Projections for Tourism Investments in Karaman Province

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Abstract

Touristic investments play an important role in marketing the tourism in Karaman province. The main reason why this study is conducted in this region with a high tourism potential is that Karaman province does not have a tourism investment guide prepared so far. Our projections will serve for this purpose. In this study, touristic function ratio, hotel management function ratio, product-market analysis, perception map through multi-dimensional scaling method and TOPSIS method have been used.

Keywords: Karaman, tourism, touristic investments

1. Introduction

Multi-dimensional studies are required to attract more tourists, to make more investments and to market them in Karaman. Three main conditions are needed as a tourist attraction in the first place: they are tourism managements, accessibility and attraction. However, it is also important that touristic destinations should involve such opportunities as transportation, accommodation, food, museums, historical sites, and entertainment and recreation areas. In Karaman case, investments will be a good start in terms of tourism marketing. Making research on developing capacity in the regions with high potential of tourism will contribute to increase income and employment for the current and future investors.

The main reason of this study is that Karaman province does not have a tourism investment guide prepared so far. When investors wish to make an investment, they are unable to reach sufficient date unfortunately and do not know about what advantages they will have in tourism area as entrepreneurs. The importance and need of this project is clearly seen when calculating the amounts of investments needed in certain areas besides describing their approximate investment capital by determining the tourism capacity of Karaman province.

The most important added value we will obtain in the end is that "A Tourism Investment Guide for Karaman Province" will be prepared, showing what areas are eligible to make an investment and which areas are potentially more available for tourism investments for the tourism sector in Karaman province. Entrepreneurs will have the opportunity to see eligible areas and potential tourism investments all around the province in a summary by the help of this tourism investment map.

2. Methodology

In this study, touristic function ratio (it refers to the relation between total accommodation potential in a certain location (T) to serve for tourists and the local population), hotel management function ratio (only calculated for tourists and defined as Tf (H), product-market analysis (comparison of touristic local products and market conditions), multi-dimensional scaling method (establishing a perception map), TOPSIS method (Technique for Order Preference by Similarity to Ideal Solution–making a rating system for appropriate tourism facilities) are utilized. The tourist numbers and tourism demand in Karaman province are not stated separately, but used through the study instead.

3. Tourist Investment Analysis in Karaman

An investment is described in such many viewpoints as narrow, wide and macro among people, in economy and in business area.

In general, it refers to obtaining certain items. An investment is to bear expenditure in advance before making a profit in the future. In other words, it is an exchange of self-sacrifice, endured in advance by hoping that it will make a profit in the future (Tatar, 1985, p. 3).

In tourism, investment refers to conducting tourism actions in a satisfactory level as planned by tourism managements, their development, provision of fixed assets which will be used more than a year in order to protect competitive power and the purchase of capital assets required to maintain these action without any interruptions. Tourism investments refer to all facilities, areas and equipments for accommodation, food, entertainment and recreation purposes, including especially the super-structure buildings known as hotels, motels, camping sites, holiday resorts, mountain houses, pensions, etc. (Ozen and Kuru, 1998, p. 37).

Tourism sector is quite different than any other sector. The features of tourism investments are as follows:

-They require more fixed capital than any other sector.

-Tourism managements produce service and sell it. Each new management offers new employment opportunity.

-Tourism investments depend mostly on infra and super structure. Insufficient infrastructure may lead to a decrease in demand (Tunc & Sac, 1998, p. 74).

In tourism, the rule is that each supply creates its own demand to a great extent. In addition to this, it is important to run tourism sector with an understanding of contemporary management and to increase the number of beds in this aspect. Karaman province plays an important role as a location in terms of the area it covers in Central Anatolia Region. It is beneficial to direct the potential entrepreneurs by evaluating the availability of alternative types of tourism and the opportunities to use available local resources in this view, and as a result of this, by determining the scope of investment seen advantageous under economic terms and creating new employment opportunities. Due to the insufficient number of touristic facilities in Karaman, foreign tourists can only stay for a single night. The tourism professionals and official institutions in Karaman state that their capacity is not sufficient and it is very important to make new investments and to improve pension boarding.

For the tourism both in Karaman and in Turkey, "Local Introduction Attempts by Private Sector" should speed up, which gives a fresh and effective dimension to foreign publicity. In terms of investments to be made in Karaman, local introduction plays an important role in this aspect. Tourist flow should be maintained by introducing many formerly unevaluated natural and touristic resources. For example, Derbe, Binbirkilise, Karadağ, Değle historical site, Karaman Castle ve Museum, Taşkale Corn Lofts, Incesu and Manazan Caves and Gödet are very appealing centers for tourists.

3.1 Evaluation Through Touristic Function Ratio

Touristic function ratio refers to the relation between total potential of accommodation of a local area (T) to be offered for tourists and local population of that area. Touristic function ratio is one of the important criteria when making investment decisions, which will contribute to accommodation potential a lot. This criterion indicates the relation between demographical conditions and tourism. The number of population in a certain area affects the number of tourists. Here is the formula:

Tf (t)=(L.100)/P

Tf (t): Touristic function ratio

L : Total potential of accommodation (number of beds),

P: Constant population

According to this formula, it is possible to calculate the touristic function of Karaman region. (Data gathered from population and tourism numbers in 2011 and bed numbers stated in the certificates of operation by investment and municipality in 2012).

Tf (t)=862.100 / 138.135=0,62. This is the conclusion.

Here are the probable values for touristic function ratio:

Tf (t)=0: No potential for accommodation;

Tf (t)= Less than 1: Bad touristic function ratio and no tourist effect on economic life;

Tf (t)=Less than 10: Weak touristic function;

Tf (t)=35: The condition required for classification as a touristic destination other than camping sites;

Tf (t)=40: Touristic function ratio showing the number of rooms in hotels;

Tf (t)=100: A lively touristic destination;

Tf (t)=More than 100: An older touristic destination or large hunting, winter or thermal tourism destinations;

Tf (t)= ∞: No potential for accommodation (Olali, 1990:185-186).

This result (0,62) indicates the bad situation of touristic function and that the tourists make no effect on economic life in the area. In addition to touristic function, hotel management function is also required for a full evaluation.

3.2 Evaluation Through Hotel Management Function

Touristic function ratio is found as hotel management function ratio when calculated in terms of touristic hotels only and shown as Tf (H).

$$Tf\ (H) = (NL*100) / P$$

NL: This refers to the number of beds in touristic hotels. This ratio is taken as 1,78 in metropolitan regions (Olali, 1990, p. 189).

The hotel management function ratio in Karaman province:

Tf (H)=627.100 / 138.135=0,45 is the conclusion.

This ratio is quite below 1,78. If a region has a low ratio, this attractive situation may be misleading even the efficiency of available hotels is high (Olali, 1990, p. 189). Therefore, the number of hotel rooms needed in the region must be calculated.

Here is the ratio of number of beds with a tourism certificate and number of rooms with a tourism certificate in Karaman province*: 627/322=1,94*

*L*100 / 138.135=1,78* using this equilibrium,

L=2.458 beds and *2.458 / 1,94=1.267* rooms must be available.

Karaman province must have 1.267 hotel rooms. Given the fact that 322 of these 1.267 rooms (with a tourism certificate) are available now, Karaman still needs 1267-322=945 hotel rooms. Even such facilities with municipal certificates are added into the calculation (945-145=800), the conclusion still indicates the need for 800 hotel rooms and 1600 beds approximately.

3.3 Product-Market Analysis

We can see that product-market analysis is used in many stages. The first of these is the matrix used by investors especially. Product matrix is a strategy used to reach four main targets. These targets are directing the available products of investors and entrepreneurs to the present markets; directing the available products to the new markets; directing the new products to the present market and directing the new products to the new markets. International partnered enterprises are explained through product and market matrix in this approach. Domestic and foreign entrepreneurs take these two elements of marketing into consideration as being 'available' or 'new' (for the market and product) when making a decision of international partnered enterprise. The aim of international partnered enterprises is limited to the explanations made in terms of market and products. It will be insufficient to explain the enterprises of international partnered entrepreneurs just in terms of market and product. However, this view clearly indicates that market and product is very important when making a preference among partnered enterprises.

Table 1. Establishment purposes of ınternational ınvestments in accordance with product-market matrix

	Available Products	New Products
New Markets	Directing new products to present markets (For foreign entrepreneurs)	Directing new products to new markets (For both domestic and foreign entrepreneurs)
Present Markets	Directing available products to present markets (For both domestic and foreign entrepreneurs)	Directing new products to present markets (For domestic entrepreneurs)

Reference: Beamish, P. W., Morrison, A., & Rosenveig, P. M. (1997). *International Management: Text and Cases,* The McGraw Hill Co. Chicago. p. 115.

Similarly, Ansoff matrix is also used in product-market matrix, which is known to indicate the large growing strategies.

Table 2. Ansoff matrix

	Present Products	New Products
Present Markets	Strategy for market access	Strategy for product development
New Markets	Strategy for market development	Diversification Strategy

Reference: Yukselen, C. (2000). Marketing, Principles-Management. Detay Pub., Ankara, p:42.

The definition of an evaluation criterion for a tourism product (product-market matching): Product-Market matching is a tourism research technique, which makes relations between product and market, ranges their uses in accordance with their importance or potential. It is a set of measurements used to determine which type of tourism product has a high potential. The method involves the addition of tourism product in product-market matching table from the main subject headline. These evaluations made herein are all subjective evaluations. The evaluation given in the Table is made by taking Ansoff and product-market matrixes into consideration. In vertical axis, we have tourism services and products while we have market types in horizontal axis. Although the local and regional market situation of Karaman province is medium-good level (TR52), it is evaluated as weak-medium on national and international market. The reason is that Karaman province is not included especially in international organizations by tour operators and incoming agencies.

When evaluating the touristic investments of Karaman province, it is required to make a product-market matching. A product-market matching is a tourism research technique, which makes a relation between product and market and ranges their uses or potentials. It is a set of measurements used to determine which type of tourism product has a high potential. The method involves the addition of tourism product in product-market matching table from the main subject headline.

-Accommodation services;
-Food and drink services;
-Tours;
-Sportive activities;
-Water sports;
-Inland activities.

Table 3. Product-Market analysis

	Local Market	Regional Market (TR52)	National Market	International Market
Accommodation services	4	3	2	1
Food and drink services	3	3	2	2
Tours	3	2	1	0
Sportive activities	2	2	1	1
Water sports	3	2	2	1
Inland activities	3	1	2	1

0: very weak, 1: weak, 2: medium, 3: good, 4: excellent.

All of these elements are evaluated in accordance with the source, market and local criteria. The evaluation is made between 0 and 4. This stage enables the researcher to have a numeric value to evaluate each tourism product and gives summary information about that area. The following results are obtained in this analysis:

- It is seen that accommodation facilities are insufficient. However, the accommodation services in surrounding areas can be used as an attraction.

- The number of restaurants is quite insufficient and low quality.

- Local handcrafts and authentic food sales are insufficient.

- Karaman province has an important potential and a high market value. There is no sufficient infrastructure and investment although the potential is quite high.

- Sportive activities and water sports play an important role.

- Sportive activities are mainly focused around Karadag. It is possible to obtain a high profit from tourism market just by simple infrastructure expenditure.

- Inland activities include festivals, carnivals, organizations, etc. No airport and railway transportation is available.

- Historic fabric, culture and ecotourism should be prioritized to make an introduction of the province.

- Such alternative tourism types as religious tourism cave; tourism; mountain and water sports, camping ground and hunting tourism must be encouraged.

- The landscape potential of the area must be defined for recreational purposes and landscape arrangements must be made.

4. Perception Map of Tourism Services in Karaman Province

The product-market analysis, stated in Table 4, is prepared to create a perception map by using a multi-dimensional scaling method at the same time. The map is examined in two dimensions to be much clearer for readers. When preparing the map, seven iterations are reached for ideal stress values (less than 0.001). The following table involves the stress values of iterations:

Table 4. Tourism service perception

Iteration S	Stress	Improvement
1	0,13344	
2	0,11398	0,01946
3	0,10893	0,00504
4	0,10601	0,00292
5	0,10423	0,00178
6	0,10316	0,00107
7	0,10252	0,00064

When calculating stress, Kruskal's stress formula is used and it is determined that this perception map is eligible to evaluate as RSQ =0,91058 (st=,11198). In this view, here are two separate dimensional values of the products used as variables:

Table 5. Perception values

Stimulus Number	Stimulus Name	Dimension	
		1	2
1	Accommodation	1,6574	-0,7060
2	Food & Drink	1,6308	0,7613
3	Tours	-1,1848	-0,8607
4	Sportive Activities	-1,2112	0,8246
5	Water Sports	0,1963	0,0032
6	Inland Activities	-1,0885	-0,0224

According to these data, the perception map prepared using a multı-dimensional scaling method is given below. As seen in the map, water sport activities are in the center and all others are located in the same distance around it. The closest product to the water sports is inland activities. Other products are scattered all around it. This situation indicates that the product distribution is appropriate and there is no sectorial vacancy.
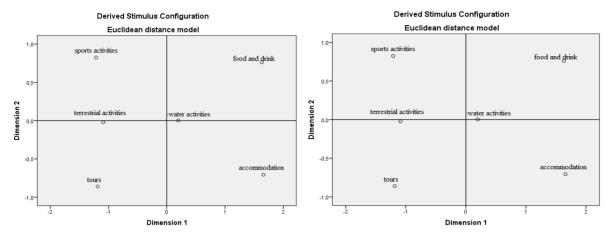
Figure 1. Perception map of tourism services

In accordance with all these calculations and analysis made, it is seen that Karaman province has 4 important areas and requires touristic investments. A general matrix can be prepared for Karaman province according to these areas and their characteristics.

Table 6. General matrix of tourism ınvestments in Karaman province

	Demand increase	Land use	Economic factors	Transportation	Raw materials	Work power
Karaman Centrum	3	4	4	4	3	3
Ermenek Area (Taşeli Area)	3	2	3	2	3	3
Taşkale Area	4	3	3	3	3	3
Karadağ Area	4	3	3	3	3	3

0: very weak, 1: weak, 2: medium, 3: good, 4: excellent

The general matrix for tourism investment shown in Table 6 is prepared in this way. The horizontal axis involves "the elements directly affecting the investment decisions". These are Demand Increase, Land Use, Economic Factors, Transportation, Raw Materials and Work Power. The vertical axis shows four important investment areas determined by Provincial Directorate of Culture and Tourism in Karaman Governorate. These areas are Karaman Centrum, Taseli Area, Taskale Area and Karadag Areas. Investment opportunities are planned with a subjective numeration. Here, the eligibility of transportation and land use in Taseli Area is compared to other areas and observed at low levels; Karaman Centrum is the focus point of investments.

5. Evaluation of Investment Facilities in Karaman Province through TOPSIS Method

TOPSIS is one of the methods when making multi-criteria decisions. This method is developed by Hwang and Yoon (1981) (Chen, 2000, p. 2). While TOPSIS method finds the closest ratio required for solution, it also calculates both its distance to positive ideal solution and its distance to negative ideal solution. A preference grading is made at the end of solution (Janko & Bernroider, 2005, p. 16).

Table 7. Investment facilities in Karaman province via topsıs method

Suggested Investment Areas for Tourism	Tourism Facilities							
	Hotel (1)	Motel (2)	Pension (3)	Camping (4)	Hostel (5)	Apart hotel (6)	Rural tourism (7)	Private Facilities (8)
Karaman Centrum(1)	4	2	3	1	3	2	1	3
Ermenek(2)	3	3	2	3	2	0	3	3
Ayrancı(3)	1	3	2	1	1	0	2	1
Başyayla(4)	1	1	1	3	1	0	3	2
Sarıveliler(5)	1	1	2	3	1	0	2	1
Kazımkarabekir(6)	1	2	2	2	1	0	4	2

0: very weak, 1: weak, 2: medium, 3: good, 4: excellent.

The table given above shows the centrum and other districts in Karaman province and they are scored after grading tourism facilities in accordance with their practicability criteria. In this subjective scoring, all factors affecting the investment criteria of the centrum and other districts. In accordance with the given criteria and alternatives, the following loads are determined by making an evaluation via Expert Choice 11 package program. These loads are used in TOPSIS method.

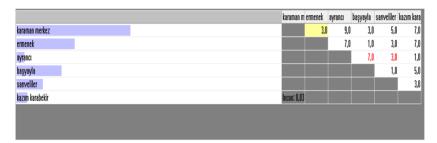|	karaman m	ermenek	ayrancı	başyayla	sarıvelier	kazım kara
karaman merkez		3,0	9,0	3,0	5,0	7,0
ermenek			7,0	1,0	3,0	7,0
ayrancı				7,0	3,0	1,0
başyayla					1,0	5,0
sarıvelier						3,0
kazım karabekir	Incon: 0,03					

Figure 2. Expert choise table

TOPSIS (Technique for Order Preference by Similarity to Ideal Solution) Method, developed by Hwang and Yoon (1981) is one the multi-criteria decision making methods. The main principle of TOPSIS method is to select the closest distance to the positive ideal solution and the furthest distance to the negative solution. Preference grading is made through comparing these distances. The stages of TOPSIS method (Chen, 2000; Opricovic & Tzeng, 2004):

Stage 1: Preparation of decision matrix (A): The alternatives, which are graded in accordance with their superiority are given on decision making matrix lines and evaluation criteria to be are stated used on the columns. D decision matrix prepared by the decision maker is shown as stated in the following:

$$D = \begin{matrix} & C_1 & C_2 & \dots & C_n \\ A_1 \\ A_2 \\ \dots \\ A_m \end{matrix} \begin{bmatrix} x_{11} & x_{12} & \dots & x_{1n} \\ x_{21} & x_{22} & \vdots & x_{2n} \\ \dots & \dots & & \dots \\ x_{m1} & x_{m2} & \dots & x_{mn} \end{bmatrix} \qquad W = [w_1, w_2, \dots, w_n]$$

In D decision matrix, $A_1, A_2, \dots, A_m$ refers to alternatives, $C_1, C_2, \dots, C_n$ refers to criteria, $x_{ij} = C_j$ refers to the evaluation of A_i alternatives in accordance with their criteria, and $w_j = C_j$ refers to each load of criteria.

Stage 2: Preparation of normalized decision matrix (R): by using the elements of decision matrix D:

$$r_{ij} = \frac{x_{ij}}{\sqrt{\sum_{k=1}^{m} x_{kj}^2}} \quad using\ this\ equation,$$

$$R_{ij} = \begin{bmatrix} r_{11} & r_{12} & \dots & r_{1n} \\ r_{21} & r_{22} & \vdots & r_{2n} \\ \dots & \dots & & \dots \\ r_{m1} & r_{m2} & \dots & r_{mn} \end{bmatrix} \quad \text{The result is obtained in this way.}$$

Stage 3: Preparation of weighted normalized decision matrix (V): First, the weighted values (w_i) are determined for the criteria ($\sum_{i=1}^{n} w_i = 1$). Then, V matrix is prepared by multiplying it with w_i values for each element in the column of R matrix.

$$V_{ij} = \begin{bmatrix} w_1 r_{11} & w_2 r_{12} & \dots & w_n r_{1n} \\ w_1 r_{21} & w_2 r_{22} & \vdots & w_n r_{2n} \\ \dots & \dots & & \dots \\ w_1 r_{m1} & w_2 r_{m2} & \dots & w_n r_{mn} \end{bmatrix}$$

Here, wi indicates the weighted value of i. criteria.

Stage 4: Preparation of positive ideal solution (A^*) and negative ideal solution (A^-): In order to prepare an ideal solution scheme, weighted evaluation criteria in V matrix, which is also called maximum values of the column, are selected (if the evaluation criterion is about minimization, then the minimum values are selected). The positive ideal solution scheme is obtained,

$$A^* = \{(_i^{max} v_{ij}|j \in J), (_i^{min} v_{ij}|j \in J')\}$$

by using this equation and indicated as $A^* = \{v_1^*, v_2^*, \ldots, v_n^*\}$. The negative ideal solution scheme is prepared by selecting the minimal values (if the evaluation criterion is about maximization, then the maximum values are selected) of the column, which are also known as weighted evaluation criteria in V matrix. The negative ideal solution scheme is obtained,

$$A^- = \{(\underset{i}{min}\ v_{ij}\ |j \in J'), (\underset{i}{max}\ v_{ij}|j \in J\}$$

by using this equation and indicated as $A^- = \{v_1^-, v_2^-, \ldots, v_n^-\}$. Both in positive and negative ideal solutions, indicates benefit (maximization) and J′ indicates loss (minimization) values. Each positive ideal or negative ideal solution scheme is in the same amount with the number of criteria.

Stage 5: Calculation of ideal solutions: Euclidian distance is used to determine the positive ideal and negative ideal values of evaluation criteria for each alternative in TOPSIS method. The deviation values of these alternatives obtained here are called the distance to positive ideal solution (d_i^*) and the distance to negative ideal distance (d_i^-). The distance value to positive ideal solution (d_i^*),

$$d_i^* = \sqrt{\sum_{j=1}^{n}(v_{ij} - v_j^*)^2} \quad i = 1, 2, \ldots, m$$

The distance value to positive ideal solution (d_i^-),

$$d_i^- = \sqrt{\sum_{j=1}^{n}(v_{ij} - v_j^-)^2} \quad i = 1, 2, \ldots, m$$

are calculated via using these equations. The number of d_i^* and d_i^- is equal to the number of alternatives.

Stage 6: Calculation of the relative proximity to the ideal solution: When calculating the relative proximity (CC_i^*) of each alternative, the distance criteria to both positive ideal solution and negative ideal solution are used. Here, the criterion used is the proportion of negative ideal solution criteria (d_i^-) within the total distance criteria ($d_i^- + d_i^*$). The relative proximity value of ideal solution is calculated using this equation: $CC_i^* = \frac{d_i^-}{d_i^- + d_i^*}$

Here, CC_i^* value is defined within the range of $0 \leq CC_i^* \leq 1$ and $CC_i^* = 1$ indicates the positive ideal solution for the related alternative, $CC_i^* = 0$ indicates the exact proximity of negative ideal solution for the related alternative (Paksoy, Yapıcı, Ozceylan, 2013).

5.1 Applying TOPSIS Method in Karaman Province

There are 8 alternatives and 6 criteria in a multi-criterion decision making problem. The decision maker prepared the decision matrix as in the following and their weights in terms of all criteria are determined as w_1=7,28010989, w_2=7,28010989, w_3=4,582575695, w_4= 5,09901951, w_4= 4,58257569, w_6=5,830951895.

$$D_Y = \begin{matrix} & C_1 & C_2 & C_3 & C_4 & C_5 & C_6 \\ A_1 \\ A_2 \\ A_3 \\ A_4 \\ A_5 \\ A_6 \\ A_7 \\ A_8 \end{matrix} \begin{bmatrix} 4 & 3 & 1 & 1 & 1 & 1 \\ 2 & 3 & 3 & 1 & 1 & 2 \\ 3 & 2 & 2 & 1 & 2 & 2 \\ 1 & 3 & 1 & 3 & 3 & 2 \\ 3 & 2 & 1 & 1 & 1 & 1 \\ 2 & 0 & 0 & 0 & 0 & 0 \\ 1 & 3 & 2 & 3 & 2 & 4 \\ 3 & 3 & 1 & 2 & 1 & 2 \end{bmatrix}$$

The decision maker ranges the alternatives in accordance with the TOPSIS method:

Stage 1: A standardized decision matrix (R) is prepared. Here, the r value and other r_{ij} values are calculated and shown as follows and the R matrix is completed in this way.

$$R = \text{R} = \begin{bmatrix} 0.6202 & 0.5345 & 0.3841 & 0.6883 \\ 0.2481 & 0.8018 & 0.5122 & 0.6883 \\ 0.7442 & 0.2673 & 0.7682 & 0.2294 \end{bmatrix} \quad \begin{bmatrix} 0,5494 & 0,4120 & 0,2182 & 0,1961 & 0,2182 & 0,1714 \\ 0,2747 & 0,4120 & 0,6546 & 0,1961 & 0,2182 & 0,3429 \\ 0,4120 & 0,2747 & 0,4364 & 0,1961 & 0,4364 & 0,3429 \\ 0,1373 & 0,4120 & 0,2182 & 0,5883 & 0,6546 & 0,3429 \\ 0,4120 & 0,2747 & 0,2182 & 0,1961 & 0,2182 & 0,1714 \\ 0,2747 & 0 & 0 & 0 & 0 & 0 \\ 0,1373 & 0,4120 & 0,4364 & 0,5883 & 0,4364 & 0,6859 \\ 0,4120 & 0,4120 & 0,2182 & 0,3922 & 0,2182 & 0,3429 \end{bmatrix}$$

Stage 2: The weighted standard decision matrix (V) is prepared. Here, The columns of V matrix are calculated by multiplying the values in the columns of R matrix with weighted values of the related criterion.

$$\text{V} = \begin{bmatrix} 0.1241 & 0.0802 & 0.1537 & 0.1721 \\ 0.0496 & 0.1203 & 0.2049 & 0.1721 \\ 0.1489 & 0.0401 & 0.3073 & 0.0574 \end{bmatrix} \quad V = \begin{bmatrix} 0,2384 & 0,0898 & 0,0074 & 0,0337 & 0,0229 & 0,0065 \\ 0,1192 & 0,0898 & 0,0222 & 0,0337 & 0,0229 & 0,0130 \\ 0,1788 & 0,0598 & 0,0148 & 0,0337 & 0,0458 & 0,0130 \\ 0,0596 & 0,0898 & 0,0074 & 0,1011 & 0,0687 & 0,0130 \\ 0,1788 & 0,0598 & 0,0074 & 0,0337 & 0,0229 & 0,0065 \\ 0,1192 & 0 & 0 & 0 & 0 & 0 \\ 0,0596 & 0,0898 & 0,0148 & 0,1011 & 0,0458 & 0,0130 \\ 0,1788 & 0,0898 & 0,0074 & 0,0674 & 0,0687 & 0,0130 \end{bmatrix}$$

Stage 3: The positive ideal (A^*) and negative ideal (A^-) schemes are prepared. The largest value in each columns of V matrix in scheme A^* is ranged by selecting the smallest value in each column of V matrix for scheme A^-.

$$A^* = \{^i maxvi1, \ ^i maxvi2, \ ^i \ maxvi3, \ \dots ^i maxvii\}$$

$$A^* = \{0,2384, \quad 0,0898, \quad 0,0222, \quad 0,1011, \quad 0,0687, \quad 0,0260\}$$

$$A^- A^* = \{^i maxvi1, \ ^i maxvi2, \ ^i \ maxvi3, \ \dots ^i maxvii\}$$

$$A^- = \{0,0596, \quad 0, \quad 0, 0, 0, 0\}$$

Stage 4: The distances to positive ideal solution for each alternative are calculated as:

$d_1^* = 0,0851$, $d_2^* = 0.1450$, $d_3^* = 0.0987$, $d_4^* =, 0,1799$, $d_5^* = 0,1081$, $d_6^* = 0,1960$, $d_7^* = 0,1804$, $d_8^* = 0,0847$

The distances to negative ideal solution are calculated as:

$d_1^- = 0,2044$, $d_2^- = 0.1181$, $d_3^- = 0.1463$, $d_4^- = 0,1525$, $d_5^- = 0,1398$, $d_6^- = 0,0596$, $d_7^- = 0,1459$, $d_8^- = 0,1660$

Stage 5: The elative proximity values to ideal solutions for 8 alternatives are found as:

$$C_1^* = \frac{0,2044}{0,2044+0,0851} = 0,7059, \quad C_2^* = \frac{0.1181}{0.1181+0,1450} = 0,4488, \quad C_3^* = \frac{0.1463}{0.1463+0,0987} = 0,5971, \quad C_4^* = \frac{0.1525}{0.1525+0,1799} = 0,4587$$

$$C_5^* = \frac{0,1398}{0,1398+0,1081} = 0,5638, \quad C_6^* = \frac{0,0596}{0,0596+0,1960} = 0,2331, \quad C_7^* = \frac{0,1459}{0,1459+0,1804} = 0,4471, \quad C_8^* = \frac{0.1660}{0.1660+0,847} = 0,6621,$$

When these values are ranged from the largest to the smallest, it is possible to put the alternatives in an order of importance.

$$C_1^{*} > C_8^{*} > C_3^{*} > C_5^* > C_4^* > C_2^* > C_7^{*} > C_6^*$$

According to our numeration, the order is Hotel (1), Motel (2), Pension (3), Camping Site (4), Hostel (5), Apart Hotel (6), Rural Tourism Facility (7) and Private Facility (8).

Hereunder, the order of importance for tourism facility investments in Karaman province is as follows: 1. Hotel, 2. Private Facility (Boutique Hotel), 3. Pension, 4. Hostel, 5. Camping Site, 6. Motel, 7. Rural Tourism Facility, 8. Apart Hotel.

6. Results

Tourism investments include the accommodation, food and drink, entertainment and recreation facilities and all areas and equipment for tourists, especially referring to the superstructure which involves such accommodation services as hotels, motels, camping sites, holiday resorts, mountain houses, pensions, etc. Investments will be a very important start for marketing the tourism in Karaman province. The main purpose of this project is that there

is no tourism investment guide in Karaman province so far. The investors, who would live to make an investment in this region, are unable to reach sufficient information and entrepreneurs do not know what opportunities they will have in tourism area. There are many reasons to make an investment in Karaman. The local and foreign tourist population, visiting Karaman due to its historical remains from the Seljukians and Karaman Seigniory Period, the increase in business meetings and organizations, the increasing population of the city and its environmental change, the insufficiency of accommodation facilities and their low standard make it obligatory to make an investment in this area.

The rate of touristic functions in Karaman province is quite low. This indicates that tourists make no difference for the economic life. It is calculated that Karaman province requires 800 hotel rooms and approximately 1.600 beds in total. It is seen that accommodation services are insufficient. The number restaurants are insufficient and low quality. Local sale of handcrafts and authentic food is not at a desired level. Karaman is an important and potential province and has a high market value. Even though the potential is high, there is no sufficient infrastructure and investment. Sportive activities and water sports play an important role. Sportive activities are focused around Karadag. Inland activities also include festivals, carnivals, organizations, etc. It also lacks of air and railway transportation. Historical fabric, culture and ecotourism must be given prominence to introduce the city. Such alternative tourism types as religious tourism, cave tourism, mountaineering and water sports, camping ground and hunting tourism must be encouraged. Landscape arrangement must be made after determining the landscape potential of Karaman in terms of local recreational use. In this view, the results indicate that there are four important touristic investments required in Karaman in accordance with these calculations and analysis made so far. These areas are Karaman Centrum, Ermenek area, Taskale area and Karadag area.

References

Beamish, P. W., Morrison, A., & Rosenveig, P. M. (1997). *International Management: Text and Cases.* Chicago: The McGraw Hill Co.

Chen, T. (2000). Extensions Of The Topsis For Group Decision-Making Under Fuzzy Environment. *Fuzzy Sets And Systems, 114*, 1–9. http://www.doi.org/10.1016/S0165-0114(97)00377-1

Janko, W., & Bernroider, E. (2005). *Multi-Criteria Decision Making: An Application Study of Electric and TOPSIS.* Retrieved from http://www.ai.wu-wien.ac.at/~bernroid/lehre/seminare/ws04/A7-TOPSIS-0107503.pdf

Karaman Governorship. (2012). Data of Provincial Culture and Tourism Directorate.

Karaman Governorship. (2013). Data of Provincial Culture and Tourism Directorate.

Olalı, H. (1990). *Tourism Policy and Plan.* Istanbul: I.U. Faculty of Business Pub.. No:228.

Ozen, O., Tugrul, S., & Kuru, S. (1998). *Tourism Investment.* Istanbul: Ozkan Ofset.

Paksoy, T., Yapıcı, P., & Ozceylan, N. (2013). *Fuzzy Set Theory*. Nobel publisihing House.

Sezgin, M. (2000). The evaluation of Konya Region's Tourism Potential in terms of Touristic Investments.

Tatar, T. (1985). *The Choice of Investment and Evaluation Techniques.* Ankara: Gazi University Pub. No:75.

Tunc, A., & Sac, F. (1998). *General Tourism, its Development and Future.* Ankara: Detay Pub.

Yukselen, C. (2000). *Marketing, Principles-Management.* Ankara: Detay Pub.

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