

## Methods Used in Selecting Location in Hotel Investment Projects

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**Abstract:** Projects in accommodation enterprises need to be planned very attentively. A great number of criteria used in selecting facility location contradict each other in some cases. Such criteria must be used in a significant way, due to the fact that difficulties can be encountered in making decisions in this complex process. "Multi-Criteria Decision Making" (MCDM) methods have been developed to help individuals, businesses, and institutions to make investment decisions and to decide more accurate and profitable investments. AHP, TOPSIS, VIKOR, PHOMETHEE, ELECTRE are some of these methods. Via these methods developed, investment decisions are made by evaluating complex data with many alternatives objectively. This may lead to more accurate investment decisions made by entrepreneurs. With this study, we have dwelled on the methods used by investors in location as well as MCDM methods, which will bring about solutions to qualitative and quantitative problems, which need to be measured and discussed in details.

**Keywords:** Location 1, Accommodation 2, Investment Projects 3, MCDM 4

### Introduction

Tourism, which is an essential value of today's economies, has been revived with the heavy increase of various investments in the communication, transportation, and service sectors in our country, especially since the 1980s; and it has always been at the top of the service sectors where huge investments can be realized accordingly. In this context, many factors are involved primarily for hotel investments, which are the leading investments in the tourism sector. The most important factor among these factors is to determine which factors are important in laying down the locations where the projects will be implemented. Various studies and other supportive research conducted within the scope of hotel investment projects have been carried out by investigating the document analysis, which is one of the qualitative research methods for this purpose. This method encompasses all the data noted down on a relevant subject (Karasar, 2010, p.183). Thus, we have tried to obtain all known data by examining the existing studies.

Two data analysis methods, which are used in qualitative research, will be used in our study. These are descriptive analysis and content analysis (Yıldırım & Şimşek, 2008, p.224). We have planned to reach the findings through the descriptive and content analysis of the obtained data.

### Investment and Investment Projects

The word "investment" is defined in the dictionary as "the production of cash or financial capital to produce products capable of bringing out different goods and services". These products need to be transformed within a set time frame. Investment, which is investigated in two aspects in macroeconomic models, creates an income use that emulates with consumption. On the one hand, it determines the income level with the multiplier mechanism. Therefore, investment can be described as the replacement of stocks with available resources to maintain and increase the capital stock in production facilities, i.e. the economy in which it exists, within a specified period (Ayanoğlu, et al. 2001, p.56). In other words, an investment may be defined as dealing with the quantitative and qualitative aspects of the technical, social conditions, financial issues, and the situation in which it will interact within the planned period until the end of its economic life (Şahin, 2000, p.226). What should be included in an investment project is to define the project well, to have clear goals, to achieve specific results, to analyze and lay down the investment period, the cost of the investment, and the resources for the investment with a correct technique (Spinner, 1997, p.4). Investment can also be defined as the financial tools that a business obtains to gather all tangible products that it will need for its economic activities (Baraçlı & İme, 2013, p. 18). While the definition of investment among the public refers to the investment of the budget allotted

for an organization to the planned project, in scientific terms, it can be pointed out as the transformation of liquidity into operating goods for production and services (Şenel, 2007, p.1).

In terms of developing the economic structure of a country, the investment projects that businesses will make are of great importance and must include the following elements.

- They must have a clear and long-lasting capacity.
- They must offer economic products and services to exports and imports.
- They must use economic raw materials, personnel, and capital products.
- It must be the right investment project choice among the alternatives.
- They must provide added value in economic terms (Hunt, et al. 1971, p.571).

## **Decision Process & Feasibility in Tourism Investments**

Risk factors are high in terms of tourism business investments. Especially the location of the business is the most important factor for tourism investments to be successful. Fixed costs are essential for the financial return of the investment as well as profitability. Apart from fixed costs, factors such as high operating expenses, unavailable income flow, and not being at the planned occupancy will risk the return of planned investment and the sustainability of a specific business. Feasibility analysis is of great significance for the success of investments in a sustainable business. The possible estimates of the sales and occupancy rates of the region where the businesses will lay down the place of the establishment should be identified carefully. At the same time, the medium and long-term socio-economic and socio-cultural developments of the region to be invested should be analyzed with statistical data obtained.

We might evaluate the feasibility in two stages. In the initial stage, we can identify whether the business or the region, where the business is located, is suitable for investment and the stage of obtaining the first information. The first stage, which can also be expressed as pre-feasibility, refers to examinations of the entire infrastructure, financial and legal, market, and facility location studies to determine the actual applicability of an investment project (Can & Güney, 2007, p.90). The second stage, on the other hand, requires more detailed research, and investigation on economic, legal, infrastructure, and financial issues. To make the decision to transform the idea of the establishment into an investment, the facility establishment stages should be examined in terms of legal, economic, technical, and financial aspects. Investors are of great importance for the investment decision to ensure that the investment is suitable and profitable, that it can respond and appeal to the expectations of the market, and that the products and services that the investment will supply following the demands and needs of the target sector (Uğurlu, 2016, p.436).

The tourism investment location should be chosen carefully because the costs of tourism investments can be very high, service provision cannot be stocked, and it may not be possible to provide the service at different times and places (Barutçugil, 1989, p.87). Investing in tourism is the execution and expansion of the main activities of the tourism business in a satisfactory environment, the protection of the contest with competitors, the use of fixed assets for more than one year, and the purchase of the operating capital in order to maintain a business without any disruption (Kuru and Özen 1998, p.37).

## **The Importance of Location for Location and Investments**

The factors to be taken into consideration in the process of determining the location of the service-producing enterprises and the producing enterprises differ subsequently. While sales expenses are important in location selection in businesses such as banks and restaurants that are directly related to the consumer in service businesses, manufacturing and investment costs steer the location selection in industrial enterprises. (Üreten, 2005, p. 357).

The fact that the sectors make investments suitable for their fields may improve a country's economy and socio-cultural structure. While choosing the investment location, the right location should be chosen by carefully approaching the research conducted in the relevant region. As a result of the balanced geographical distribution of the investments made in a region, one can ensure positive development of the financial and environmental structure. Whereas entrepreneurs prefer developed regions for choosing investment locations creates an imbalance between regions, it also provides positive returns for businesses. The decision to be made to choose

the facility location of the business will affect the business in the long run. Changing this decision will be costly, and cause a waste of resources. The choice of establishing a facility location, which is called the piece of land on which it continues its commercial activities for all business branches, is a multifaceted problem. (Ertuğral, 1998, p.33).

## **Location Selection in Tourism Enterprises**

We may describe location selection for the tourism business as the most suitable place for the realization of basic needs such as bed, food and beverage, entertainment, and financial and social purposes. The region where the established tourism business will provide the least cost and the most profit can be called the best facility location (Barutçugil, 1989, p.85). One of the factors that should be considered while creating tourism projects is the effect that directs investment decisions. The main purpose of a project maker or an operator is a rapid return on investment and profitability. For this reason, investors turn to locations where they can gain profit and benefit. The first thing that is demanded for the projects is the adequacy of the available resources to ensure sustainability at the investment location. The main benefits that tend to provide this competence are transportation facilities to the region. Feasibility studies should be prepared by experts in the project field. And it is also important to choose the right alternatives by the experienced decision-makers in the field of investment locations.

## **Valuation Methods in Selection of Organization Location**

Location selection is a process where businesses make decisions by spending a long time. It is an important turning-point where decision-makers seek solutions at the decision-making stage with sequential and logical perspectives. It has led to the emergence of "Multi Criteria Decision Making" (MCDM) methods, as it is often not appropriate to make a decision for only one purpose-oriented function in order to find the appropriate solution for realizing location selections.

More than one method is used in facility location preferences. "Multi Criteria Decision Making" (MCDV) methods applied in this process are the methods developed to find more accurate results for the relevant problems. The data, gathered by MCDM process is analyzed with a correct method, and the alternatives by which the objectives can be achieved, are evaluated according to different criteria. As a result, those who are to make investment decisions will have the opportunity to analyze the measurable and unmeasurable factors in a holistic manner, thus providing the opportunity to choose the most appropriate alternative.

The main objectives of the facility location are to provide a place where the relevant business enterprise can keep its expenses at the lowest, keep the earnings the highest, referring to the fact that the highest-earning or the most beneficial place. If the location of the facility is changed frequently, it causes losses in terms of financial and customer demands. Therefore, a business facility location should be determined by performing the detailed and comparative analysis (Küçük, 2013, p.111). Facility location selections are a choice that should be emphasized. The facility location is the place where the business will maintain its commercial activities. It is the main work to be realized in the establishment of the business. In the gradual selection, first of all, the importance of the business facility location and the appropriate facility location should be considered respectively. Then, the factors that affect the choice of facility location should be examined via the methods of choosing a facility location.

Factors that help businesses to choose their location can be compiled under 12 headings;

- Raw material
- Quality of the product to be manufactured
- Labor supply opportunities
- Proximity to demand
- Transportation facilities
- Land price
- Natural structure
- Infrastructure
- Incentives and restrictions
- Laws of the country
- Possibilities to enlarge the facility in the future (Mucuk, 2016, p. 116).

The main purpose of the facility location is the availability of the business needs, the increase in efficiency and power, and most importantly, the economic advantage. The reason for establishing businesses is to gain profit, to provide services, and to survive for a long time (Eleren, 2006, p. 407). Transition angle criteria are used for the selection of establishment location. The most important of these are the investments: successful and high quality, easy operation, profit and costs, risk criteria, growth, size of resources, contribution to the country's economy, impact on exports and imports, contribution to local development, and the need for regional industrialization. (Demir, 1988, p.167). In business establishments, the following processes are followed.

- Determining the need for establishment,
- Determining the alternative facility location to meet the need,
- Determining the alternative facility location qualities,
- Qualitative and quantitative analysis of the alternative,
- Facility location selection as a result of analysis (Yalçınmer & Aksoy, 2011, p.7).

The following should be taken into account when choosing a facility location: The use of basic principles such as objective decisions by analyzing the demands of the enterprise in detail, making the work sequentially with discipline during the location selection, and determining the opportunities that can be used by experts and institutions in the whole process will all contribute to the accuracy of the decision (Korkut, et al. 2011, p. 33).

### **Multi Criteria Decision Making (MCDM) Methods**

Decision making, which is an important phase of all areas of life, constantly directs businesses and organizations to make decisions with today's rapidly changing and difficult working conditions. Factors such as the number of options and conditions increasing day by day and the conditions conflict with each other complicate the decision-making stage of the last decision-maker who has to make a choice. For this reason, MCDM methods have begun to be used to eliminate conflicting and multiple conditions. MCDM are analytical methods that are used to evaluate the advantages and disadvantages of options considering many conditions. MCDM methods have different contents compared to mostly inconsistent factors to assist in the conclusion process. This method is considered to be the choice of one or more options of the alternatives scheme or the ordering of the alternatives.

Mathematical approximations are used in the process, so the decision space is intermittent in general in MCDM methods. These models elaborate on the procedures for sequencing the most appropriate decision options according to different factors, rather than finding the most suitable outcome. The analytical hierarchy procedure is also included in this framework, among approaches that gather options from intermittent problems with alternatives from the beginning. Although these problems are observed more frequently in current situations, there are few solution options in theory, and the explanation of the methods is constantly difficult and varied according to the situations. Therefore, the question to be asked is what is the best method for a particular problem is. As can be seen, the answer to this question is rather challenging (Kuru, 2011, p.17).

Using MCDM methods is a process that involves many preferences with many options. Final decision-makers are supposed to identify factors of different importance according to their own benefits. Criteria that develop depending on the factor effect enable the decision-maker to agree on a conscious choice according to the degree of importance, on the other hand, it causes the other criteria to be neglected (Öztürk & Batuk, 2006, p.1).

MCDV offers quite suitable answers for location selection problems within the scope of operational research. While determining the location of the facility during the research process, the focus is on the location of the facility and the profile of the target audience it addresses. It is the most frequently used method among the relevant alternatives. Models also present the right candidate by analyzing alternative options (Karabay, 2014, p.361).

The stages in MCDM analyzes can be summarized as follows.

- The problem is determined,
- The path to outcome is searched, alternatives are created,
- The ways and methods that can be chosen are detected. The most seemingly accurate method is chosen.
- Solutions suitable for the problem are classified by observing the sequence.
- The correct method is chosen; the methods are divided into sections according to their types.

- The average analysis selection is realized, the determined solution is divided into sub-sections (Karabıçak, et al., 2016, p. 110).

While analyzing the factors or alternatives in MCDM evaluations, clear expressions are revealed and precise judgments are used respectively. The data obtained by quantitative analysis methods that will be obtained by examining the factors that make up the whole are used separately. Criteria affecting business managers and some uncertain and unproven vague discourses are not included in the subjects regarding implementation; In this way, wrong steps that may result in the emergence of incomplete, unclear, and unstable information from time to time are prevented attentively (Mohaghar, et al., 2012, p.15).

#### *Simple Additive Weighting Method*

In 1954, Churchman and Ackoff developed the "Simple Additive Weighting" (SAW) method as one of the MCDM methods and used it in portfolio selection. Since the method is based on the assumption of the total benefit, all of the criteria should be determined considering total benefit or total cost. Once the method is prepared this way, it can work properly. Simple Additive Weighting (SAW) method, which is also known as "Weighted Linear Combination" or "Scoring Methods", is simple to apply and is also a well-known and widely used method among MCDM methods (Çakın, 2013, p. 21).

The method is based on a weighted average. The SAW method seeks for a weighted summary of the performance rating form in each alternative according to all functions. The SAW method requires a normalization process on a scale that can be compared to all alternative grading of the decision matrix (X) (Pratiwi et al.2014, p.154). An evaluation score for all alternatives is calculated by multiplying the scaled value given to the alternative of this function by the relative importance weights assigned directly by the decision-maker, and by the summing of "products" for all criteria. The advantage of this method is that it is a proportional linear transformation of the raw data. In this case, it results in a relative order of magnitude of the standardized scores remains equal (Afshari, et al., 2010, p.512).

#### *Weighted Multiplication Method*

Weighted multiplication method reveals similarities with a weighted additive method. It is also called the dimensionless analysis. The nature of the method is that it allows the elimination of specified magnitude units. For such reasons, weighted product method is used to solve problems in one or more criteria (Karakaoğlu, 2008, p. 22).

#### *Analytical Hierarchy Process (AHP) Method*

In 1977, Thomas L. Saaty developed it for the first time. "Analytic Hierarchy Process" (AHP) method, which is one of the MCDM methods, is actually a derivative of "Additive Weighting" method (Karaman, 2008, p.7). AHP is especially used to measure MCDM options included in subjective criteria (Kwong & Bai, 2002, p. 368). AHP method emerged by imitating the process of compartmentalization which is also available in humans from birth. The underlying meaning of AHP is fragmentation and blending. This system, which plays an important role in the categorization of samples and logical measurement after the problems are broken down among themselves, brings about the concepts in terms of human perception. One can observe that AHP, which is widely used in the literature, has been used in almost all studies related to MCDM methods in recent years (Cengiz & Celem, 2003, p.145). An MCDM method is an approach that supports the decision maker in taking the right decision at the final stage by considering the effects of many respective factors. It is, therefore, beneficial to use the AHP method in the selection of a facility location.

#### *TOPSIS Method*

In 1981, TOPSIS method was developed as one of the MCDM methods by Hwang and Yoon. The MCDM method guides one to make decisions by using "a" result criteria and "b" options (Behzadian et al. 2012, p.13052). TOPSIS stands for sequencing performance technique in terms of similarity to an ideal solution. The main purpose of the technique is to be able to select the most suitable alternatives to a positively ideal solution and to keep the criteria at the lowest level while maximizing the benefit criteria of the solution. The preferred

criterion is the most distant one from the negative ideal solution. While maximizing the criteria, it is ensured that the benefit criteria are minimized and the most efficient result is achieved in the end. (Saghafian and Hejazi, 2005, p. 215)

The TOPSIS method, one of the MCDM methods, can clearly lay down the number of the criteria. Since the self-judgments of people at the decision-making stage cannot be expressed quantitatively, generally existing experienced and applied data are used in this method. Options in the TOPSIS method require determining the most appropriate solution for the situation among the highest and lowest values that they can take within certain criteria (Yurdakul & İç, 2003, p.11).

#### *PROMETHEE Method*

In 1982, J.P.Brans developed the "Preference Ranking Organization Method for Enrichment Evaluations" (PROMETHEE) method as one of the MCDM methods. PROMETHEE method consists of two main sections. The method differs slightly from other MCDM methods in that it includes bilateral relations within its options and leaves the decisions to the final decision makers (Brans, et al., 1986, 228-233).

PROMETHEE method evaluates product and service procurement options with different selection functions. The method is used in the tourism sector as it is applied in many different sectors (Brans & Mareschal, 2005, p.164). PROMETHEE, an evaluation method made by performing binary comparisons comprises of identifying various alternatives with preferred criteria, based on the selected function with a preferred criterion (Genç, 2013, p. 135). It has become one of the most used methods among MCDM methods by considering the partial and holistic priorities of the subject together in order to provide a detailed analysis. (Dağdeviren and Eraslan, 2008, p.70). The PROMETHEE method, which is utilized especially in the logistics sector, is a method that can be used to meet the needs of access problems related to location problems and to evaluate supplier preferences as strategic investment partners in the medium and long terms (Behzadian, 2010, p. 200).

#### *ELECTRE Method*

As a MCDM method, the term "Electre" is used to express "Elimination Et Choix Traduisant la Reality". It stands for "elimination and preference that reflect the reality" (Türker, 1988, p.73). Based on the valuation of discordance and concordance indices, Electre method is defined by two indices (Wang & Triantaphyllou, 2008, p.48). Electre is used for solving problems with high qualitative weight because it is a method that can convert these values into a quantitative form. Electre method basically relies on making one of the selected or unselected options the most advantageous ultimately (Ertuğrul & Karakaşoğlu, 2010, p.27).

#### *VIKOR Method*

As a MCDM method, "Vise Kriterijumska Optimizacija I Kompromisno Resenje" (VIKOR) was developed by Po-Lung Yu in 1973 (Büyüközkan and Ruan, 2008, p.466). Many of the life problems include conflicting factors that can be measured at different scales. In such cases, it may not be possible to include all factors in the solution at the same time in solving the problems in the decision-making process. VIKOR, which is a MCDM method, is used in solving problems considering conflicting factors (Göktürk, et al., 2011, p.64). VIKOR has recently been used to find solutions to problems in the tourism sector as well as in many areas.

### **Contemporary Selecting Methods of Facility Location**

Numerical valuation methods enable decision making by considering objectively measured financial calculations for location selection at the facility establishment stage.

#### *Numerical Evaluation Methods*

There are some problems in measuring factors that cannot be explained numerically. These problems can be solved in two ways. The first solution is based on decision-makers' personal evaluation outcomes. The second is based on the determination of the significance levels of the factors that can be clearly and accurately observed

and measurable in the decision-making phase (Üreten, 1997, p.328). When evaluated in this context, we can identify some observation and measurement methods under the following headings.

#### *Weighing Method*

It is used in the analysis of some criteria for which there are difficulties in measuring location preference. Opinions of experts and relevant research findings are used in this method. The correctness of the result is provided via the statistical control method. The pioneers in the field are consulted regarding the size of significance attributed to the type of production, the factors affecting it, and the resulting score grading of the desired facility location (Tekin, 2000, p. 293).

#### *Profit Comparison Method*

When the profit criterion is taken as primary in the choice of the appropriate facility location, the sales gains and cost expenses are calculated separately for each facility location option. The places that are likely to provide the greatest income are determined as the most accurate facility locations (Cinnioğlu, 2006, p.92).

#### *Cost Analysis Method*

All methods that aid the facility location preferences made by comparing the factors may not be sufficient to find a substantial solution. The "cost analysis method", which is thought to be more detailed and comprehensive, is used in choosing the facility locations (Demircioğlu, 2010, p.12).

#### *Par Point Method*

Once the constant and changing costs of the business locations are found out, it becomes easier to create cost functions. The data of such functions can be observed on a production volume and financial axis in terms of alternative business locations. Using a graph as a visual aid, the place where the maximum benefit will be provided according to the business capacity can be selected as the location where the business facility will be established (Özer, 2005, p.27).

## **Related Studies**

While determining the facility location with MCDM methods, we have pointed out the methods such as TOPSIS, VIKOR, and AHP, which are some of the most commonly used methods, are applied predominantly. In our study, two case studies out of many studies on this subject have been examined to set an example.

### **Case Study 1**

In a study conducted in 2017: "Application of Facility location in Accommodation Management with TOPSIS Method", it has been revealed that it is of great importance that investment plans in accommodation management are planned from the very beginning to the end and considered by decision-makers respectively. Among the investment decisions, the decision of facility location selection seems to be the biggest and most important decision to be taken. It is evident that if the decision is taken incorrectly or if it is returned after the process has started, it may cause great costs or damages for the investors. (Ermağan, et al., 2017, p.90-91)

In the abovementioned study, in which TOPSIS method was used, they discussed the factors affecting the choice of facility location and the characteristics of investment projects in accommodation businesses. They have made interviews with managers and administrators, who are experts in the field of tourism, and also with those working in the tourism sector by reviewing the literature on the relevant topic. By using one of the operational techniques and utilizing the determined factors, the most appropriate facility location was chosen eventually. They found the significance level values of the criteria determined in line with the statistical information collected and the interviews made accordingly. They detected that it was more appropriate to prefer

an accommodation business planned to be established like the ones in Bodrum and Çeşme rather than those available in Alanya.

In the phase of criteria evaluation, the duration of the tourists' stay, ease of supply, and energy expenditures were not taken into consideration. However, when the criteria such as tourist attraction, ease of transportation by air, longer seasonal advantages are estimated, they recognized that the values were close to each other; and therefore, Alanya became more prominent. Although the revealed criteria did not come out with very high values in the case of Alanya, it became the more suitable alternative by showing great superiority to Bodrum and Çeşme. Thus, they concluded that choosing the criteria from which data can be obtained in the selection of the location provides more accurate and realistic results.

## **Case Study 2**

A second study titled "Using Fuzzy AHP-VIKOR Approach in the Selection of Facility Location: An Application in the Hotel Industry" revealed one of the most important problems to be decided among other problems of the location where the facility would be built, such as the fastest return of the investments made and the ability to use the entire capacity of the enterprise for maximum profit. The selection of an eco-tourism location planned to be established in Rize was examined; and then, the results of the AHP and VIKOR methods, which were used to solve the location problem, were identified respectively (Ar, et al., 2014, p. 106).

AHP method was used while choosing the location of the accommodation business. With the VIKOR method, a compromise result was achieved. It was observed that important criteria were determined while making the decision to choose the location of the "Nearby Environment" criterion. Three alternatives were offered for hotel location selection and it was decided that Kuspa was the right location for the relevant project. While choosing the location of the hotel, the factor that there were important touristic places in the surrounding area was revealed in that location as well.

As seen, the AHP - VIKOR method used in the selection of the hotel location provides an advantage in accordance with the nature of the problem. The emphasis on personal stories in the method has caused the problems to have an abstract structure rather than concrete data. For this reason, problems are supposed to be handled with logical analysis. In the process of comparing the obtained criteria, this approach enables an opportunity to carry out the operation regularly and to obtain the most appropriate solution. In the second study, investors were guided by shedding light on those who would make an investment decision in Rize.

## **Conclusion**

Among the stages of accommodation business investment plans, selecting a facility location is the most important step that should be carefully considered, since returning it will cause lots of costs. In this study, we have tried to elaborate on the importance of facility location and MCDM methods to be used in location selection regarding a tourism enterprise investment project. Situations that may affect the facility location positively and negatively have been discussed by conducting a wide literature review on the location of facility establishment and explaining the criteria to be applied in the choice of facility location. The methods used in the choice of facility location are explained in detail by looking at the profitability of the business, the market it will appeal to, and the touristic attraction from a wide perspective. We have mentioned about some project studies of the enterprises that have chosen the facility location via some MCDV methods such as TOPSIS, VIKOR, and AHP.

In the first study, TOPSIS method, which is one of the widely used MCDV methods, was preferred in making the right decision in choosing the facility location. As a result of the implementation, it has been observed that the hotel business planned to be established in Alanya has proved to be superior in terms of its touristic attraction, its ease of transportation by air, and seasonal conditions in comparison with a facility establishment in Bodrum and Çeşme.

In the second study, an eco-tourism location selection planned to be established in Rize was examined, and the AHP and VIKOR methods were used for aspects such as the quickest return of the investments made in the facility location and the use of the entire capacity of the enterprise for maximum profit. In the study, while choosing the hotel location, the importance of the touristic places in its vicinity have been to revealed to be prominent and three alternatives were presented for the choice of this hotel location to be established; thus they

decided that Kuspa was the best location for the project and guided those who would make investment decisions in Rize respectively.

Since both qualitative and quantitative methods are used when making decisions in the TOPSIS method, it has been observed that if the number of criteria sought is increased when choosing the facility location of the accommodation business, the effect on the correct and reliable result will be achieved on a large scale.

In sum, it has been revealed that the AHP and VIKOR methods provide an advantage in line with the nature of the problem. The emphasis on personal stories in the method has caused the problems to have an abstract structure rather than concrete data. For this reason, problems should be handled with a logic-based analysis. In the process of comparing the obtained criteria, such an approach allows the operation to be carried out regularly and to achieve the most suitable solution.

## References

- Afshari, A., Mojahed, M., Yusuf, R., M., (2010). "Simple Additive Weighting Approach to Personnel Selection Problem", *International Journal of Innovation, Management and Technology*, 1 (5), 511-515.
- Ar, M. İ., Baki, B., Özdemir, F. (2014). Kuruluş Yeri Seçiminde Bulanık Ahs-Vikor Yaklaşımının Kullanımı: Otel Sektöründe Bir Uygulama, 7 (13), 93-114.
- Ayanoğlu, K., Düzyol, M. C., İter, N. ve Yılmaz, C. (2001). Kamu Yatırım Projelerinin Planlanması ve Analizi, DPT, Genişletilmiş İkinci Baskı, Ankara.
- Baraçlı, H. ve İme, M. (2013). Kurumsal İşletmelerde Finansal Yönetim, Alfa Basım Yayım Dağıtım, İstanbul.
- Barutçugil, İ. S. (1989). Turizm İşletmeciliği, Beta Basım, Bursa.
- Behzadian, M., Kazemzadeh, R.B., Albadvi A., Agdashi, M. (2010). "PROMETHEE: A comprehensive literature review on methodologies and applications", *European Journal of Operational Research* (200), 198-215.
- Behzadian, M., Otaghsara, S.K., Yazdani, M., Ignatius, J. (2012). A state-of the-art survey of Topsis applications. *Expert System with Applications*, 39 (2012), 13051-13069.
- Brans, J. P., Vincke, P., Mareschal, B. (1986). "How to Select and How to Rank Projects:The Promethee Method", *European Journal of Operational Research*, 24 (2), 228-238
- Brans, J., P., Mareschal, B. (2005) "PROMETHEE Methods", *Multiple Criteria Decision Analysis, State of the Art Survey*, New York, Springer Science, 163-195.
- Büyüközkan, G., Ruan, D. (2008). "Evaluation of Software Development Projects Using A Fuzzy Multi-Criteria Decision Approach", *Mathematics and Computers in Simulation*, 77 (5-6), 464-475.
- Can, H., ve Güney, S., (2007). Genel İşletme, İstanbul.
- Cengiz, T. Çelem H, (2003). Kırsal Kalkınmada Analitik Hiyerarşi Süreci (AHS) Yönteminin Kullanımı, Kafkas Üniversitesi Artvin Orman Fakülte Dergisi, 144-153.
- Cinnioğlu, H. (2006). Otel işletmelerinde yatırım projelerinin ekonomik yönden hazırlanması ve kuruluş yeri seçimi, Yüksek Lisans Tezi, Anadolu Üniversitesi Sosyal Bilimler Enstitüsü, Eskişehir.
- Çakın, E. (2013). Tedarikçi Seçim Kararında Analitik Ağ Süreci (ANP) ve Electre Yöntemlerinin Kullanılması ve Bir Uygulama, (Basılmamış Yüksek Lisans Tezi), Dokuz Eylül Üniversitesi, Sosyal Bilimler Enstitüsü, İzmir.
- Dağdeviren, Metin ve Ergün Eraslan, (2008), "PROMETHEE Sıralama Yöntemi ile Tedarikçi Seçimi", *Gazi Üniversitesi Mühendislik Mimarlık Fakültesi Dergisi*, 23 (1), 69-75.
- Demir, M. H. (1988). Üretim Yönetimi Cilt-1. 3. Basım, Aydın Yayınevi, İzmir.
- Demircioğlu, O. (2010). Kuruluş Yeri Seçiminde Çok Kriterli Karar Verme Yöntemlerinin Karşılaştırılması, (Basılmamış Yüksek lisans Tezi), Marmara Üniversitesi, Sosyal Bilimler Enstitüsü, İstanbul.
- Eleren, A. (2006). Kuruluş Yeri Seçiminin Analitik Hiyerarşi Süreci Yöntemi ile Belirlenmesi, *Deri Sektörü Örneği, Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi* 20 (2), 405-416.
- Ermağan, U., Kızılırmak, İ. Ve Yazırdağ, M., (2017). Konaklama İşletmeciliğinde Kuruluş Yeri Seçiminin TOPSIS Yöntemiyle Uygulanması, 4. Disiplinler Arası Turizm Araştırmaları Kongresi, 91- 105.
- Ertuğrul, İ. ve Karakaşoğlu, N., (2010). "ELECTRE ve Bulanık AHP Yöntemleri ile Bir İşletme İçin Bilgisayar Seçimi", *Dokuz Eylül Üniversitesi İktisadi ve İdari Bilimler Fakülte Dergisi*, 25(2), 23-41.
- Eruğral, S. M. (1998). Otel İşletmelerinde Kuruluş Yeri Seçimi: İstanbul'daki Dört ve Beş Yıldızlı Oteller ile İlgili Bir Alan Araştırması, *Anatolia: Turizm Araştırmaları Dergisi*, 9, 33-38.
- Genç, T. (2013). "PROMETHEE Yöntemi ve GAIA Düzlemi", *Afyon Kocatepe Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 15(1), 133-154.
- Göktürk, F., Eryılmaz, A. Yörür, B., Yuluğkural, Y. (2011). "Bir İşletmenin Tedarikçi

- Değerlendirme ve Seçim Probleminin Çözümünde ASS ve VIKOR Yöntemlerinin Kullanılması", Dumlupınar Üniversitesi Fen Bilimleri Enstitüsü Dergisi, Sayı: 25, 61-74.
- Hunt, P., Charles, M. W., Donaldson, G. (1971). Basic Business Finance Text and Cases, Georgetown, Richard D. Irwin Inc, Georgetown.
- Karabay, S., Köse, E., Kabak, M. (2014). "Stokastik Çok Kriterli Kabul Edilebilirlik Analizi ile Bir Kamu Kurumu için Tesis Yeri Seçimi", Ege Akademik Bakış Dergisi, 14 (3), 361-369.
- Karabıçak, Ç., Boyacı, A.İ., Kocabaş, M., Özcan, B. (2016). "Çok Kriterli Karar Verme Yöntemleri ve Karayolu Şantiye Yeri Seçimine İlişkin Bir Uygulama" Kastamonu Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, 13, 106-121
- Karakaşoğlu, N. (2008). Bulanık Çok Kriterli Karar Verme Yöntemleri ve Uygulama, (Basılmamış Yüksek Lisans Tezi), Pamukkale Üniversitesi, Sosyal Bilimler Enstitüsü.
- Karaman, C. (2008). Fuzzy Multi-criteria Decision-Making, Theory and Applications with Recent Developments, USA; New York, Springer Science Business Media, İstanbul.
- Karasar, N. (2010). Bilimsel Araştırma Yöntemi. Nobel. Ankara.
- Korkut, D., Doğan, A., Bekar, G., (2011). Kuruluş Yeri Seçimini Etkileyen Faktörlerin Düzce İli Açısından Değerlendirilmesi, Düzce Üniversitesi Ormanlık Dergisi, 32-39.
- Kuru, D. Ş. ve Özen, T. (1998). Turizm Yatırımları Özkan Ofset Matbaacılık, İstanbul.
- Kuru, A. (2011). Entegre Yönetim Sistemlerinde Çok Kriterli Karar Verme Tekniklerinin Kullanımına Yönelik Yaklaşımlar ve Uygulamaları, (Basılmamış Doktora Tezi), Marmara Üniversitesi, Sosyal Bilimler Enstitüsü, İstanbul.
- Küçük, O. (2013). Girişimcilik ve Küçük İşletme Yönetimi, Seçkin Yayıncılık, Ankara.
- Kwong C.K, Bai, H. (2002). A Fuzzy AHP Approach to the Determination of Importance Weights of Customer Requirements in Quality Function Deployment", Journal of Intelligent Manufactured, 367-377.
- Mohaghar, A., Fathi, M., Zarchi, M., Omidian, A., (2012). "A Combined VIKOR-Fuzzy AHP Approach to Marketing Strategy Selection" Business Management and Strategy, 1 (3), 15-27.
- Mucuk, İ., (2016). Modern İşletmecilik, Türkmen Kitabevi, İstanbul.
- Özer, S. (2005). Mermer fabrikaları için en iyi tesis yeri seçimi. Yayımlanmamış yüksek lisans tezi, Osmangazi Üniversitesi, Eskişehir.
- Öztürk, D. Batuk, F. (2006). Criterion Weighting In Multicriteria Decision Making, Journal of Engineering and Natural Sciences, 25 (1), 86-98.
- Pratiwi, D., Lestari, J. P., Agushinta, R. D. (2014). "Decision Support System to Majoring High School Student Using Simple Additive Weighting Method", International Journal of Computer Trends and Technology (IJCTT) 10 (3), 153-159.
- Saghafian, S. ve Hejazi, S. R., 2005, "Multi – criteria Group Decision Making Using A Modified Fuzzy TOPSIS Procedure", International Conference on Computational Intelligence for Modelling, Control and Automation, and International Conference on Intelligent Agents, Web Technologies and Internet Commerce, IEEE. 215-221.
- Spinner, M. P. (1997). Project Management, Prentice-Hall, New Jersey.
- Şahin, H. (2000). Yatırım Projeleri Analizi, Ezgi Kitabevi Yayınları, Bursa.
- Şenel, S. A. (2007). Turizm Sektöründe Yatırım Kararları, Selçuk Üniversitesi Karaman İ.İ.B. F Dergisi (12), 1-12.
- Tekin, M. (2000). Üretim Yönetimi Cilt 1. Arı Ofset Matbaacılık, Konya.
- Türker, A., (1988), "Çok Ölçekli Karar Verme Tekniklerinden ELECTRE", İstanbul Üniversitesi Orman Fakültesi Dergisi, 38(3), 72-87.
- Uğurlu, K. (2016). Turizm Tesisi Yatırımlarında Ön Fizibilite Çalışmalarının ve SWOT Analizinin Önemi, Bolu Göynük Doğa Oteli Örneği, Bartın Üniversitesi İ.İ.B.F. Dergisi, 7 (14), 434-459.
- Üreten, S. (1997). "Stratejik Kararlar ve Karar Modelleri", Bizim Büro Basımevi, Ankara.
- Üreten, S. (2005). Üretim/ İşlemler Yönetimi Stratejik Kararlar ve Modelleri, Gazi Yayıncılık, İstanbul.
- Wang, X. and Triantaphyllou, E., (2008). "Ranking Irregularities when Evaluating Alternatives by using some ELECTRE Methods", Omega the International Journal of Management Science, 36(1), 45-63.
- Yalçın, K. ve Aksoy, E.E. (2011). Yatırım Projelerinin Değerlendirilmesi, Ankara.
- Yıldırım, A., & Şimşek, H. (2008). Sosyal Bilimlerde Nitel Araştırma Yöntemleri (6. Baskı). Seçkin Yayıncılık, Ankara.
- Yurdakul, M., İç Tansel, Y. (2003). "Türk Otomotiv Firmalarının Performans Ölçümü ve Analizine Yönelik TOPSIS Yöntemini Kullanan Bir Örnek Çalışma", Gazi Üniversitesi Mühendislik Mimarlık Fakültesi Dergisi, 18 (1), 1-18.