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EVALUATING AND IMPROVING THE DESTINATION IMAGE THROUGH QFD-AHP INTEGRATED METHOD: EXAMPLE OF CAPPADOCIA

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Abstract: This study evaluates the Cappadocia region's destination image with AHP and KFG integrated method and determines how to improve the destination image. First of all, the Cappadocia region's destination image elements were listed by tourism industry experts according to their importance weights. The activities targeted at improving the destination image were ranked according to their importance. Destination image elements and remedial activities were associated, and the "Conducting national and international promotion," activity was the most important activity. As it is known, AHP, which is one of the multi-criteria-decision-making methods, is a powerful method that allows subjective judgments to be digitized and converted into objective evaluation criteria. The KFG method is a systematic approach that can define customer requirements using quantitative and qualitative techniques and transform them into measurable product and process parameters. In this sense, destination image elements' effective inclusion in decision mechanisms emphasizes this study's importance.

Keywords: Destination Image, QFD, AHP, Cappadocia.

1. Introduction

With the tourism industry gradually getting more competitive, estimating the future behaviors of tourists became more important for the development of the destinations (C. F. Chen & Tsai, 2007). However, one of the fundamental determinants of the future behaviors of tourists is the concept of destination image (Afshardoost & Eshaghi, 2020). In the meantime, the destination image is widely considered as a strong management tool to strengthen the tourism industry in the market in the current dynamic and competitive global environment. Every step towards the development of tourism which is a quite significant income item is especially crucial for the economies of developing countries (Furmolly & Kirkulak Uludağ, 2018)

As a developing country, Turkey is a destination that has an important share in the tourism industry. It is seen that Turkey hosted more than 51 million tourists and generated approximately USD 35 million income in 2019 (Ministry Of Culture And Tourism, 2019)

Tourism is considered as one of the most active components of the economy in Turkey and it attained its current status through significant developments over the years (Tosun, Timothy, and Öztürk, 2003). When the location, history, and unique natural attractions of Turkey are taken into consideration, it has an important place in the global tourism market, and it is targeted to maintain and improve this important place by reaching 63 million tourists, USD 86 billion international tourism income, and USD 1350

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expenditure per tourist as stipulated in 2023 Tourism Strategy (kuzka.gov.tr, 2007). Yet, it is considered that the following deficiencies are effective in reaching this target: Failure to benefit from the national and international opportunities; insufficient regulations in tourism; national and international political uncertainties; and the unfavorable image of Turkey in the international arena. In other words, it is possible to assert that one of the reasons preventing Turkey to get its desired share from the global tourism market is the image problem.

When the tourism potential of our country is considered, it is known that all attractions that may be a motive for the visitors are available in our country as a destination. Kutvan and Kutvan list these attractions as follows: “Natural beauties, climate, architectural properties, festivals, regional features, attitudes of the public towards tourists, important historical ruins, works with religious significance, works with historical significance, sportive activities, cultural activities, health and wellness facilities, night recreation, shopping facilities, infrastructures providing means to the tourists, food and accommodation facilities” (Kutvan & Kutvan, 2013). Although it is a country with such great tourism potential, indeed, Turkey is not in a well-deserved place in terms of the quality and quantity of the demand (Karakuş, 2019). One of the strong tools which may be used to take our country’s tourism activities to the desired level is the destination image.

Considering the touristic product characteristics, the Cappadocia region is an important destination worldwide. It may be stated that it is a destination that has no alternatives with regards to its natural attractions as well as its historical and sociocultural attractions. The touristic demand of the Cappadocia region, which is intensely engaged in tourism, has specific characteristics. In general, the region appeals to a market segment with a relatively higher education level, income status, and age average, and it is a destination that should be affected less by the seasonality issue both due to its supply and demand properties. Despite this, the region is affected by the seasonality issue and encounters issues such as failure to fulfill expectations in terms of the average period of stay or per capita expenditure (Karakuş & Çoban, 2018). In this sense, strengthening (or restructuring) the image of the destination may be considered as a factor that may help to overcome these issues.

This study discusses the destination image of the Cappadocia Region through the integrated use of QFD and AHP methods, and the destination image is evaluated in line with the expectations of industry experts, and the aspects which might be improved are determined. The outstanding ones among the expectations of the experts were determined, and thus, the aspects of the destination image requiring improvement are presented.

AHP is one of the multi-criteria decision-making methods, and it is a method that allows digitizing subjective conclusions and converting them into objective evaluation criteria. The Quality Function Deployment (QFD) method may briefly be referred to as the quality improvement method which converts the customer expectations into technical requirements. The integrated use of QFD and AHP methods is important in terms of including expert opinions into the decision mechanism.

2. Literature review

World Tourism Organization (WTO, 1980) draws attention to the positive image in attracting tourists to the destinations. Hunt (1975) is one of the first research presenting the importance of destination image in increasing the number of tourists, and in his research, he set forth that destination image is the primary factor considered by the tourists while choosing the destinations to visit. According to Hunt (1975), tourists who do not have personal experiences or who have limited information about the destinations are willing to visit the destinations by checking their images. The destination image allows the tourists to distinguish and compare different destinations and helps some destinations to position themselves more competitive than others or to improve themselves. This indicates that destination image is a key factor in tourism (Uwizeye, 2020).

Destination image consists of two items which are cognitive image and affective image. Baloglu and McCleary (1999) indicated in their study that cognitive image refers to the information or beliefs of a person regarding a destination. In the research conducted by Chen and Uysal (2002) and Kim and Richardson (2003), affective image concept is defined to refer to the sensations and feelings of a person towards a destination. Recent research reveal that destination image is measured by considering cognitive image and affective image together (del Bosque & San Martín, 2008). Factors such as natural and cultural resources, atmosphere, infrastructure and superstructure, social environment, cultural environment may be referred to as examples to measuring the cognitive image (Beerli & Martín, 2004; del Bosque & San Martín, 2008). The affective image is measured by factors such as the liveliness of the city, being an exciting and interesting place (Baloglu & Mangaloglu, 2000; del Bosque & San Martín, 2008).

Creating an image for the destination different than the competitors and being perceived differently by every individual are substantially important. Therefore, the purpose of all marketing activities is to create a good image (Tosun, Cevat; Bilim, 2004). Destination image may be developed according to the type of products owned by a region. While creating the image of a destination, it is possible to reflect the characteristics of a region to communities and to use these characteristics accordingly (Kılıç, Burhan; Hande, 2011).

The destination image is quite important as it affects the satisfaction levels of the visitors and their attitudes to choose a destination. In brief, it possible to indicate that destination image has vital importance in affecting the satisfaction levels of tourists (O'Leary & Deegan, 2005).

The destination image scales generally measure the perceived image, and the image perception naturally differs by every person. Different models are created to show the differences. Gartner (1989) advocated that people's perception of the characteristics of a destination would be associated with a holistic (comprehensive) image. The holistic (comprehensive) image may be positive or negative. It is seen that many researchers conducting research on tourism destination image widely use a perceptive component in their experimental research.

Chon (1990) suggests a theory on cognitive consumerism and argues that trip purchasing behavior may be created through an integrated destination image model. The essential point of the model is to describe the trip purchasing behavior as a window that would change the imagination through the experiences gained during the trip. A positive image and a positive trip experience are particularly important with regards to a more positive evaluation of the destination.

According to Baloglu and McCleary (1999), there are three more determinants affecting the destination image other than past experiences and actual visits. These determinants are tourism motivations, socio-demographics, and various sources of information.

Echtner et al., (2003) strongly emphasize two basic matters in the process of shaping the destination image. Primarily, it is asserted that people may have a destination image about the cities even if they never visited that city before or exposed to any commercial advertisements. Secondly, it is necessary to separate the city images of the visitors and non-visitors due to the changes in the destination image before and after the visit. This may be realized by conducting an image measurement by monitoring the individuals visiting the city.

Tasci and Gartner (2007) created a conceptual model together with the destination image and complex relations, supply, and demand-oriented variables within the framework of the reviewed literature. A destination image-relations model including consumer behavior, affective and cognitive systems, and marketing environment reflects the properties of such a dynamic system.

The common point of research on destination image is that active, perceptive, and cognitive evaluations are effective in the formation of the image. The image of the destination is considered as an important factor while choosing a vacation spot (Akyurt & Atay, 2009). Nevertheless, the destination decision-makers should make effort to manage the destination image concept to ensure successful operations management. In other words, it is important to design the destination image concept to serve the purposes of developing the required plans, policies, and strategies to ensure a sustainable tourism activity at the destination. At this point, as every destination has unique characteristics, activities to create or manage an image specific to that destination should be conducted. The duty to manage the destinations or to execute the destination image strategies is under the responsibility of all shareholders such as the regional public institutions, tourism establishments, local nonprofit organizations, and the local community. The shareholders are also the most important members of destination management organizations. Despite being named as “management,” the destination management organizations generally undertake the marketing activities, and they are perceived as “destination marketing organization.” However, it should fulfill its management duties to be an advisor in the development of the (Ritchie & Crouch, 2003).

As every destination has specific characteristics, the destination image factors should have impacts at different levels in the formation or modification of the destination image and the formation of a holistic image. For example, while the accommodation facilities are the strong image component of a destination, hospitality may be the distinctive component for another destination. Therefore, the decision-makers in

destination image management should take the specific characteristics of the destination into account, and they should include their weight in the process while evaluating the components. In general terms, to manage an existing destination image, the required activities should be determined based on the characteristics of the existing destination, and among these activities, those with higher weight should be prioritized to ensure a positive integrated image impact. In some cases, it may not be possible to perform all the activities due to insufficient resources. At this point, it is important to know where to start.

3. Method

In the study, the Analytical Hierarchy Process (AHP) and Quality Function Deployment (QFD) methods are used in an integrated manner. These methods are described below respectively.

a) Analytical Hierarchy Process

AHP is one of the multi-criteria decision-making methods, and it is a method that allows digitizing subjective conclusions and converting them into objective evaluation criteria. The method was developed by Thomas L. Saaty. The stages of the AHP method are listed and described below.

1. *Presenting the problem as a hierarchical structure:* There is a hierarchical structure consisting of the goal at the top, criteria in the middle, and the alternatives at the bottom. The main purpose is to choose the most suitable alternative by considering all criteria. In Figure 1, an exemplary hierarchic structure is given. It is seen that the hierarchy consists of six criteria and three alternatives.

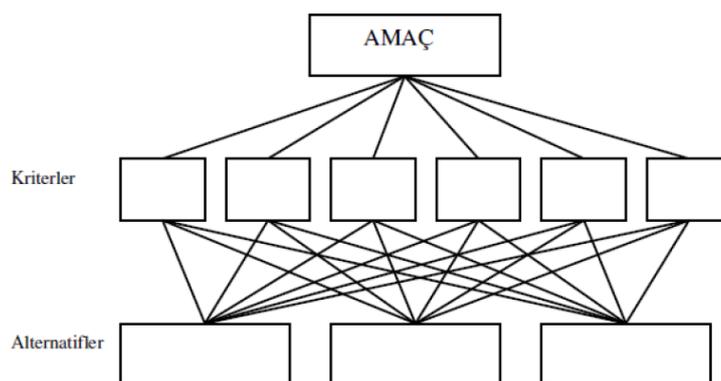


Figure 1: AHP Hierarchy Example
Source: (Ömürbek & Tunca, 2013: 50)

2. *Creating pairwise comparison matrices:* Each criterion is subjected to a pairwise comparison both among themselves and in terms of each alternative. While making the comparisons, the scale numbered 9 (Table 1) which was developed by Saaty is used, and the pairwise comparison matrices are obtained by digitizing the judgment values through the quantitative intensities in this scale.

Table 1: Pairwise Comparison Scale Used in AHP

Value	Numerical	Conceptual Scale	Description
1		Equal importance of both elements	Two elements contribute equally.
3		Moderate importance of one element over another	Experience and judgment favor one element over another.
5		Strong importance of one element over another	An element is strongly favored.
7		Very strong importance of one element over another	An element is very strongly dominant.
9		Extreme importance of one element over another	An element is favored by at least an order of magnitude.
2,4,6,8		Intermediate values	Used to compromise between two judgments

Source: (Berrittella et al., 2009: 251)

The pairwise comparison matrix for a case where total n criteria in form of C_1, C_2, \dots, C_n are pairwise compared shall be the nxn type A matrix given below.

$$A = [a_{ij}] = \begin{bmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & a_{22} & \dots & a_{2n} \\ \vdots & \vdots & \vdots & \vdots \\ a_{n1} & a_{n2} & \dots & a_{nn} \end{bmatrix}$$

The values included in the matrix are in form of a_{ij} , and these indicate the quantitative judgment regarding the comparison of C_i (where i refers to the criterion number) and C_j (where j refers to the criterion number). For example, a_{12} is the quantitative judgment value obtained from the comparison of C_1 (the first criterion) and C_2 (the second criterion). Where the value of elements $a_{11}, a_{22}, \dots, a_{nn}$ on the main diagonal of the matrix is 1 and it is in form of $a_{ij}=1/ a_{ji}$.

3. *Finding the priority values of pairwise comparison matrices:* Each column of the matrices is added up. Then, each element in the matrix is divided into the number of columns in the column where it is located. Thus, each column adds up to 1 and it is ensured that each element within the pairwise comparison matrix has a value between (0, 1). In other words, the matrix is now normalized. Each row in the normalized matrix obtained is averaged. These averages calculated form a column matrix and indicate the priority values (weights) corresponding to each criterion. The following W matrix is a column matrix of nx1 type which provides the priority values.

$$W = [w_{ij}] = \begin{bmatrix} w_{11} \\ w_{21} \\ \vdots \\ w_{n1} \end{bmatrix}$$

In other words, the average of the first row (w_{11}) is the priority value of the first criterion C_1 ; the average of the second row (w_{21}) is the priority value of the second criterion C_2 ;; and the average of n row (w_{n1}) is the priority value of the n criterion C_n . C_1, C_2, \dots, C_n criteria are arranged among themselves based on their weights (priority values). The criterion with the highest weight is more important than others. So, is it possible to use these weights obtained immediately? The consistency ratios of pairwise comparison matrices should be reviewed for this. If the comparisons in the matrices are consistent, then it is possible to use the weights $w_{11}, w_{21}, \dots, w_{n1}$ obtained. The consistency ratio is explained in the next step.

4. *Calculating the consistency ratio*: The principal pairwise comparison matrix is multiplied by the priority values obtained from this matrix. In other words, it is referred to the multiplication of A matrix of $n \times n$ type and W matrix of $n \times 1$ type. As a result of the multiplication, the R matrix of $n \times 1$ type is obtained.

$$A_{n \times n} W_{n \times 1} = \begin{bmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & a_{22} & \dots & a_{2n} \\ \vdots & \vdots & \vdots & \vdots \\ a_{n1} & a_{n2} & \dots & a_{nn} \end{bmatrix} \begin{bmatrix} w_{11} \\ w_{21} \\ \vdots \\ w_{n1} \end{bmatrix} = \begin{bmatrix} r_{11} \\ r_{21} \\ \vdots \\ r_{n1} \end{bmatrix} = R_{n \times 1}$$

Then, each element in R matrix is divided by the element corresponding to it in W matrix. This process is shown below, and the division results in B matrix.

$$\begin{bmatrix} r_{11} / w_{11} \\ w_{21} / w_{21} \\ \vdots \\ w_{n1} / w_{n1} \end{bmatrix} = \begin{bmatrix} b_{11} \\ b_{21} \\ \vdots \\ b_{n1} \end{bmatrix} = B_{n \times 1}$$

It is now possible to calculate λ_{\max} value. This is the arithmetic average of the values in B matrix.

$$\lambda_{\max} = \frac{b_{11} + b_{21} + \dots + b_{n1}}{n}$$

We can now calculate the Consistency Index (CI):

$$TI = \frac{\lambda_{\max} - n}{n - 1}$$

Consistency Ratio (CR) is a value obtained by dividing CI by Random Index (RI).

$$TO = \frac{TI}{RI}$$

RI is an index with different values depending on the matrix size (n). Table 2 shows random index values based on different matrix sizes.

Table 2: Random Index Values by Number of Criteria

N	3	4	5	6	7	8	9
RI	0.5245	0.8815	1.1086	1.2479	1.3417	1.4056	1.4499
N	10	11	12	13	14	15	
RI	1.4854	1.5141	1.5365	1.5551	1.5713	1.5838	

Source: (Alonso & Lamata, 2006: 449)

The CR obtained as a result is considered. If this value is equal to or less than 0,10, then the pairwise comparisons are consistent. When CR value is greater than 0,10, there is no consistency. In such cases, the decision-makers should review their judgments/comparisons.

5. *Determining final priority values:* In the last step, the priority values (weights) obtained throughout the hierarchy are gathered, and the combined weights, or in other words, final priority values are determined. Moving from the top to the bottom, the weights in each layer of the hierarchy are multiplied. The value obtained from the sum of these multiplications is the final priority value (Bottero et al., 2011: 1212).

b) Quality Function Deployment

Quality Function Deployment (QFD) may briefly be referred to as the quality improvement method which converts the customer expectations into technical requirements. QFD is a method developed in Mitsubishi shipyard in Kobe, Japan in 1972 to be used in product development. Being a systematical method based on the idea of aligning technology with people, QFD is used to help businesses to understand the requirements of the customers and to meet these requirements within the scope of their capabilities and resources (Wang, 2007: 222).

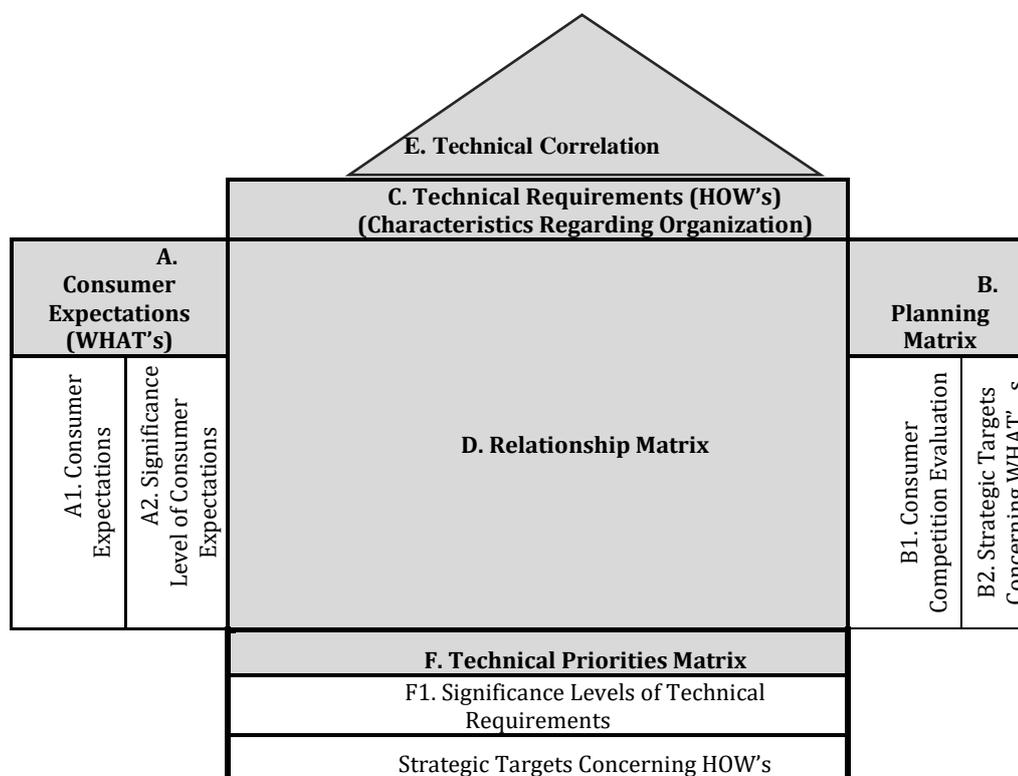


Figure 2: House of Quality
Source: (Park et al., 2012: 326)

QFD is a systematic approach that converts customer requirements to identifiable and measurable product and process parameters by using matrices as well as quantitative and qualitative techniques. It should be noted that QFD is a method that, in essence, considers not only the customer but also the organization (Jeong & Oh, 1998)

Fundamentally, QFD is a method which was developed to consider the voice of customer to develop high-quality products to meet or exceed the customer expectations. Therefore, product development, quality management, and customer needs analysis are the primary functions of the method. Later, the functions of the method expanded and covered various aspects such as design, planning, decision making, engineering, management, teamwork, timing, and costing. QFD is a system that is successfully practiced in numerous industries such as transportation and communication, electric-electronic, software systems, production, service, education, and research (Chan & Wu, 2002)

House of quality is an important factor. In Figure 2, there is a house of quality including all sections. There is the "Voice of Customer (Consumer Expectations)" on the left; the "Technical Correlation Matrix" on the roof; "Voice of Company" (Technical Requirements) just under the roof; "Technical Priorities Matrix" at the bottom; "Relationship Matrix" in the middle; and "Planning (Strategical Planning) Matrix" on the right (Costa et al., 2000: 307)

The stages followed in the QFD method are as follows (Sohn, 1999: 756)

- Determining the voice of customer as “*WHAT*’s,”
- Determining the “*HOW*’s” which is the action plan to satisfy the customer,
- Associating the components of *WHAT*’s with the components of *HOW*’s,
- Determining the interactions between *HOW*’s,
- Determining the relative significances of *WHAT*’s,
- Ordering the *HOW*’s.

4. Implementation

In the study, the destination image of the Cappadocia Region was evaluated through integrated AHP and QFD methods, and the expectations which are important to experts were determined. Data used in the study were obtained from the interviews with the experts chosen from the tourism industry. These people consisted of tourism researchers, professional tourist guides, NGO’s, local administration officers (Provincial Directorate of Tourism, KAT-HİP, KAPTİD, TURKODER, NERO, TÜRSAB regional officers), and civilian tourism managers. The destination image factors, and the corrective actions of the experts were arranged based on their importance, and the corrective actions were compared in terms of each expert expectation.

The destination image factors were determined by referring to the literature (Ozturk & Qu, 2008), and these are given in Table 3 with abbreviations.

Table 3: Destination Image Factors

Accommodation and catering facilities	DI1
Cost	DI2
Hospitality and customer orientation	DI3
Environment and Hygiene/cleanliness	DI4
Transportation	DI5
Facilities and activities	DI6
Accessibility	DI7

There are corrective activities at the roof of the house of quality. Based on the interviews with the tourism researchers, professional tourist guides, local administration officers and tourism managers, and the studies in the literature, totally 7 factors were determined to reflect the technical requirements: These are listed in Table 4 with their abbreviations.

Table 4: Corrective Activities for the Destination Image

Diversification of touristic products of Cappadocia Region	A1
Improving transportation in the Cappadocia Region	A2
Conducting national and international promotion activities	A3
Conducting more effective and efficient brand city activities for Cappadocia	A4
Promoting national and international movie and tv show shootings	A5
Activities by international tour operators to support the destination image	A6
Preventing the accidents specific to the region which may harm the destination image	A7

The values in the relationship matrix at the center of the house of quality are obtained through a comparison of the seven corrective actions (A1, A2, A3, A4, A5, A6, and A7) separately in terms of each destination image factor. Again, the evaluations of the decision-makers with consistent decisions are included here. The values given in the relationship matrix are collectively shown in Table 5. The final weight values obtained by averaging are given below the table. These are the values to be entered into the relationship matrix in the house of quality.

Table 5: Relationship Matrix

Destination Image Factors (WHAT's)	Corrective Actions (HOW's)						
	A1	A2	A3	A4	A5	A6	A7
DI1	0.183246	0.150913	0.137199	0.150327	0.143242	0.189633	0.118421
DI2	0.149589	0.120334	0.126743	0.163399	0.106168	0.210704	0.131579
DI3	0.224383	0.17077	0.142586	0.140523	0.12875	0.105352	0.144737
DI4	0.205684	0.115171	0.147338	0.135621	0.158409	0.117994	0.154135
DI5	0.093493	0.099285	0.158428	0.155229	0.16178	0.130636	0.093985
DI6	0.068811	0.19857	0.152091	0.124183	0.133131	0.126422	0.169173
DI7	0.074794	0.144956	0.135615	0.130719	0.16852	0.119258	0.18797
Weights	0.13301371	0.143207	0.146447	0.146197	0.145225	0.142341	0.143569
Order	7	5	1	2	3	6	4

Independent from the destination image factors, the priority order as a result of corrective actions and the weights and the final order obtained through synthesizing the values in Relationship Matrix (the roof of the house of quality) and destination image factors (through normalizing by reflecting the weights) are given in Table 6.

Table 6: Final weights and the order as a result of considering the destination image factors.

Destination Image Factors (WHAT's)	Corrective Actions (HOW's)						
	A1	A2	A3	A4	A5	A6	A7
	0.310660	0.070000	0.125540	0.157240	0.183390	0.065320	0.087860
1 DI 0.272890	0.065757	0.049138	0.045000	0.045310	0.045748	0.052356	0.033904
2 DI 0.126140	0.496530	0.362427	0.384525	0.455567	0.313642	0.538102	0.348454
3 DI 0.140890	0.083873	0.057921	0.048715	0.044120	0.042833	0.030299	0.043164
4 DI 0.147800	0.069196	0.035157	0.045305	0.038323	0.047430	0.030541	0.041370
5 DI 0.141620	0.030474	0.029364	0.047200	0.042499	0.046932	0.032761	0.024441
6 DI 0.074180	0.022120	0.057921	0.044688	0.033531	0.038090	0.031268	0.043389
7 DI 0.096480	0.232050	0.408072	0.384568	0.340649	0.465327	0.284673	0.465278
Initial Weights	0.12943781	0.139357	0.14251	0.142267	0.141321	0.138514	0.139709
Final Weights	0.152378	0.148860	0.153341	0.140676	0.148068	0.125459	0.131219
Order	2	3	1	5	4	7	6

When Table 6 is reviewed, there have been some changes in the order of the corrective activities upon including the destination image factors into the evaluation. The activity with the highest weight in the initial order and the final order did not change. “Conducting national and international promotion activities” showed up to be the most important activity in terms of the destination image. “Activities by international tour operators to support the destination image” was calculated as the activity with the lowest importance.

5. Discussion and Conclusions

Considering the touristic product characteristics, the Cappadocia region is an important destination worldwide. It may be stated that it is a destination that has no alternatives with regards to its natural attractions as well as its historical and sociocultural attractions (Tosun et al., 2020; Özen & Güneren Özdemir, 2020). The touristic demand of the Cappadocia region, which is intensely engaged in tourism, has specific characteristics. In general, the region appeals to a market segment with a relatively higher education level, income status, and age average, and it is a destination that should be affected less by the seasonality issue both due to its supply and demand properties. Despite this, the region is affected by the seasonality issue and encounters issues such as failure to fulfill expectations in terms of the average period of stay or per capita expenditure (Karakuş, 2019). In this sense, strengthening (or restructuring) the image of the destination may be considered as a factor that may help to overcome these issues.

This study discusses the destination image of the Cappadocia Region through the integrated use of QFD and AHP methods, and the destination image is evaluated in line with the expectations of industry experts, and the aspects which might be improved are determined. The outstanding ones among the expectations of the experts were determined, and thus, the aspects of the destination image requiring improvement are presented. Each destination has specific characteristics. The components of the destination image to be envisioned by the tourists will be decisive at different levels based on each destination. At this point, when the Cappadocia destination is considered, we see that the dominant destination image factor is accommodation and catering facilities. It is known that successful activities in the hospitality industry can be important tools in shaping the image. For example, efforts of accommodation and catering businesses to fulfill their environmental responsibilities (Perinotto & Sousa, 2020) and optimize service quality (Keskin, 2020) will have a positive impact on the overall destination image as they will be welcomed by tourists. Therefore, it may be more accurate to decide the formation of the destination image according to the component with the highest weight. The activities to be performed for the management of the destination image should also be determined and designed specifically for the destination with this perspective. When, sometimes, the output and the cost of the activity to be performed are compared, it may not be reasonable to perform the activity. Yet, some activities may have a significant contribution to achieving the goal. Thus, it may be beneficial information to determine the activity with the highest weight.

According to the findings of the research, the order of priority of the activities required for the improvement of the destination image are listed as follows: A3 (national and international promotion activities); A1 (diversification of touristic products of Cappadocia Region); A2 (improving the transportation in Cappadocia); A5 (promoting the national and international movie and TV show shootings); A4 (conducting more effective and efficient brand city activities for Cappadocia); A7 (preventing the accidents specific to the region which may harm the destination image); and A6 (international tour operators to support the destination image).

Based on the result of the research, the most important activity that should be performed to improve the destination image of the Cappadocia Region is “to conduct national and international promotion activities.” Although there are promotional activities, their success debatable when regarded in terms of efficiency. Both the businesses and the local and national administration should work together in an organized manner while performing promotional activities. The destination image is formed even before the tourist arrives at the destination (Echtner et al., 2003). At this stage, the successful performance of promotional activities would allow forming a strong image from the very beginning.

The second activity required to improve the destination image is the diversification of touristic products. Even though there is a unique product, the Cappadocia Region is monotonous with regards to touristic product range (Karakuş & Çoban, 2018). As stated by Özen and Güneren Özdemir (2020), the new product components in the destination have an effect on shaping the collective image of the destination. Offering different product ranges with potential such as entertainment or gastronomy tourism which will support the experiences of the visitors along with the cultural tourism may increase the average period of stay and average expenditure, and it may allow imprinting the destination on the memories by favorably changing the trip experience perception.

Cappadocia Region is an unrivaled destination rich in natural and historical attractions. The region is also known as a natural film studio, and it hosted many movie and TV show projects. Many indications are showing that the outcome of such projects increases both the national and the international demand to the destination. In this sense, promoting such activities and building the required infrastructure in the region may support the destination image and substantially increase the demand.

In this study, the activities determined by referring to expert opinions are listed according to the order of priority. In the meantime, synthesizing the destination image factors increases the objectivity of the study. Presenting this method for the improvement of destination image on a destination basis has a guiding quality for future studies. It is important as it provides a tool for the tourism managers and the local and national administrators to evaluate the destination image.

Within the scope of the research, opinions of a limited number of experts working in the Cappadocia region could be asked. Besides, the activities determined are assumed equal in terms of practicability. These restrictions of the research are important as they may be inspiring to future studies.

References

- Afshardoost, M., & Eshaghi, M. S. (2020). Destination image and tourist behavioural intentions: A meta-analysis. *Tourism Management*, 81, 104154. <https://doi.org/10.1016/j.tourman.2020.104154>
- Akyurt, H., & Atay, L. (2009). Destinasyonda imaj oluşturma süreci. *Aksaray Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 1(1), 1–14.
- Alonso, J. A., & Lamata, M. T. (2006). Consistency in the analytic hierarchy process: a new approach. *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems*, 14(04), 445–459.
- Baloglu, S., & Mangalolu, M. (2000). Tourism destination images of Turkey, Egypt, Greece, and Italy as perceived by US-based tour operators and travel agents. *Tourism Management*, 22(1), 1–9. [https://doi.org/10.1016/S0261-5177\(00\)00030-3](https://doi.org/10.1016/S0261-5177(00)00030-3)
- Baloglu, S., & McCleary, K. W. (1999). A model of destination image formation. *Annals of Tourism Research*, 26(4), 868–897. [https://doi.org/10.1016/S0160-7383\(99\)00030-4](https://doi.org/10.1016/S0160-7383(99)00030-4)
- Beerli, A., & Martín, J. D. (2004). Factors influencing destination image. *Annals of Tourism Research*, 31(3), 657–681. <https://doi.org/10.1016/j.annals.2004.01.010>
- Berrittella, M., La Franca, L., & Zito, P. (2009). An analytic hierarchy process for ranking operating costs of low cost and full service airlines. *Journal of Air Transport Management*, 15(5), 249–255. <https://doi.org/10.1016/j.jairtraman.2008.11.006>
- Bottero, M., Comino, E., & Riggio, V. (2011). Application of the Analytic Hierarchy Process and the Analytic Network Process for the assessment of different wastewater treatment systems. *Environmental Modelling & Software*, 26(10), 1211–1224. <https://doi.org/10.1016/j.envsoft.2011.04.002>
- Chan, L.-K. L., & Wu, M. M.-L. (2002). *Quality function deployment: A literature review*. 143(3), 463–497. [https://doi.org/10.1016/S0377-2217\(02\)00178-9](https://doi.org/10.1016/S0377-2217(02)00178-9)
- Chen, C. F., & Tsai, D. C. (2007). How destination image and evaluative factors affect behavioral intentions? *Tourism Management*, 28(4), 1115–1122. <https://doi.org/10.1016/j.tourman.2006.07.007>
- Chen, J. S., & Uysal, M. (2002). Market positioning analysis: A hybrid approach. *Annals of Tourism Research*. [https://doi.org/10.1016/S0160-7383\(02\)00003-8](https://doi.org/10.1016/S0160-7383(02)00003-8)
- Chon, K. (1990). The role of destination image in tourism: A review and discussion. *The Tourist Review*, 45(2), 2–9. <https://doi.org/10.1108/eb058040>

- Costa, A. I. , Dekker, M., & Jongen, W. M. . (2000). Quality function deployment in the food industry: a review. *Trends in Food Science & Technology*, 11(9-10), 306-314. [https://doi.org/10.1016/S0924-2244\(01\)00002-4](https://doi.org/10.1016/S0924-2244(01)00002-4)
- del Bosque, I. R., & San Martín, H. (2008). Tourist satisfaction a cognitive-affective model. *Annals of Tourism Research*. <https://doi.org/10.1016/j.annals.2008.02.006>
- Echtner, C. M., Echtner, C. M., & Ritchie, J. R. B. (2003). The meaning and measurement of destination image. *Journal of Tourism Studies*, 14-1. <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.89.3276>
- Furmolly, A. W., & Kırkulak Uludağ, B. (2018). The Impact of Tourism on Turkish Economy (1963-2015). *Journal of Multidisciplinary Academic Tourism*, 3(1), 11-22. <https://doi.org/10.31822/jomat.364321>
- Gartner, W. C. (1989). Tourism image: attribute measurement of state tourism products using multidimensional scaling techniques. *Journal of Travel Research*, 28(2), 16-20. <https://doi.org/10.1177/004728758902800205>
- Hunt, J. D. (1975). Image as a Factor in Tourism Development. *Journal of Travel Research*, 13(3), 1-7. <https://doi.org/10.1177/004728757501300301>
- Jeong, M., & Oh, H. (1998). Quality function deployment. *International Journal of Hospitality Management*, 17(4), 375-390. [https://doi.org/10.1016/S0278-4319\(98\)00024-3](https://doi.org/10.1016/S0278-4319(98)00024-3)
- Karakuş, Y. (2019). Identifying the Best Alternative Tourism Product for a Destination: the case of Cappadocia. *Revista Anais Brasileiros de Estudos Turísticos - ABET*, 9(1, 2 e 3). <https://doi.org/10.34019/2238-2925.2019.V9.16929>
- Karakuş, Y., & Çoban, S. (2018). Evaluation Of Stakeholders' Expectations Towards Congress Tourism By Kano Model: Case Of Nevşehir. *Anais Brasileiros de Estudos Turísticos - ABET*, 8(2), 8-20. <https://abet.ufjf.emnuvens.com.br/abet/article/view/3027>
- Keskin, E. (2020). Relationships among self-efficacy, job resourcefulness and job performance of hotel cooks in Cappadocia. *Journal of Multidisciplinary Academic Tourism*, 5 (1) , 17-27 . DOI: 10.31822/jomat.691475
- Kim, H., & Richardson, S. L. (2003). Motion picture impacts on destination images. *Annals of Tourism Research*. [https://doi.org/10.1016/S0160-7383\(02\)00062-2](https://doi.org/10.1016/S0160-7383(02)00062-2)
- Kılıç, Burhan; Hande, A. (2011). Destinasyon İmajı Oluşturmada Hüzün Turizmi: Grief Tourism on Destination Image Formation. *Gaziantep Üniversitesi Sosyal Bilimler Dergisi*, 10(1), 209-232.

- Kutvan, A. B., & Kutvan, A. S. (2013). Turizm Planlamasında Destinasyon Çekiciliklerinin Ölçümü: Bir Yöntem Yaklaşımı. *International Journal of Economic & Administrative Studies*, 6(11). <http://www.acarindex.com/dosyalar/makale/acarindex-1423936230.pdf>
- kuzka.gov.tr. (2007). *Türkiye turizm stratejileri*.
- Ministry Of Culture And Tourism. (2019). *Tourism Statistics*. <https://yigm.ktb.gov.tr/TR-9851/turizm-istatistikleri.html>
- O'Leary, S., & Deegan, J. (2005). Ireland's image as a tourism destination in France: Attribute importance and performance. *Journal of Travel Research*. <https://doi.org/10.1177/0047287504272025>
- Ömürbek, N., & Tunca, M. Z. (2013). Analitik Hiyerarşi Süreci ve Analitik Ağ Süreci Yöntemlerinde Grup Kararı Verilmesi Aşamasına İlişkin Bir Örnek Uygulama. *Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 18(3).
- Özen, A., & Güneren Özdemir, E. (2020). Relationship between destination image change and behavioral intention: a study on Cappadocia hot air balloon experience. *Journal of Multidisciplinary Academic Tourism*, 5 (1) , 39-54 . DOI: 10.31822/jomat.709096
- Ozturk, A. B., & Qu, H. (2008). The Impact of Destination Images on Tourists' Perceived Value, Expectations, and Loyalty. *Journal of Quality Assurance in Hospitality & Tourism*, 9(4), 275–297. <https://doi.org/10.1080/15280080802520552>
- Park, S. H., Ham, S., & Lee, M. A. (2012). How to improve the promotion of Korean beef barbecue, bulgogi, for international customers. An application of quality function deployment. *Appetite*, 59(2), 324–332. <https://doi.org/10.1016/j.appet.2012.05.008>
- Perinotto, A., & Sousa, M. (2020). Environmental responsibility actions and technologies in hotels management at Fortaleza: The Case of Fortaleza-Ceará-Brazil. *Journal of Multidisciplinary Academic Tourism*, 5 (2) , 143-155 . DOI: 10.31822/jomat.768792
- Ritchie, J. R. B., & Crouch, G. I. (2003). The competitive destination: a sustainable tourism perspective. In *The competitive destination: a sustainable tourism perspective*. CABI. <https://doi.org/10.1079/9780851996646.0000>
- Sohn, S. Y. (1999). Quality function deployment applied to local traffic accident reduction. *Accident Analysis & Prevention*, 31(6), 751–761. [https://doi.org/10.1016/S0001-4575\(99\)00038-X](https://doi.org/10.1016/S0001-4575(99)00038-X)
- Tasci, A. D. A., & Gartner, W. C. (2007). Destination Image and Its Functional Relationships. *Journal of Travel Research*, 45(4), 413–425. <https://doi.org/10.1177/0047287507299569>

- Tosun, Cevat; Bilim, Y. (2004). Şehirlerin Turistik Açidan Pazarlanması: Hatay Örneği. *Anatolia: Turizm Araştırmaları Dergisi*, 15(2), 125–138.
- Tosun, C., Dedeoğlu, B. B., Çalışkan, C., & Karakuş, Y. (2020). Role of place image in support for tourism development: The mediating role of multi-dimensional impacts. *International Journal of Tourism Research*, jtr.2405. <https://doi.org/10.1002/jtr.2405>
- Uwizeye, J. (2020). *Rwanda's tourism destination image in Turkey* [(Unpublished master's thesis) Atilim University, Ankara]. <https://tez.yok.gov.tr/UlusalTezMerkezi/TezGoster?key=f10Kw4p1rmMDotyKRdYv1NK0IXWaOy6IHVpfJo-gqlnrcwBgMbl3SOQVjRgtcqCb>
- Wang, R.-T. (2007). Improving service quality using quality function deployment: The air cargo sector of China airlines. *Journal of Air Transport Management*, 13(4), 221–228. <https://doi.org/10.1016/j.jairtraman.2007.03.005>

AVALIAÇÃO E MELHORIA DA IMAGEM DE DESTINO ATRAVÉS DO MÉTODO INTEGRADO QFD-AHP: EXEMPLO DE CAPPADOCIA

RESUMO

Este estudo avalia a imagem do destino da região da Capadócia com o método integrado AHP e KFG e determina como melhorar a imagem do destino. Em primeiro lugar, os elementos da imagem do destino da região da Capadócia foram listados por especialistas da indústria do turismo de acordo com seus pesos de importância. As atividades voltadas para a melhoria da imagem do destino foram classificadas de acordo com sua importância. Foram associados elementos da imagem do destino e atividades corretivas, sendo a atividade "Realização de promoção nacional e internacional" a atividade mais importante. Como se sabe, o AHP, que é um dos métodos multicritério de tomada de decisão, é um método poderoso que permite digitalizar os julgamentos subjetivos e convertê-los em critérios objetivos de avaliação. O método KFG é uma abordagem sistemática que pode definir os requisitos do cliente usando técnicas quantitativas e qualitativas e transformá-los em parâmetros de produto e processo mensuráveis. Nesse sentido, a inclusão efetiva dos elementos da imagem de destino nos mecanismos de decisão enfatiza a importância deste estudo.

Palavras-chave: Imagem de destino, QFD, AHP, Capadócia.