

# THE IDENTIFICATION OF A PROFILE OF THE WELLNESS TOURISM CONSUMER

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*The aim of the current research is to establish whether there is a connection between the socio-demographic features of the potential consumers and the predilection towards the wellness consumerism, in order to evaluate the potential wellness market in Romania. Therefore, we will use the results of a study performed in 2007 on the tourists in the Băile Felix spa, by using the fuzzy mathematics.*

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## **1. Introduction**

The concept of *wellness tourism* is still being debated on. In different studies and research, the wellness is more or less connected to tourism, having a strong relation with the prevention and treatment of some diseases. A rather enough definition says that the wellness tourism is "the sum of the all of the relationships and phenomena resulting from a journey and residence by people whose main motive is to preserve or promote their health"<sup>23</sup>. In the paper quoted, there is some delineation between the wellness tourism and the medical/treatment tourism. The major difference would be, in the terms of demand, that the wellness tourism is addressed to healthy persons, having programmes for prevention or maintenance. Anyway, the opinions are divided, others not making a too clear differentiation between those demanding such programmes. The wellness tourism could be the way to invigorate the balneary-climatic tourism in the Romanian traditional resorts.

The problem is whether the traditional consumers of the balneary-climatic tourism are going to embrace this relatively new form of tourism and/or the new consumer segments can be targeted.

Other researches too meant to create a possible profile of the wellness consumer<sup>24</sup>. In Australia a study on 1308 persons from different urban and rural areas was made regarding their attitude towards the complementary and alternative medicine. The paper suggests four categories of activities making up the complementary and alternative medicine. These are<sup>25</sup>:

- natural remedy modalities: naturopathies, homeopathies, Chinese medicine and herbals;
- wellness modalities: Kinesiology, spiritual healings, shiatsu, Reiki, reflexology, aromatherapy, yoga, meditation;
- accepted modalities: osteopathy, acupuncture, tai chi, hypnotherapy;
- established modalities: chiropractic, massage therapy, prayer, magnet therapy, Brown therapy.

The study mentioned<sup>26</sup> has generated the following profile of the wellness consumer: mainly women, especially in age groups of 18-39 or 40-59 years old, with superior education, with above the average incomes.

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23 Mueller, H; Lanz Kaufmann, E., Wellness tourism: Market analysis of a special health tourism segment and implications for the hotel industry, *Journal of Vacation Marketing*, vol.7, no.1, p.7.

24 Robinson, A.; Chesters, J; Cooper, S., Complementary and Alternative Medium Modalities, *Complementary Health Practice Review*, 2008, 12; 99.

25 Robinson, A.; Chesters, J; Cooper, S., op.cit., p.104.

26 Idem

## 2. Methodological approach

The aim of our research is to establish whether there is a connection between the socio-demographic features of the potential consumers and the predilection towards the wellness consumerism, in order to evaluate the potential wellness market in Romania.

In this view, we will use the results obtained as a result of a study made in 2007<sup>27</sup>. The study had as objective the identification of the attitude of the current consumers of balneary-climatic products from Băile Felix towards the wellness programmes.

The investigation method based on questionnaire was used as a preliminary stage in order to identify the attitude and the perceptions of the consumers, together with the general degree of information regarding the study subject, also the questionnaire targets to identify specific aspects regarding the current services, prospective needs etc.

The questionnaire has 10 questions, it has a common structure: that is, the headlines of the company undergoing the research, the period of time is mentioned (February 2007), it has an introductory-explanatory phrase meant to justify its implementation.

The implementation interval is chosen at the beginning of February 2007, in off-season, in Băile Felix, Romania.

There are 230 persons who agreed to answer to it. The questioned sample is characterised from the point of view of personal data as follows: the best-represented category is that of 25-34 years (39.13%), the distribution on ages being a normal one, the Romanians over 55 years old do not travel much. The surveyed population is preponderantly feminine (69,57% F vs. 30,34% M); The respondents are in an overwhelming percentage with their address in the urban environment (82.26%),

The geographical areas represented Ardeal -73.91%, Banat 13.04 %, Muntenia, Maramureş and Bucharest being each represented in a percentage of 4.35%, Oltenia and Moldova having 0%.

The duration of the trip that the most choose (47.82%) is of 2-3 days (probably, the week-end), then a cure of up to 7 days (26.09%) almost at equality with those who wish the 7-14 days trip (21.74%), in 14 days time we have a choosing percentage of only 4.35%.

Regarding the monthly revenue of the respondents, they are framed into the 5-15 million lei group (43.48%), the 15-25 million lei group, respectively (21.74%).

The best-represented marital status is 47.83% married, followed by singles 30.43%.

Regarding the studies, we notice a high percentage of people with superior education 60.87%, next to the post-university education 21.74%, those in the primary and secondary education are not represented.

We start from the presupposition that on the balneary-climatic market of Băile Felix there is also the segment of potential consumers of the wellness supply. Without using the term of *wellness* (too little known) the entire survey was directed towards the identification of the options for procedures regarding both the body as well as for the mind and the spirit. A direct question in this view is the question number 10 which studies the degree of adhesion to the essence of wellness, meaning the procedures meant for both the body as well as for the mind and the spirit. The adhesion was expressed by marking a square on the Likert scale.

Trying to create a possible profile of the wellness consumer, we have checked whether there is a connection between the answer to question number 10 and the income interval where the respondents frame within and the question number 10 and the level of education. **In this view, we used the fuzzy mathematics due to the high degree of precision that it provides.**

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27 Tomescu, A.; Ban, O., Drawing up the positioning strategy of a spa-hotel –the preliminary data, International Conference “European Integration – New Challenges for the Romanian Economy”, Annals of University of Oradea-Faculty of Economics, pp.1253-1258, <http://steconomice.uoradea.ro/anale/volume/2007/v1-management-and-marketing/124.pdf>.

**”10. It is being conveyed the idea according to which, in a treatment centre, there should be techniques addressing not only the body but also techniques addressing the mind and techniques for the spirit poise. What is your position to it?”**

We took into consideration the answers of the tourists accommodated in 3 star entities (approximately 20% of the total), 2 star entities (approximately 40% of the total) and one star entities (approximately 40% of the total). We gave up the answers provided by those accommodated in four star entities due to the reduced number, which does not ensure the representation.

Let  $X$  be a universal set of discourse. A fuzzy set  $A$  in  $X$  is defined by a membership function which maps each element  $x \in X$  to a real number in the interval  $[0,1]$ , that is  $A: X \rightarrow [0,1]$ . The value  $A(x)$  represents the grade of membership of  $x$  in  $A$  means a large value of  $A(x)$ .

A triangular fuzzy number is a fuzzy set  $A$  in  $\mathbb{R}$  with the membership function  $A: \mathbb{R} \rightarrow [0,1]$  characterized by

$$A(x) = \begin{cases} \frac{x-a}{b-a}, & \text{if } a \leq x \leq b \\ \frac{x-c}{b-c}, & \text{if } b \leq x \leq c \\ 0, & \text{otherwise,} \end{cases}$$

where  $a, b, c \in \mathbb{R}, -\infty < a < b < c < \infty$ . We denote  $(a, b, c)$  a triangular fuzzy number as above.

The addition  $\oplus$  and the scalar multiplication  $\cdot$  of triangular fuzzy numbers are based on the extension principle in Fuzzy Set Theory and they are defined by (see e. g. [Tsaur-Tzeng-Wang])

$$\begin{aligned} (a_1, b_1, c_1) \oplus (a_2, b_2, c_2) &= (a_1 + a_2, b_1 + b_2, c_1 + c_2), \\ k \cdot (a, b, c) &= \begin{cases} (ka, kb, kc), & \text{if } k \geq 0 \\ (kc, kb, ka), & \text{if } k < 0. \end{cases} \end{aligned}$$

The arithmetic mean  $M_{A_1, \dots, A_n}$  of triangular fuzzy numbers  $A_1, \dots, A_n$  is equal to

$$M_{A_1, \dots, A_n} = \frac{1}{n} \cdot (A_1 \oplus \dots \oplus A_n) \quad (1)$$

The expected interval of a fuzzy number  $A$ , denoted by  $EI(A) = [EI_*(A), EI^*(A)]$  and the expected value of a fuzzy number  $A$ , denoted by  $EV(A)$ , were introduced in the paper [Heipern] to evaluate a fuzzy number by a real interval or a real number. In the particular case of a triangular fuzzy number we have

$$EI((a, b, c)) = \left[ \frac{a+b}{2}, \frac{b+c}{2} \right] \quad (2)$$

and

$$EV((a, b, c)) = \frac{a+2b+c}{4}. \quad (3)$$

The correlation coefficient between two fuzzy numbers  $A$  and  $B$  was define in the paper [Hung-Wu] by

$$\rho(A, B) = \frac{EI_*(A)EI_*(B) + EI^*(A)EI^*(B)}{\sqrt{(EI_*(A))^2 + (EI^*(A))^2} \sqrt{(EI_*(B))^2 + (EI^*(B))^2}}. \quad (4)$$

The concept of linguistic values [Zadeh 1] is in a strong connection with the fuzzy set theory [Zadeh 2] and it is very useful in handling situations that are too complex or ill-defined to be reasonably described by quantitative expressions. As example, we model the possible answers to question 10, by triangular fuzzy numbers as follows:

Strongly agree:  $A = (7.5, 10, 10)$ ;

Agree:  $B = (5, 7.5, 10)$ ;

Less Agree:  $C = (2.5, 5, 7.5)$ ;

Disagree:  $D = (0, 2.5, 5)$ ;

Strongly disagree:  $E = (0, 0, 2.5)$ .

Then (according to formula (1) and the data given in ...) the arithmetic mean of the opinions with respect to question (10) in the case of the three stars hotels (we denote it by  $M_3^{10}$ ) is

$$\frac{1}{17} \cdot (1 \cdot A \oplus 8 \cdot B \oplus 7 \cdot C \oplus 1 \cdot D \oplus 0 \cdot E) = (3.82, 6.32, 8.68)$$

Let us assume that we want some conventional quantitative expressions of this result. We apply formula (2) to obtain a real interval as a synthesis of opinions and formula (3) to obtain a real number as a synthesis of opinions. We have

$$EI(M_3^{10}) = [5.07, 7.50]$$

and

$$EV(M_3^{10}) = 6.285,$$

to conclude the analysis on the answers to question 10.

In a similar way we calculate  $M_1^{10}$  and  $M_2^{10}$ , the arithmetic mean of opinions with respect to question (10) in the case of one and two stars hotels, respectively. We obtain

$$M_1^{10} = \frac{1}{7} \cdot (0 \cdot A \oplus 6 \cdot B \oplus 1 \cdot C \oplus 0 \cdot D \oplus 0 \cdot E) = (4.64, 7.14, 9.64)$$

and

$$M_2^{10} = \frac{1}{26} \cdot (1 \cdot A \oplus 14 \cdot B \oplus 7 \cdot C \oplus 3 \cdot D \oplus 1 \cdot E) = (3.65, 6.06, 8.46).$$

Then

$$EI(M_1^{10}) = [5.89, 8.39],$$

$$EI(M_2^{10}) = [4.86, 7.26],$$

$$EV(M_2^{10}) = 7.140$$

and

$$EV(M_2^{10}) = 6.06.$$

We can do analogous analysis in the case of questions 20 and 22. First, we consider the following representations as triangular fuzzy numbers of the linguistic values given as possible answers to questions 20 and 22:

Under 500 RON:  $F = (0, 0, 3)$ ;

Between 500 RON and 1500 RON:  $G = (0, 3, 7)$ ;

Between 1500 RON and 2500 RON:  $H = (3, 7, 10)$ ;

Upper 2500 RON:  $I = (7, 10, 10)$ ;

Post-university:  $P = (7.5, 10, 10)$ ;

University:  $Q = (5, 7.5, 10)$ ;

High-school:  $R = (2.5, 5, 7.5)$ ;

Secondary school:  $S = (0, 2.5, 5)$ ;

Primary school:  $T = (0, 0, 2.5)$ .

With the already introduced notations we obtain:

$$M_1^{20} = \frac{1}{7} \cdot (0 \cdot F \oplus 7 \cdot G \oplus 0 \cdot H \oplus 0 \cdot I) = (0, 3, 7)$$

$$EI(M_1^{20}) = [1.5, 5],$$

$$EV(M_1^{20}) = 3.25,$$

$$M_2^{20} = \frac{1}{26} \cdot (7 \cdot F \oplus 12 \cdot G \oplus 4 \cdot H \oplus 3 \cdot I) = (1.27, 3.62, 6.73)$$

$$EI(M_2^{20}) = [2.45, 5.18],$$

$$EV(M_2^{20}) = 3.815$$

$$M_3^{20} = \frac{1}{17} \cdot (0 \cdot F \oplus 1 \cdot G \oplus 11 \cdot H \oplus 5 \cdot I) = (4, 7.65, 9.82)$$

$$EI(M_3^{20}) = [5.83, 8.73],$$

$$EV(M_3^{20}) = 7.28$$

$$M_1^{22} = \frac{1}{7} \cdot (0 \cdot P \oplus 0 \cdot Q \oplus 4 \cdot R \oplus 3 \cdot S \oplus 0 \cdot T) = (1.43, 3.93, 6.43)$$

$$EI(M_1^{22}) = [2.68, 5.18],$$

$$EV(M_1^{22}) = 3.93$$

$$M_2^{22} = \frac{1}{26} \cdot (0 \cdot P \oplus 7 \cdot Q \oplus 13 \cdot R \oplus 5 \cdot S \oplus 1 \cdot T) = (2.60, 5, 7.50)$$

$$EI(M_2^{22}) = [3.80, 6.25],$$

$$EV(M_2^{22}) = 5.025$$

$$M_3^{22} = \frac{1}{17} \cdot (0 \cdot T \oplus 0 \cdot S \oplus 5 \cdot R \oplus 11 \cdot Q \oplus 1 \cdot P) = (4.41, 6.91, 9.26)$$

$$EI(M_3^{22}) = [5.66, 8.09],$$

$$EV(M_3^{22}) = 6.875.$$

In the sequel we use the above results and formula (4) to study the links between the answers to questions 10, 20 and 22 and their dependence from the category of the accommodation. Between the answers to question 10 and the salaries of the tourists we obtain the following correlations:

$$\rho(M_1^{10}, M_1^{20}) = 0.9483$$

$$\rho(M_2^{10}, M_2^{20}) = 0.9886$$

$$\rho(M_3^{10}, M_3^{20}) = 0.9999.$$

Between the answers to question 10 and the studies of the tourists we obtain the following correlations:

$$\rho(M_1^{10}, M_1^{22}) = 0.9909$$

$$\rho(M_2^{10}, M_2^{22}) = 0.9985$$

$$\rho(M_3^{10}, M_3^{22}) = 0.9998.$$

### 3. Results

Our suppositions were confirmed, meaning the values obtained indicate a strong and direct connection between the adhesion to the concept of wellness (which means the treatment of the body, mind and spirit) and the level of education and the income group. The more educated is a person (he/she has university or post-university education), the more open that person is to non-conformist treatment procedures, not modern.

The connection with the level of income is determined by the *freedom* that a high income gives, referring to the access to knowledge, to some varied cultural experiences etc. The actions to

promote the wellness supply should be oriented to the superior education segment and above the average incomes.

An aspect of the socio-demographic profile of the potential wellness consumer, which requires to be investigated, is that of the religious affiliation.

### **References**

1. Heilpern, S. The expected value of a fuzzy number, *Fuzzy Sets and Systems* 47 (1992) 81-86.  
<http://steconomice.uoradea.ro/anale/volume/2007/v1-management-and-marketing/124.pdf>
2. Hung, W. ; Wu, J. A note on the correlation of fuzzy numbers by expected interval, *Internat. J.*
3. *Uncertainty Fuzziness and Knowledge-Based Systems* 9 (2001) 517-523.
4. Mueller, H; Lanz Kaufmann, E., Wellness tourism: Market analysis of a special health tourism segment and implications for the hotel industry, *Journal of Vacation Marketing*, vol.7, no.1, p.7.
8. Robinson, A.; Chesters, J; Cooper, S., Complementary and Alternative Medium Modalities, *Complementary Health Practice Review*, 2008, 12; 99
9. Tomescu, A.; Ban, O., Drawing up the positioning strategy of a spa-hotel –the preliminary data, *International Conference “European Integration – New Challenges for the Romanian Economy”*, *Annals of University of Oradea- Faculty of Economics*, pp.1253-1258,
10. Tsaur, S.H. ; Tzeng, G.H. ; Wang, K.C., Evaluating tourist risks from fuzzy perspectives, *Annals of Tourism Research* 24 (1997) 796-812.
11. Zadeh, L. A., Fuzzy sets, *Information and Control* 3 (1965) 338-353.
12. Zadeh,, L. A. The concept of a linguistic variable and its application to approximate reasoning, *Information Sciences* 8 (1975) 199-249, 301-357; 9 (1976) 43-80.