

## STUDIES CONCERNING EVALUATION OF LANDS (CASE STUDY)

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### Abstract

The paper has as motivational support the importance of land value without which you can not do a thorough analysis of its use. Indisputable that in determining the place of the land in national wealth, determining of land value is absolutely necessary. Purpose of the paper is to provide a conceptual framework, methodological needed for an objective estimation of the land value, and the overall objective suppose the estimating the comparative value of land in the village Certesti, Galati county, depending on where they are - in town or outside of town. The paper deals punctually, methodological, the assessment of lands related Certesti's village, Galati county, on the three types of estimates, in the base of economical parameters, and of the analytical estimations or through income capitalization. Based on economical parameters, the value of a incorporated hectare of land is 13928.57 lei/ha in the village Certesti and 9705.88 lei/ha in the village Cotoroaia, and the value of a unincorporated hectare of land is the 5850 lei/ha respectively 5490 lei/ha. The average price of a incorporated hectare based on estimating through benchmarking method in the base of technical and economical parameters and of the analytical estimations or through income capitalization ranging from 14944.3 lei/ha in Certesti village and 10627.45 lei/ha in Cotoroaia village. The average price of a unincorporated land is 6323.87 lei/ha in Certesti village and 5900.82 lei/ha in Cotoroaia village.

**Key words:** technical parameters, economical parameters, analytical estimations, income capitalization.

The land through its specific nature, is a very valuable natural resource, the most precious economic asset different from other goods. Romania has 14.85 million ha of agricultural land which represents 62.3% of the total area, returning 0.65 ha per capita. Economic evaluation of agricultural land is essential and mandatory for better organization and use of land in order to achieve the main objective of the current land policy which is to achieve effective structures of agricultural holdings in Romania (Bodescu D., 2012).

### MATERIAL AND METHOD

The research methods can be grouped as follows:

- Monographic method;
- Methods used to study structure phenomena divided on components and the interrelationship between them: the method of division of the results;
- Methods used for determining the level of the phenomenon such as the method of comparison;
- Statistical grouping method;
- Case study.

### RESULTS AND DISCUSSIONS

Comparative estimation of land from Certesti, Galati county, depending on where they are - in town or unincorporated was carried out based on economic parameters. Certesti village is situated north of Galati county. Certesti village is made up of three villages: Certesti, Carlomanesti and Cotoroaia. Economic parameters more frequently used are lease norm or rent (Ca), the benefit land (Bf), gross salable production (Pbv), net income (Vn).

Lease norm or rental it is used for land and construction (Bodescu D., 2012). The evaluation process consists of the usual proportion:

$$X = (\Sigma V / \Sigma Ca) * x Ca$$

where :

X – The most probable value of land;

$\Sigma V$ - the sum of the market prices of similar land;

$\Sigma Ca$ - sum of lease norms related to similar lands;

x CA – economic parameter;

In the case study applying the formula and using data from the Certesti territory village has lead to estimation of the value of land depending on where it is - incorporated or unincorporated.

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In the village Certesti aggregate value for sale-purchase of three land located in urban area of 1 hectare each ( $\Sigma V$ ) is 45000 lei, lease norm is 2100 lei that is 700 lei per hectare.

Lease norm of the estimated land it is 650 lei per hectare.

To determine the value of the land apply the following calculation:

$$X = \frac{45000}{2100} \times 650$$

$$X = 13928.57 \text{ lei/ha}$$

In the village Certesti aggregate value for sale-purchase of three land located in unincorporated area of 1 hectare each ( $\Sigma V$ ) is 19500 lei, lease norm is 1200 lei that is 400 lei per hectare. Lease norm of the estimated land it is 360 lei per hectare.

To determine the value of the land apply the following calculation:

$$X = \frac{19500}{1200} \times 360$$

$$X = 5850 \text{ lei/ha}$$

In the village Cârломănești aggregate value for sale-purchase of three land located in urban area of 1 hectare each ( $\Sigma V$ ) is 39000 lei, lease norm is 1890 lei that is 630 lei per hectare. Lease norm of the estimated land it is 600 lei per hectare.

To determine the value of the land apply the following calculation:

$$X = \frac{39000}{1890} \times 600$$

$$X = 12380.5 \text{ lei/ha}$$

In the village Cârломănești aggregate value for sale-purchase of three land located in unincorporated area of 1 hectare each ( $\Sigma V$ ) is 18900 lei, lease norm is 1000 lei that is 333.3 lei per hectare. Lease norm of the estimated land it is 300 lei per hectare.

To determine the value of the land apply the following calculation:

$$X = \frac{18900}{1000} \times 300$$

$$X = 5670 \text{ lei/ha}$$

In the village Cotoroia aggregate value for sale-purchase of three land located in urban area of 1 hectare each ( $\Sigma V$ ) is 33000 lei, lease norm is 1700 lei that is 566.6 lei per hectare. Lease norm of the estimated land it is 500 lei per hectare.

To determine the value of the land apply the following calculation:

$$X = \frac{33000}{1700} \times 500$$

$$X = 9705.88 \text{ lei/ha}$$

In the village Cotoroia aggregate value for sale-purchase of three land located in unincorporated area of 1 hectare each ( $\Sigma V$ ) is 18300 lei, lease norm is 900 lei that is 300 lei per hectare. Lease norm of the estimated land it is 270 lei per hectare.

To determine the value of the land apply the following calculation:

$$X = \frac{18300}{900} \times 270$$

$$X = 5490 \text{ lei/ha}$$

Analytical estimate identify with economic criterion of capitalization and consists in determination of the probable value of a good through capitalization (Boghiță E., 2011). By this method accumulates at the estimation moment, the future series of constant incomes, averages, normal, on which can provide it the asset.

#### Determining the land benefit

Bf's determination varies depending on management system of enterprise:

For businesses managed in direct economy:  $Bf = Pbv - Ct$ , where:

Pbv- saleable gross product;

Ct- total cost;

- for leased enterprises  $Bf = Ca - Chp$ , where:

Ca- lease norm;

Chp- owner's cost;

Land benefit which can be obtained from a leased land, can be determined by the relationship:

$Bf = Ca - Chp$  or better  $Bf = Vbp - Chp$

Vbp=owner's gross income;

Saleable gross product which can be obtained for an hectare of arable land located in Certesti village is worth about **600 lei**.

**1. Cerțești village**

Land benefit calculated per hectare of arable urban land, will be:

**Bf=600lei - (taxes 100lei + construction executed 300lei + other expenses 40lei)**

$$\mathbf{Bf = 600 - 440 = 160lei/ha}$$

Land benefit calculated per hectare of unincorporated arable land, will be:

**Bf=600lei - (taxes 15lei + construction executed 300lei + other expenses 40lei)**

$$\mathbf{Bf = 600 - 355 = 245 lei/ha}$$

**2. Satul Cărlomănești**

Land benefit calculated per hectare of arable urban land, will be:

**Bf=600lei - (taxes 90lei + construction executed 300lei + other expenses 40lei)**

$$\mathbf{Bf = 600 - 430 = 170lei/ha}$$

Land benefit calculated per hectare of unincorporated arable land, will be:

**Bf=600lei - (taxes 12lei + construction executed 300lei + other expenses 40lei)**

$$\mathbf{Bf = 600 - 352 = 248 lei/ha}$$

**3. Satul Cotoroaia**

Land benefit calculated per hectare of arable urban land, will be:

**Bf=600- (taxes 70lei + construction executed 300lei + other expense 40lei)**

$$\mathbf{Bf = 600 - 410 = 190 lei/ha}$$

Land benefit calculated per hectare of unincorporated arable land, will be:

**Bf = 600 - (taxes 10 + construction executed 300lei + other expenses 40lei)**

$$\mathbf{Bf = 600 - 350 = 250 lei/ha}$$

**Estimating the costs of transformation - unincorporated land in urban land**

At the level of village Certesti, estimating transformation costs of unincorporated land in urban land, an area of one hectare, plots of 1000m<sup>2</sup>, is as follows (table 1):

Table 1

**Estimating the costs of transformation - unincorporated land in urban land - village Cerțești**

<b>Costs of transformation</b>	<b>Value -lei-</b>
area urbanistic plan	3300
expenditure on the electricity network	1150 x 100 m = 115000
expenditure on the electricity network	2670 x 100m = 267000
expenditure on the construction of asphalt roads	10235 x 1000m <sup>2</sup> = 10235000
gas network costs	3560 x 100 m = 356000
expenses of running water network	3115 x 100 m = 311500
<b>Total</b>	<b>11287800</b>

In the case of plots with 1000 m<sup>2</sup> surface, cost per square meter of land transformed into the village Certesti will be:

$$(11287800 + 14944.3)/10000 = \mathbf{1130.27 lei}$$

And the cost for a transformed plot with an area of 1000 m<sup>2</sup> will be:

$$1130.27 \times 1000 = \mathbf{1130270 lei}$$

In the village Carlomanesti cost per square meter of land transformed will be:

$$(11287800 + 12819.14)/10000 = \mathbf{1130.06 lei}$$

And the cost for a transformed plot with an area of 1000 m<sup>2</sup> will be:

$$1130.06 \times 1000 = \mathbf{1130060 lei}$$

In the village Carlomanesti cost per square meter of land transformed will be:

$$(11287800 + 10627.45)/10000 = 1129.84 lei$$

And the cost for a transformed plot with an area of 1000 m<sup>2</sup> will be:

$$1129.84 \times 1000 = \mathbf{1129840 lei}$$

**CONCLUSIONS**

Based on economic parameters estimation, the value of an hectare a urban land 13928.57 lei/ha in village Cerțești and 9705.88 lei/ha in village Cotoroaia and the value of an land hectare is 5850 lei/ha respectively 5490 lei/ha.

Based on the transformation costs results, the cost for a transformed plot with an area of 1000 m<sup>2</sup> is 1130270 lei in village Cerțești, 1130060 lei in village Cărlomănești and 1129840 lei in village Cotoroaia.

Regarding the need for land for housing and household annexes, should not be pressures, because the estimated calculations show a reduction in population commune in the near future, on the other hand is expected extension of urban land through superior valorification of land internal resource.

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