

THE EVALUATION OF THE INFORMATIVE FUNCTION OF THE COMPLEX OF BALȚILE MICI OF BRAILA

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The paper work approaches the theoretical methodological support of the informational function s evaluation of the natural capital.

In this purpose we have resorted to the characterization of the evaluation methods and technics from the point of view of the fields of pretability, stages, and limits. The measure is completed by the selection criterions of the methods and technics of evaluation regarding the application field.

The usement of the evaluation methods stands for the turistic activity under the comparative results obtained by using the hypothetic market methods and the substitution market.

Key word : hypothetic market, substitution market, paying approval, consumer s overflow.

The characterization of the monetary methods and evaluation techniques of resources and services generated by the natural capital.

The technique of “implicit prices” is applicable in the following cases:

- the lowering of the air and water quality in the considered zone
- the affecting of the recreative characteristics of an area
- the increase of the ecological risks due to the placing in the nearby area of a dangerous installation

For the application of the technique of “implicit prices” there must be ran through more steps:

- the defining and measurement of the environmental parameters: the concentration of CO₂,NO_x,SO₂, particles in suspension, etc.
- the establishment of the function of “implicit prices” (the characteristics and the facilities of the real estate asset)
- collecting the data
- the determination, based on multiple regression, of the environmental characteristic value
- the establishment of the demand curve regarding the environment quality

The limits of this technique refer to the following aspects:

- the real estate market is not active and transparent enough, and it doesn’t assure the data flux
- it presumes collecting and processing a large data volume, which necessitates special competences in the domain of statistics and econometry
- some characteristics of the environment are either little or at all measurable
- the perception of the environmental quality has an important subjective dimension
- the results of the application are highly influenced by the form of the function and the estimation techniques; once the quality of the environment has been assimilated, in the regression analysis, as residual value, the defining of the function is determined
- the prices of real estate assets may reflect anticipations of the market evolution, including probable changes of the environmental quality.

“**The travel cost**” is a technique that has a large applicability for the evaluation of the natural areas or the environmental resources which price hasn’t been set , because the availability to pay for visiting(with recreative, cultural, scientific purposes) such an area can be considered as an expression of the value associated to it.

As a result, the technique based on “travel cost” is operational especially for:

- parks for spending free time
- natural reservation, national parks, forests and humid areas used for spending free time
- dams, artificial lakes, forests having recreative functions as well
- supplying wood for heating

Applying this technique presumes running through the following steps:

- delimitating the affluention areas of the visitors
- making polls amongst the visitors of the area
- estimating the frequency rate
- estimating travel cost
- calculating the statistical regression
- establishing the demand curve

The difficulties(the limits) of using the technique of “travel cost” come from a series of aspects such as:

- crossing the track to the evaluated area aims other objectives (touristical) as well
- the utility or the lack of utility of the crossed track
- estimating the value of the time assigned for visiting the area
- the possibilities of making the poll based on a representative group
- from the multiple functions of the area only the recreation, esthetical, scientific function is targeted
- choosing the form of the regression function
- evaluating the changes regarding the quality of the environment; the technique based on “travel cost” can allow evaluating the incidence of the changes or the suggestions regarding the modification of the recreation “vocation” of the area on it’s frequency rate, or the importance of the demand for an area comparative to an other which offers a different quality of the environment. Under these terms it’s necessary the objective measurement of the environment condition, which may be an objective hard to achieve.

The technique of “conscripted evaluation“ is a form of hypothetical market study referring to the environmental quality change:

- the quality of the air and of the water
- expressing the recreation function(fishing, hunting, walks, etc)
- preserving some components of the natural patrimony
- the value of option and existence of biodiversity
- risks for health and life
- improving transportation, etc.

Applying the technique of “conscripted evaluation” is being handled by the following steps:

- isolating and characterizing the environmental issue
- establishing the way of contacting the subjects of the poll group (mail, phone, direct meeting)
- conceiving the questionnaire in shape of direct, open or multiple choice questions so that:
 - the minimal necessary information is provided to the interviewed one
 - the value which the interviewed one associates with the environmental quality change can be established
 - the social and economical status of the interviewed one is known
- the data analysis on three levels:
 - the elaboration of a frequency distribution table, relating the indicated level of payment consent (CAP) to the number of those who indicated that level

- the elaboration of a multiple entry table, for relating the CAP level to the social and economical characteristics of the interviewed ones
- the use of multi-criterial analysis techniques.

The reserves against the use of the “conscripted evaluation” technique are related to the fact that there are taken into account the points of view of the interviewed ones instead of concrete aspects of their behaviour, as well as their training level.

The technique based on the “dose-answer” relation (circumscribed to the indirect method of monetary evaluation of the physical effects) estimates the physical impact of the environmental quality change on a receiver:

- atmospheric pollution and material corrosion
- acid rains and terrain (agricultural, of forests) efficiency
- water pollution in the coast area and the health of those who bathe, etc.

Usually the “dose-answer” relation is applicable in the following situations:

- the effect of acid rains on the growth, fading or quality of the crops and trees, and on the corrosion and the aspect of the materials and equipment
- the damages caused to human health by the atmospheric pollution (particles in suspension, toxic substances),
- the impact of pollution on human health
- the oversalting of the lands
- the accumulation of heavy metals and chemical substances into the soil and underground water as a result of the mining activity

The application of the “dose-answer” relation runs in two stages:

- the determination of the physical impact, by using:
 - laboratory or field research
 - controlled experiments
 - regressions techniques
 - the modeling of the phenomenons and processes.
- the determination of the monetary value of the physical effect, utilizing for this purpose especially the market cost (even if this means taking some risks on the deformation of the results)

Criteria for selecting method packages, techniques and instruments proper the evaluation of the resources and services generated by natural assets.

The theories of applying the “implicit prices”:

- the real estate market is dynamic, active
- the quality of the environment is perceived by the population as an important factor of property value
- the space-time distinctions regarding the quality of the environment are obvious
- the real estate market works relatively free and the transactions take place under transparency conditions

The theories of applying “expenses for protection”:

- the dwellers understand the ecological risks that they are exposed to
- the assumption of the measures aiming the protection
- the effort made for reducing the damages is expressed by numeric indicators

The theories of applying the “travel cost” technique:

- the area is accessible at least for certain periods

- the access in the area is not restricted by paying a fee(or the level of the entrance fee is symbolic)
- the visitors assign a lot of time and money to be able to get to the recreation area

The theories of applying “conscripted evaluation”:

- the changes in the environment have no direct impact on commercialised production
- direct observation of the individuals’ preferences is not possible
- the poll group is representative concerning the information level and for the interest of the solved problem
- there are funds, human and time resources suitable to realize achieve a true study

The hypothesis of using the “duse-response” technique.

1. The change of the quality of the environment determines, directly the diminution (or the increase) of the productivity of a commercialized object.
2. The effect is obvious and may be observed or tested in an empiric way.
3. The market functions well, so as the price represents a good indicatory/sign of the economic value.

The evaluation of the informative function of the Baltile Mici ale Brailei (Bm Br) Complex. The hypothetic market method.(the sounding technique)

Crt. Nr.	The tipe of tourist’s activities	The pattern’s structure		The variation of compensation Ron/year	The medium variation of compensation Ron/year
		Nr.	%		
1	Scientific tourism	22	13,3	1900	86,4
2	Recreation tourism	106	64,3	8141	76.8
3	Educational tourism	37	22,4	2220	60
Total	total	165	100	12261	74,3

Note: the structure of the pattern doesn’t reflect even the member of non- responses.

Table 1. The tourist’s structure and their disposability to pay for keeping safe Bm Br

The determination of visitors number

- the number of the used beds.105
- the average of the holiday:5 nights
- the number of the tourists/bed/year:73
- the number of the tourists:7665

Variation’s determination of compensation for all visitors:

$$7665*74.3 \text{ ron/year}=569509,5 \text{ ron/year.}$$

The informative function of Bm Br has an annual net value of 569509.5 ron/year. This sum would change obviously if we took into consideration the entire Bm Br capacity of maintaining the tourist activities.

1. The varying of compensation represents the sum which the visitor can pay aver the market price” (the annual cost of the holiday) to conserve Bm Br so that the level of his well-being remain at last the initial level (before expiring his availability of paying); the varying the net value of the tourist resource determined by the Bm Br informative function.

The method of substitution market (technique based on the price of the trip).

Crt. Nr	The zone	The number of the tourists		Tourists /1000 inhabitants	The cost of the trip
		Total	%		
1	Alexandria	221	2.9	3.9	1105
2	Bacau	605	7.9	2.9	1151
3	Brasov	813	10.6	2.7	1186
4	Braila	1015	13.2	4.3	967
5	Buzau	585	7.6	4	1015
6	Focsani	617	8.1	6.4	950
7	Galati	723	9.4	2.2	987
8	Ilfov	810	10.6	2.8	1100
9	Pitesti	648	8.4	3.5	1121
10	Ploiesti	792	10.3	3.2	1100
11	Slobozia	144	1.9	2.6	1093
12	Targoviste	458	6.1	4.6	1100
13	Vaslui	234	3	3.1	1105
	Total	7665	100	3.6	1068

Note :the cost of the trip =the transport expense + the value of the consumed time * expense in site (the value of the consumed time was calculated on the basis of the medium salary in the economy from 2006).

Table 2 .The number of the tourist and the cost of the trip coming from origin areas (big cities)

The determination of the petition for tourism function.

$$Y=a + bx$$

y-the cost of the trip

x = tourist's number / 1000 inhabitants

Taking into account the data from the table nr. 12 , the parameters of the petitions function for tourism are :

$$Y =1250 - 46,8x$$

The determination of consumers excess

- the determination of the balance price, estimated medium shared cost of the trip ;taking into account the data from the tabel 12 results a balance price of 1028 ron.
- the measurement of the 'consumers excess ' for one tourist :

$$1250 - 1068 * 1 * 0.5 = 91 \text{ ron/year.}$$
- the measurement of the ' medium approved to pay ' for a tourist : (the raw value conferred on the informative function of Bm Br by a tourist) :

$$1068 + 91 = 1159 \text{ ron / year}$$
- the approved to pay = the market price * consumers excess
- the determination of the total net value of the informative function of the Bm Br $7665 * 91 = 697515 \text{ ron / year}$
- the determination of the total net value of the informative function of Bm Br : $7665 * 1159 = 8883735 \text{ ron / year}$
- the determination of the total raw value of the informative function of the Bm Br $1068 * 7665 = 8186220 \text{ ron / year}$

It is found that the net value of the informative function of the Bm Br based of the variation of compensation (569509.5) is 18.4 % smaller than the one determined by the consumers excess (697515), by this being checked the theoretical size relation between the variation of the compensation and the excess of the consumer.

Bibliografie

1. Barde J.P. - Economie et politique de l'environnement Paris, OCDE, pg.63.166
2. Giles Atkinson, Richard Dubourg, ş.a. - Measuring Sustainable Development, Edward Elgar Publishing Limited, 1997, pg. 155-187
3. Guy Garrod, Keneth G. Willis - Economic Valuation of the Environment . Ed. Edward Elgar Publishing Inc, Massachutsetts, USA, 1999, pg. 117-125
4. Helen Bright Uwe Latacz-Lohmann - Environmental Policy: Theory, Design and Applications , University of London, 1998, pg. 5,4,8
5. xxx - Evaluation economique des politiques et projets environnementaux (un hide pratique), - insittute de Developpement Economique de Banque Mondial, 1995, pg.41-89
6. Scott J. Callanjanet M. Thomas - Environmental Economics and Management, Third Edition, Ed. Thomson, 2004, pg.42-57; 142-159
7. Sylvie Faucheux , Jean Francois Noel - Economie des ressources naturelles et de l'environnement, Ed. Armând Colin, Paris, 1995, pg.212-233