

ESTIMATION OF RURAL ESTATES IN CIRCULAR ECONOMY (TRASIMENO AREA – LIVERUR PROJECT)



Within the territory of Trasimeno, about 10 companies have embarked on a circular economy path in which agricultural and animal production, agritourism, crafts, recovery of by-products and waste, common management of maintenance services of the territory, are strongly interconnected, especially through small local economic and market supply chains.

Wanting to estimate the economic value of an ordinary company, we proceeded, by way of example, by applying both a synthetic method and an analytical method, reaching a very similar final value. Both in the first and in the second case the benefits of the circular economy bring only additions to the value of the property, with strong reductions in management costs.

The methods of estimating rural estates, also in circular economy, follow two paths:

1) Estimate with synthetic method that provides that there are similar estates recently object of sale and that the prices of real estate are known.

$SUM V : \sum p = V^{\circ} : p$

where V° is the ordinary value of the asset, followed by a possible devaluation due to fragmentation, positioning, fertility, exposure.

P is the technical parameter (hectares)

The economic parameters are the dominical income, the land income, the Gross Saleable Production.

2) Estimation with analytical method, based on an economic balance, with the aim of finding the value of the property $V^{\circ} = Bf / r$ (land benefit / capitalization rate). Provided that it is possible to determine an ordinary and continuous Bf and it is possible to determine an adequate capitalization rate.

SYNTHETIC METHOD

$$V_x = \frac{\sum V}{\sum p} \times P_x$$

where:

$\sum V$ = sum of market prices of similar real estate

$\sum p$ = sum of unit parameters of measurement (hectares)

p = unit parameter

Example:

Farm 1 : 15 hectares, value 150.000 euro

Farm 2 : 20 hectares, value 200.000 euro

Farm 3: 30 hectares, value 400,000 euros

$$(150.000+200.000+400.000)/(15+20+30) = 750.000/38 \times 24 = 473.684 \text{ euro}$$

Therefore, the estimate of the property, with synthetic method, amounts to 473,684 euros, for a medium area equal to 24 hectares, of which:

- olive grove: 10 hectares
- vineyard: 5 hectares
- cereals: 5 hectares
- sunflower: 4 hectares

ANALYTICAL METHOD

It is based on the calculation of the company balance sheet:

$$\text{Bf} \pm \text{profit} = \text{PLV} - (\text{Sa} + \text{St} + \text{Sv} + \text{Q} + \text{Int} + \text{Imp})$$

Where:

Bf = land benefit

Sa = wages

St = salaries

Sv = direct expenses

Q = depreciation, maintenance, insurance

Int = interest

Imp = taxes

PLV OLIVE GROVE

$$10 \text{ hectares} \times 6 \text{ tons} \times 0.20 \text{ (yield)} \times 100 \times 4 \text{ euros} = 48,000 \text{ euros/year}$$

PLV VINEYARD

$$5 \text{ hectares} \times 4 \text{ tons} \times 0.40 \text{ (yield)} \times 100 \times 3 \text{ euros} = 24,000 \text{ euros/year}$$

PLV SOFT WHEAT

$$5 \text{ hectares} \times 5 \text{ tons} \times 400 \text{ euros} = 10,000 \text{ euros/year}$$

PLV SUNFLOWER

$$4 \times 3 \text{ tons} \times 340 \text{ euros} = 4,080 \text{ euros}$$

TOTAL PLV = 86,080 euros

Direct expenses = 25,824 euros

Wages = 8,608 euros

Salaries = 4,304 euros

Shares = 12,912 euros

Taxes = 4,304 euros

Interest = 5,165 euros

TOTAL COSTS = 61,517 euros

$Bf = 86,080 - 61,517 = 24,563$ euros (land benefit)

$Bf/r = 24.563/0,06 = 409.383$ euro (property value with analytical method)

ADDITIONS WITH CIRCULAR ECONOMY SYSTEM

lower advertising and marketing costs

lower transport costs for products and technical means

lower management costs of agritourism activities (catering, tasting, sports and recreational activities, etc.)

DEDUCTIONS

None.

In conclusion, both with the first and with the second method of estimation, the lower costs due to a common management of circular economy, determine an increase in the value of the property of 20-30% (+ 80,000 – 120,000 euros).

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