is currently an imbalance between existing and projected demand and the current or anticipated total supply as it is influenced by the economic situation at national level in general. The seller's market has turned into the buyer's market. Transaction levels have fallen sharply and continue to decline until a further recovery in the economy. Increase in vacancy rates is inversely proportional to the drop in transaction volumes.

*Best use of land – free (BULF).* Taking into account the provisions of the Urbanism Certificate, the evaluated property was analyzed in the case of land development, as a residential (apartment building) with a P + 4E height regime with the last retreat, as recommended by the Urbanism Certificate. According to the data from the urbanism certificate, the only possible use (legally permissible) is "block of flats P = 4E", for which the maximum possible built area is 190 sqm (corresponding to POT = 40%), and the built area is 755 , 00 sqm, the total useful area estimated is 706 sqm and the useful area of actual living space is about 580.00 sqm or on average 121.00 sqm / level for the ground floor and the floors 1-3, 2 two-room apartments with the useful area of 50.00 sqm each and a studio apartment of 21.00 sqm, and for the 4th floor an apartment of 3 rooms with 64 sqm and terrace. For the evaluated property a lot of possible uses could be imagined, but as indicated in the urbanism certificate, the specific of the area is oriented to residential building - blocks of flats with height regime P + 4E, with the last level withdrawn. Uses that met the first two criteria are reviewed if they would produce income that would cover financial liabilities and capital depreciation.

The proposed use is financially feasible and is unique, therefore productive. The building will be equipped with all the facilities, the finishes will be quality, its own heating system from a methane gas thermal plant.

The land is valued on the basis of the following relationship:

$V_t = V_b * k * (1 + N)$ , wherein:

$V_b$  - the base value of the land, determined as a minimum limit at a level of 11,50 lei / sq m;

$k$  - coefficient to bring the base value to the day;

$1 + N$  - correction coefficient of the base value of the land, where  $N$  reflects the sum of the scores granted on the basis of criteria, namely:

- category of locality: municipality - 1,0;
- the location of the land to the settlement: 0,6;
- economic functions and social characteristics of the locality: complex economic function - 1.00;
- the position of the land towards the transport networks: road and rail transport - 0.50;
- the technical and municipal equipment of the area where the land is located: electricity, telephone - 1.00;
- geotechnical characteristics of the land: normal ground - 1.00;

$$N = 1.0 + 0.6 + 1.00 + 0.50 + 1.00 + 1.00 = 5.1$$

The coefficient to bring the base value to the day is:  $k = 1.18$ .

$$V_t = 11,50 \text{ lei / mp} * 1,18 * (1 + N)$$

$V_t = 11,50 \text{ lei} / \text{sqm} * 1,18 * (1 + 5,1) = 82,7 \text{ lei} / \text{sqm}$ .

The total area of the land is 1,000 square meters, from which it follows that the total market value of the land will be:

$V_t = 82,7 \text{ lei} / \text{sqm} * 1,000 \text{ sqm} = 82,700 \text{ lei}$

$V_t = 18,25 \text{ €} / \text{sqm} * 1,000 \text{ sqm} = 18,250 \text{ €}$

Comparative analysis can be performed on two quantitative criteria - analysis on data pairs and / or qualitative - analysis of relative comparisons. In the present case, due to the nature and relevance of the collected market information, the relative comparisons were analyzed. For the application of this technique, the valuer analyzes sales - comparative bids - to determine whether they have superior, inferior or similar characteristics to the rated property. In this case, the analysis of relative comparisons is similar to data pairs, except that adjustments are not expressed as absolute or percentage but as qualitative attributes.

Presentation of comparable sales offers:

A. Land 1100 sqm, right, intabulation, utilities: electricity

Offer: 20 € / sqm

B. Land 900 sq m, opening 20 ml to the main street, electricity, water, gas

Offer: 25 € / sqm

C. Land 800 sqm, open to the paved road, utilities: current

Offer: 23 € / sqm

D. Land 1000 sqm, access road to the road, all utilities.

Offer: 27 € / sqm

In the grid of market comparisons, it was noted that on the real estate market in the Puiești barrier area for similar lands located in the analyzed area, the bargaining margin between the offer and the actual transaction is about 15% depending on the waiting time, the willingness of the bidder to leave price, if the offer is made through a real estate agency or not, etc.(table 1).

Table 1

**Position of the property subject to assessment in relation to comparable properties**

Property	The Value Negotiated (€/sqm)	Global net correction
A	20	Positive
C	23	Positive
The Property evaluated	-	-
B	25	Negative
D	27	Negative

The property evaluated ranks between the highest value in the group of properties comparable to positive corrections (the C comparable) and the lowest value in the group of comparable negative (the B comparable). Given the characteristics of the land, the location in the area, the crossing, the utilities at its disposal, the state of the land at the date of evaluation, the value obtained by this method and which can be taken into consideration for this evaluation report is 24 € / sqm. The market value of the subject field determined by comparison method will be:

$V_p = 1000 \text{ sq. M} * 24 \text{ €} / \text{sqm} = 24000 \text{ €} * 4.53 \text{ lei} / \text{€} = 108.720 \text{ Lei}$

#### *Extraction method*

Taking into account the results obtained by applying the method of market comparisons to express an opinion on the market value for the analyzed land, and the realization of a coherency test of the resulting values, the extraction method was applied (Stan V. Sorin, 2003).

By the extraction method, the value of the land is taken from the sale price of a property by deducting the value of the construction contribution estimated by cost method.

$VT$  (free land value) =  $VP$  (property value after construction) –  $CIB$  (gross replacement cost)

For the application of this method we will consider the best use for land: the construction of a P = 4 E block of flats with the last retreat as recommended by the Urbanism Certificate (due to the angle of incidence of light that may affect the neighboring block located in the South) , with the built area of 755sqm and the actual living area of 580 sqm.

The extraction method involves estimating the market value for real estate property (land and residential property) and determining the value of the land by deducting from the value of the entire property of the value of the constructions and the costs related to the realization thereof, including the entrepreneur's profit.

According to the information from the construction companies, the prices for a square meter of the building are between 400-500 € / sqm depending on finishing. For the building we appreciated an achievement price of 400 € / sqm for structure and medium finishing. The replacement value of the subject building will be:

$C_i = 755 \text{ sqm} * 400 \text{ €/sqm} = 302000 \text{ €}$ .

Comparable apartments in the area:

A. Studio apartment, 4th floor ,25 sqm, framing, similar area.

Offer: 18000 Euro

B. Studio, 1st floor 1,26 sqm, multiple improvements, upper area.

Offer: 19500 Euro

C. Two-room apartment, floor 4,56 sqm, 2 balconies, CT, T, G, F, P, multiple improvements, D, upper area.

Offer: 42000 Euro

D. Two-room apartment, 3rd floor, 3,48 sqm, 2 balconies, T, G, F, P, D, upper area.

Offer: 36000 Euro

E. Three-room apartment, ground floor, 70 sqm, balcony, CT, T, metal door, upper area.

Offer: 52000 Euro

F. Three-room apartment, 2.65sqm floor, plates, CT, multiple improvements, similar area.

Offer: 48000 Euro

From market study shows that a two-room apartment with a useful area of about 50 square meters in the subject area has a value of approximately 43,000 E, a 21 sqm room with a usable area of approximately 18,000 E, and a 3-room apartment with a usable area of 64 sqm approximately 50000 E. Therefore, the value of the property in the BULF hypothesis is:

$VP = 8 \text{ ap.} \times 43000\text{€} + 4 \text{ ap.} \times 18000 \text{ €} + 1 \text{ ap.} \times 50000 \text{ €}$

$VP = 466000 \text{ €}$

The investment value for constructions would be:

Value of construction = 302000 €

Investor's profit (20%) = 60400 €

Expenditure (PUD, opinions) = 5000 €

Expenditure on sale (2%) = 8308 €

$Vi = 375708 \text{ €}$

The costs of financing this real estate project have been estimated taking into account interest rates on the real estate lending market, taking into account an average interest rate of approx. 10% and a lending period, which includes the period of realization of the real estate project, 1 year. Therefore, the funding costs are:

$F = 466000 \text{ €} \times (1,12 - 1) = 55920 \text{ €}$

The market value of the subject land, determined through by this method is the difference between the value of the property and the value of the constructions:

The value of the land will be:

$VT = VP - VI - F = 466000 \text{ €} - 375708 \text{ €} - 55920 \text{ €} = 34372 \text{ €} (34 \text{ €/sqm})$

The market value of the subject land by the extraction method will be:

$Vp = 34372 \text{ €} = 155.705 \text{ Lei}$

As a rule, several methods are applied for the valuation of a real estate, and each method results in a certain market value.

Reconciliation is the analysis of some alternative results to reach the final estimate of the value. The values contained in applying the two approaches to evaluation are (table 2):

Table 2

The resulting market values of the intravilan land, Bârlad municipality

Crit.number	Type Approach	Value (lei)	Value (€)
1.	COMPARATIVE APPROACH - SALES COMPARISON METHOD	108.720	24000
2.	APPROACH by cost EXTRACTION METHOD	155.705	34372

## CONCLUSIONS

The purpose of this analysis was to establish the market value of a arable land for a mortgages to secure a bank loan.

In the hypothesis of the non-reimbursement of the loan the bank wants to capitalize on the land by selling it on the market, not exploiting the land for the benefit, so the value obtained in the sales comparison approach would be appropriate. Taking into account the adequacy, quantity and accuracy of market information used in the approach, the valuer recommends as the final market value, the value obtained in the comparative approach - sales comparison method.

In order to compare the results obtained and to be as close as possible to the real value of the land, it is recommended to use at least two valuation methods, and in the case of large land, it is recommended to use the land plot method.

## REFERENCES

- Boghiță E., 2016 - *Estimațiuni rurale : sinteze și aplicații*, Editura Ion Ionescu de la Brad, Iași.  
 Borza Mioara, 2004 - *Evaluari Rurale*, Ed. Terra Nostra, Iași.  
 Stan V. Sorin, 2003 - „*Ghid practic de evaluare*”, Ed. IROVIAL, București.  
 \*\*\* „*Standardele Internationale de evaluare*”, Ediția a opta, 2007