



## **Measuring the Relationship between Factors Affecting the Demand of Spiritual Tourism in Tehran Using Fuzzy Technique**

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### **Abstract**

Today, sustainable development of tourism as a strategy for the development of cities, especially remote cities is a relatively new idea that its importance has been realized by policymakers. This type of tourism can be considered as a source of income, creating jobs, and making positive changes in the income of cities. In tourism studies, there are also discussions about spiritual tourism. However, most scholars do not consider spiritual tourism as real tourism because it is like an umbrella that can include various types of tourism that leads to a transcendental sense and sacred values such as 'Spiritual city tourism'. Then, using laboratory techniques of test and evaluation of fuzzy DEMATEL decision making, as one of the appropriate decision-making techniques that deal with systematic relations between variables, relations among factors influencing the development of Spiritual city tourism in Tehran are studied and modeled. The results of the fuzzy DEMATEL method showed that factors affecting the development of Spiritual city tourism include Appropriate planning and management, Direct supervision of the government and institutions on those active in the field of tourism, Presence of experts fluent in live languages of the world beside tourism attractions, Attracting foreign investment for the development of Spiritual city tourism activities with contracts and special facilities, Marketing, advertising, and introducing tourism attractions in national and international areas, Culturalization of tourism development and promotion of tourist acceptance culture among city residents.

**Keywords:** Tourism, Spiritual city tourism, Spiritual tourism, DEMATEL fuzzy technique, Tehran.

## 1. Introduction

The concept of spirituality is a research area that has attracted the attention of many scholars and researchers for a long time. Because of the richness of the concept of spirituality, it is difficult to provide an objective definition for it. However, it is not impossible to examine and conceptualize it based on existing studies. Plante and Thoreson (2007) define spirituality as the search for meaning in life, the transcendental relationship with self and god, universal guidance, unity with nature, and confederation. Wilson (2013) also believes that spirituality is the essence of human existence and urges a person to find meaning in life in accordance with his explorer nature. Therefore, spirituality can be considered as a kind of informing tool that mentally creates awareness in the conscience of a man (Shafia and Sabbaghpour Azarian, 2016). As travel leads the seeker to find meaning, tourism can be interpreted as a phenomenon in which spirituality is born (Ambrose, 2011). In the field of tourism, primitive look at spirituality has considered it as one of the motivating factors for travel. Moreover, in this field, the tourist is interested in the individual spirituality that he travels and pilgrimages in order to perceive a transcendental sense. Nevertheless, the two categories of religion and spirituality, despite their similarity, are sharply distinguished. Regardless of the relationship between religion and spirituality, religion can solely focus on the internal sanctity of individuals, while spirituality has an ultra-material and multidimensional structure with religion considered only as one of its several elements (Shafia and Sabbaghpour Azarian, 2016). The present study was conducted to further explore this category and identify the factors affecting the development of spiritual city tourism.

**Spiritual city tourism:** In tourism studies, there are several discussions about spiritual tourism. But, most scholars believe that spiritual tourism cannot be considered as a type of tourism since spirituality is like an umbrella that covers various types of tourism that lead to a transcendental sense and sacred values. Therefore, spiritual tourism is not a special type of tourism; rather, it shows the spirituality that the tourist is immersed in it in achieving non-material values while traveling (Vargheese, 2012). In this regard, each type of tourism has a capacity of deep thinking and a superficial realization of spiritualization that is dependent on the tourists' charisma and point of view.

For many years, cities have been a place for leisure and recreation in addition to working and living. Tourists use many tourist attractions and facilities for recreation. The physical and social structure of urban

environments provides tourists with favorable conditions and puts numerous and diverse tourism opportunities at their disposal.

Stansfield (1964) believes that there is a difference between urban and non-urban environments that makes people pursue recreation in other environments. Christaller (1964) conducted a study in Europe and offered a spatial pattern of tourist behavior that partially confirmed the statements of Stansfield (1964).

In this model, cities are proposed as tourist sender regions while villages and border towns are considered as tourist receiver areas [Quote from (Xiao, 2007)].

For this reason, a major part of tourism research until the late 20<sup>th</sup> century was on tourism in villages and nature, and Spiritual city tourism was not much considered. In the late 20<sup>th</sup> century, manufacturing industries gradually lost their significance as the main tool for the growth of towns and the service sector was known as the economic motor engine of cities.

Law (1993) mentions four contributing factors in the development of tourism as a service sector in cities [Quote from (Xiao, 2007)]:

1. The decline of manufacturing industries
2. The need to create new economic activities and cope with unemployment
3. Recognition of the importance of tourism as a growing industry
4. The role of tourism development in the reconstruction and revival of urban areas

Nyiri (2006) has also added two other factors to the above factors:

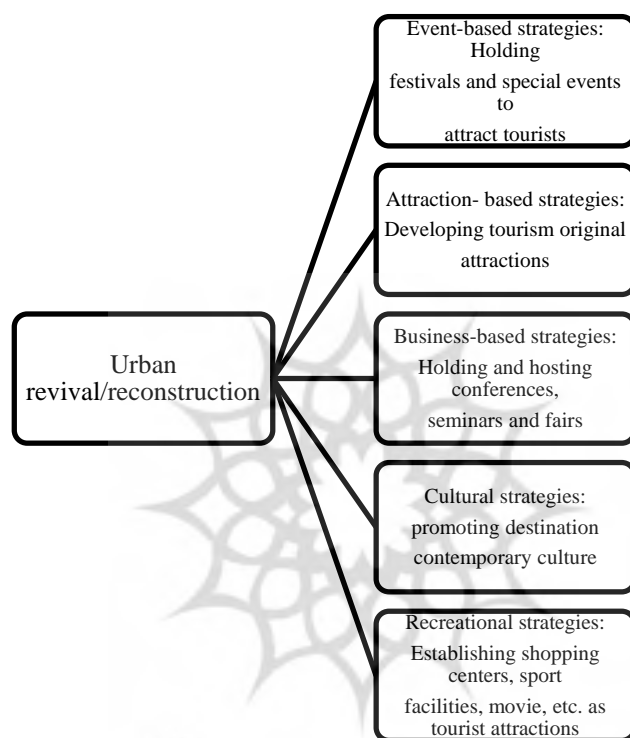
1. Globalization
2. Special status of cities in capital accumulation

One of the main objectives of Spiritual city tourism development (and other types of tourism) is socio-economic development of destination and the welfare of local residents, which are usually brought up as reconstruction in Spiritual city tourism.

Swarbrooke (2000) identified strategies of achieving urban development through tourism shown in Fig. 1 [Quote from (Sharpley & Roberts), 2005: 165 ]: In general, the development of tourism has had an effective role in the reconstruction process of inner-city physical environments of many European and American cities and has led to mental image improvement of these cities.

The rise of recreational spaces within cities, the development of beaches, festivals, casinos, museums, conference halls, and sports stadiums

are, in fact, physical manifestations of local economic development through Spiritual city tourism (Rogerson, 2002).



**Figure 1. Impact of urban spiritual tourism as an important role in the process of physical reconstruction of urban environments**  
(Sharpley and Roberts, 2005: 165)

A very important point in Spiritual city tourism is that continuing success in this type of tourism will require innovation and continuous investment to overtake newer competitors.

Meanwhile, it seems that any tourism has the spiritual capabilities of achieving excellence, achieving meaning, and reaching mutual understanding, which all require review and analysis. Where cultural tourism provides greater opportunities for achieving awareness, trip advice, and appreciation of cultural values, Spiritual tourism provides the base for the health of the body and self-actualization through its talents and potentials. Therefore, spirituality in tourism includes all the hidden and obvious dimensions that will remain in the tourist both internally and

externally. Even the sense of satisfaction and pleasure that comes with the perception and appreciation of a tourism trip can be called a part of the spirituality derived from tourism, which can be found in the context of a city and as spiritual city tourism.

In such conditions, tourism is addressed as an appropriate option for the development of cities, because cities potentially have many attractions such as historic monuments, cultural heritage, events, etc. According to Robins (1991:38), even the most deprived cities also can compete in terms of Spiritual city tourism destinations because of their historical and cultural heritage [the same].

In order to grow and develop the tourism industry in urban areas, factors effective on the growth and development of this industry in villages are needed to be identified. Here, it is necessary to first identify factors affecting the development of Spiritual city tourism in this area. In the present study, the relations between factors affecting the development of Spiritual city tourism are studied and modeled using the laboratory technique of test and evaluation of fuzzy DEMATEL decision, as one of the appropriate decision-making techniques that deal with systematic relations between variables.

## **2. Research history**

Some researchers classify travel and tourism in a spiritual category (Ambrose, 2011, Hill et al., 2000). In comparison, some others believe that spirituality in tourism only involves journeys that lead to sacred values and transcendental sense, depending on two decisive factors. The first factor is the motive of travel. According to Kells (1991), modern travelers travel in order to meet their major needs with more extended motives (Kells, 1991). Kells also emphasizes that humans always fidget in delve into responding the questions such as where do they come from, where are they going, and where are their ultimate destination. Moreover, according to this scholar, humans always seek new experiences, relations with new people, and connecting to the environment in order to give meanings to their lives. The second determinant of spirituality in tourism is the travel experience that is achieved when some non-material experiences occur and lead to a sense of transcendence and sacredness in the conscience of individuals. However, the identification of spiritual experiences is very difficult, because spiritual experiences are very different from other types of experiences due to being non-manageable and non-measurable (Ambrose, 2011).

What creates the point of connection between spirituality and tourism is the existence of spiritual intelligence in human. Spiritual intelligence

reflects the passion of human and the adventurous spirit of the traveler. In Multiple Intelligence, Gardner (2011) has pointed to the spiritual intelligence paradigm and its emergence after the development of emotional intelligence and social intelligence. In defining the spiritual intelligence, one should pay attention the joy created in the human being to answer the questions of existence and the fact that the spiritual intelligence continuously motivates humans to make more contact with others and nature to find the answers for his ultimate questions. Here, tourism is considered as one of the facilitating tools for the more effective operation of emotional intelligence. Humans while traveling seek meaning, self-awareness, gaining non-material experiences, creating transcendental values, and identifying and gaining the health of the soul and body (Ambrose, 2011).

Emphasizing that spirituality can be penetrated in all aspects of tourism, and this feature will provide the possibility of giving meaning and recreating a tourist trip, identifying and strengthening the constructive components of a spiritual experience will be the main issue of spiritual tourism management (Wilson et al., 2013). It seems that the expansion of spiritual city tourism can have an effective role in creating a distinct mental image for a city and thus could provide the development of these areas. In this regard, it is possible to expedite the sustainable growth of this industry in urban areas by examining the factors influencing the development of this industry in urban areas and in particular remote towns and by providing these factors.

### 3. Research Methodology

This research is descriptive in terms of purpose and applied in terms of the results. The statistical community of this research includes experts familiar with the tourism industry and Spiritual city tourism.

This study is aimed at identifying factors affecting the development of Spiritual city tourism in the country and assessing causal relations between these factors. To this end, by a comprehensive review of research literature and feedback from experts familiar with Spiritual city tourism, development factors of Spiritual city tourism in the country were extracted. Then, the relevant questionnaire was compiled and given to the experts of this field. The questionnaire consisted of 9 factors. The experts were asked to rate the effective amount of each factor relatively. It should be noted that the questionnaire was first reviewed in terms of face validity and content validity by experts and its possible uncertainties were alleviated. After

collecting questionnaires, causal relations between factors were specified using the fuzzy DEMATEL method and through MATLAB software.

#### 4. Data Analysis

##### 4.1. Fuzzy DEMATEL Method

DEMATEL technique, which was first presented by American scientists between the years 1926 and 1972, was a method for solving complicated problems. This technique, which was made on the basis of graph theory, is able to solve issues by a simple method, but the shortcoming of DEMATEL technique (i.e., decision making under uncertainty) led to presenting fuzzy DEMATEL technique. Fuzzy DEMATEL method makes decision making easy in environmental uncertainty using linguistic fuzzy variables. This technique is applicable in the fields of production, organization management, information system, and social services (Rostamzadeh and Sofian, 2011:5167). In this theory, tacit knowledge and judgment of individuals can be described as verbal variables. Verbal variables are used to express those judgments of people that are ambiguous (Lane, 2010:881). In this research, to calculate triangular fuzzy numbers, the following Equations were used:

Equations 1

Addition of fuzzy numbers

$$\tilde{a}_1 + \tilde{a}_2 = (l_1, m_1, u_1) + (l_2, m_2, u_2) = (l_1 + l_2, m_1 + m_2, u_1 + u_2)$$

Equations 2

Subtraction of fuzzy numbers

$$\tilde{a}_1 - \tilde{a}_2 = (l_1, m_1, u_1) - (l_2, m_2, u_2) = (l_1 - l_2, m_1 - m_2, u_1 - u_2)$$

Equations 3

Multiplication of fuzzy numbers

$$\tilde{a}_1 \times \tilde{a}_2 = (l_1, m_1, u_1) \times (l_2, m_2, u_2) = (l_1 \times l_2, m_1 \times m_2, u_1 \times u_2)$$

$$\text{for } l_1, l_2 > 0; m_1, m_2 > 0; u_1, u_2 > 0$$

##### 4.2. Fuzzy DEMATEL Technique

Fuzzy DEMATEL technique is one of the varieties of decision-making methods that is on the basis of paired comparison. Benefiting from the judgment of experts in extracting the factors of a system and their systematic structuralization, this technique uses the principles of graph theory and brings hierarchical structure of the factors in system with mutual influential and impressionability relations in a way that it determines the

intensity of the effect of these relations in a numerical order (Rostamzadeh and Sofian, 2011:5168).

Fuzzy DEMATEL technique facilitates decision making in environmental uncertainty conditions using fuzzy language variables. The steps of this technique are as follows:

Step 1: Creating a direct relations matrix: In this stage, the poll initial matrix is created in a way that the rows and columns of the matrix are comprised of the criteria of decision-making issue.

Step 2: Designing fuzzy linguistic criteria: These criteria (Table 1) are used at this point to resolve uncertainty (Jassbi et al., 2011:5969).

**Table 1. Verbal phrases and correspondent verbal numbers**

Verbal phrases	Quite uninfluential	Low influential	Average influential	High influential	Very high influential
Verbal values	(0,0,0.25)	(0,0.25,0.5)	(0.25,0.5,0.75)	(0.5,0.75,1)	(0.75,1,1)

In this step, all respondents are asked to specify the effect of each criterion on any other criteria in Table 1.

$\tilde{Q}_{ij} = (L_{ij}, M_{ij}, U_{ij})$  represents the respondents' opinion regarding the effect of criterion i on criterion j.

For any respondent, an n\*n matrix with fuzzy components is defined in the form of  $\tilde{O}^p = [\tilde{O}_{ij}^p]$ . P represents the number of respondents and n the number of cases studied (Lioua et al., 2008:21).

Step 3: Making an initial decision-making matrix: In fact, it is extracted from a simple average of all comments.  $\tilde{O}_{ij} = (L_{ij}, M_{ij}, U_{ij})$  are triangular fuzzy number dimensions (Jassbi et al., 2011:5970).

$$\tilde{O}_{ij} = \frac{1}{p} \times \sum_{p=1}^p \tilde{a}_{ij}$$

$$\tilde{O} = \begin{bmatrix} \tilde{O}_{11} & \tilde{O}_{12} & \dots & \tilde{O}_{1n} \\ \tilde{O}_{21} & \tilde{O}_{23} & \dots & \tilde{O}_{2n} \\ \vdots & \vdots & \vdots & \vdots \\ \tilde{O}_{m1} & \tilde{O}_{m2} & \dots & \tilde{O}_{mn} \end{bmatrix}$$

Step 4: A normalized matrix of  $(\tilde{Z})$  (matrix 2) is calculated. Relation 5 is used to obtain the normalized matrix (Liu et al., 2008:21)



$$\tilde{Z} = k \times \tilde{O}$$

$$k = \min \left[ \frac{1}{\max_{1 \leq j \leq n} \sum_{j=1}^n |\tilde{O}_{ij}|}, \frac{1}{\max_{1 \leq j \leq n} \sum_{i=1}^n |\tilde{O}_{ij}|} \right]$$

$$\tilde{Z} = \begin{bmatrix} \tilde{Z}_{11} & \tilde{Z}_{12} & \dots & \tilde{Z}_{1n} \\ \tilde{Z}_{21} & \tilde{Z}_{23} & \dots & \tilde{Z}_{2n} \\ \vdots & \vdots & \vdots & \vdots \\ \tilde{Z}_{m1} & \tilde{Z}_{m2} & \dots & \tilde{Z}_{mn} \end{bmatrix}$$

Step 5: In this step, the matrix ( $\tilde{V}$ ) is calculated by relation 6 for any fuzzy limit of ( $L_{ij}^n, m_{ij}^n, u_{ij}^n$ ).

$$l_{ij}^n = \tilde{Z} \times (I - \tilde{Z}_l)^{-1}, m_{ij}^n = \tilde{Z}_m \times (I - \tilde{Z}_m)^{-1}, u_{ij}^n = \tilde{Z} \times (I - \tilde{Z}_u)^{-1}$$

Then, each of lower, middle, and upper limits of triangular fuzzy numbers are combined with each other and matrix 3 is formed.

$$\tilde{V} = \begin{bmatrix} \tilde{V}_{11} & \tilde{V}_{12} & \dots & \tilde{V}_{1n} \\ \tilde{V}_{21} & \tilde{V}_{23} & \dots & \tilde{V}_{2n} \\ \vdots & \vdots & \vdots & \vdots \\ \tilde{V}_{m1} & \tilde{V}_{m2} & \dots & \tilde{V}_{mn} \end{bmatrix}$$

Step 6: Each  $\tilde{V}_{ij}$  of matrix  $\tilde{V}$  is converted into a definite number using relation 7. Then, matrix V is created and factors are identified accordingly.

$$V = \frac{(l + 4m + u)}{6}$$

### 4.3. Analysis

By literature review and survey of 10 experts familiar with tourism and spirituality (Table 2), 9 factors were identified as those affecting Spiritual city tourism development. Table 3 shows the factors used in this research.

**Table 2. Demographic features of Panel members of Experts**

Education level	Masters	2
	Ph.D. student	4
	Ph.D.	4
Job position	Professor	3
	Manager	4
	Expert	3
Work experience	Less than 5 years	2
	5-10 years	5
	10-15 years	1
	More than 15 years	2

**Table 3. Factors affecting Spiritual city tourism development**

Row	Factors affecting Spiritual city tourism development
C1	Appropriate planning and management
C2	Training and education of human resources in the field of tourism
C3	Direct supervision of the government and institutions on those active in the field of tourism
C4	Presence of experts fluent in live languages of the world beside tourism attractions
C5	Participation of the private sector in the field of investment in regional tourism
C6	Attracting foreign investment for the development of Spiritual city tourism activities with contracts and special facilities
C7	Marketing, advertising, and introducing tourism attractions in national and international areas
C8	Culturalization of tourism development and promotion of tourist acceptance culture among city residents
C9	Paying attention to the resources that lead tourists to spirituality and high values.

In the fuzzy DEMATEL technique, enjoying the comments of experts, mutual influential and impressionable relations of elements are obtained in the form of a numerical score.

In this study, the effective score of each factor affecting Spiritual city tourism development (Table 3) is determined relatively regarding the comments of experts.

Table 4. The results of the integration of fuzzy DEMATEL questionnaires

	C1	C2	C3	C4	C5	C6	C7	C8	C9																		
C1	0.00	0.00	0.00	0.12	0.28	0.53	0.07	0.20	0.42	0.12	0.28	0.50	0.08	0.25	0.47	0.08	0.25	0.48	0.10	0.30	0.53	0.02	0.10	0.25	0.05	0.17	0.37
C2	0.05	0.20	0.42	0.00	0.00	0.00	0.00	0.12	0.28	0.07	0.20	0.38	0.07	0.15	0.32	0.07	0.15	0.32	0.03	0.20	0.43	0.05	0.17	0.30	0.03	0.08	0.23
C3	0.13	0.28	0.47	0.05	0.15	0.32	0.00	0.00	0.00	0.08	0.23	0.42	0.03	0.13	0.33	0.08	0.17	0.32	0.07	0.20	0.38	0.03	0.13	0.33	0.07	0.17	0.33
C4	0.02	0.10	0.30	0.12	0.30	0.53	0.03	0.18	0.35	0.00	0.00	0.00	0.07	0.15	0.35	0.03	0.17	0.35	0.07	0.18	0.35	0.05	0.17	0.33	0.03	0.17	0.37
C5	0.03	0.15	0.35	0.12	0.27	0.48	0.03	0.13	0.32	0.07	0.17	0.35	0.00	0.00	0.00	0.10	0.28	0.52	0.05	0.20	0.38	0.08	0.20	0.37	0.07	0.22	0.40
C6	0.05	0.13	0.27	0.05	0.17	0.37	0.03	0.10	0.25	0.03	0.18	0.33	0.07	0.20	0.43	0.00	0.00	0.00	0.07	0.17	0.37	0.08	0.25	0.45	0.05	0.18	0.40
C7	0.10	0.23	0.42	0.13	0.30	0.52	0.05	0.20	0.37	0.07	0.20	0.40	0.05	0.18	0.38	0.05	0.20	0.38	0.00	0.00	0.00	0.03	0.17	0.38	0.05	0.15	0.32
C8	0.08	0.22	0.45	0.07	0.18	0.40	0.05	0.17	0.35	0.03	0.17	0.37	0.05	0.18	0.42	0.05	0.17	0.33	0.07	0.22	0.42	0.00	0.00	0.00	0.03	0.10	0.23
C9	0.08	0.22	0.37	0.05	0.18	0.37	0.07	0.20	0.37	0.13	0.30	0.52	0.05	0.15	0.30	0.10	0.27	0.47	0.03	0.08	0.22	0.05	0.17	0.38	0.00	0.00	0.00

Source: Investigator calculations

Table 5. Normal direct communication matrix

	C1	C2	C3	C4	C5	C6	C7	C8	C9
C1	0.00	0.00	0.03	0.08	0.15	0.02	0.06	0.12	0.03
C2	0.01	0.06	0.12	0.00	0.00	0.03	0.08	0.02	0.06
C3	0.04	0.08	0.13	0.01	0.04	0.09	0.00	0.00	0.02
C4	0.00	0.03	0.08	0.15	0.01	0.05	0.10	0.00	0.02
C5	0.01	0.04	0.10	0.03	0.08	0.14	0.01	0.04	0.09
C6	0.01	0.04	0.08	0.01	0.05	0.10	0.01	0.03	0.07
C7	0.03	0.07	0.12	0.04	0.08	0.15	0.01	0.06	0.10
C8	0.02	0.06	0.13	0.02	0.05	0.11	0.01	0.05	0.12
C9	0.02	0.06	0.10	0.01	0.05	0.10	0.02	0.06	0.10

Source: Investigator calculations

Table 6. Complete communication matrix

	C1	C2	C3	C4	C5	C6	C7	C8	C9																		
C1	0.00	0.04	0.63	0.04	0.13	0.86	0.02	0.09	0.67	0.04	0.12	0.80	0.03	0.11	0.78	0.03	0.12	0.78	0.01	0.07	0.66	0.02	0.08	0.66			
C2	0.02	0.08	0.60	0.00	0.04	0.57	0.00	0.06	0.52	0.02	0.09	0.63	0.02	0.07	0.57	0.02	0.07	0.60	0.01	0.09	0.62	0.02	0.07	0.54	0.01	0.05	0.50
C3	0.04	0.11	0.65	0.02	0.09	0.70	0.00	0.03	0.48	0.03	0.10	0.67	0.01	0.07	0.61	0.03	0.08	0.64	0.02	0.09	0.64	0.01	0.07	0.58	0.02	0.08	0.56
C4	0.01	0.06	0.61	0.04	0.12	0.74	0.01	0.08	0.57	0.00	0.04	0.57	0.02	0.07	0.62	0.01	0.08	0.64	0.02	0.08	0.63	0.02	0.08	0.58	0.01	0.07	0.56
C5	0.01	0.08	0.66	0.04	0.12	0.78	0.01	0.07	0.59	0.02	0.09	0.70	0.00	0.04	0.57	0.03	0.12	0.72	0.02	0.09	0.68	0.03	0.09	0.63	0.02	0.09	0.61
C6	0.02	0.07	0.59	0.02	0.09	0.69	0.01	0.06	0.53	0.01	0.09	0.64	0.02	0.09	0.63	0.00	0.04	0.54	0.02	0.08	0.63	0.03	0.10	0.60	0.02	0.08	0.56
C7	0.03	0.10	0.68	0.04	0.13	0.79	0.02	0.09	0.61	0.02	0.10	0.71	0.02	0.09	0.67	0.02	0.10	0.69	0.00	0.04	0.59	0.01	0.08	0.63	0.02	0.07	0.59
C8	0.03	0.09	0.65	0.02	0.09	0.73	0.02	0.07	0.58	0.01	0.08	0.67	0.02	0.08	0.64	0.02	0.08	0.65	0.02	0.09	0.66	0.00	0.03	0.50	0.01	0.06	0.54
C9	0.03	0.10	0.63	0.02	0.10	0.72	0.02	0.09	0.58	0.04	0.12	0.70	0.02	0.08	0.61	0.03	0.11	0.68	0.01	0.06	0.61	0.02	0.08	0.60	0.00	0.03	0.48

Source: Investigator calculations

**Table7. De-fuzzy matrix**

	C1	C2	C3	C4	C5	C6	C7	C8	C9
C1	0.23	0.34	0.26	0.32	0.29	0.31	0.31	0.24	0.25
C2	0.23	0.21	0.19	0.25	0.22	0.23	0.24	0.21	0.19
C3	0.27	0.27	0.17	0.27	0.23	0.25	0.25	0.22	0.22
C4	0.23	0.30	0.22	0.20	0.24	0.24	0.25	0.22	0.22
C5	0.25	0.31	0.22	0.27	0.20	0.29	0.26	0.25	0.24
C6	0.23	0.27	0.20	0.25	0.24	0.19	0.24	0.24	0.22
C7	0.27	0.32	0.24	0.28	0.26	0.27	0.21	0.24	0.23
C8	0.26	0.28	0.22	0.26	0.25	0.25	0.26	0.18	0.20
C9	0.25	0.28	0.23	0.29	0.24	0.27	0.23	0.23	0.17

Source: Investigator calculations

**Table 8. Communication matrix**

	C1	C2	C3	C4	C5	C6	C7	C8	C9
C1	0	1	0	1	1	1	1	0	0
C2	0	0	0	0	0	0	0	0	0
C3	0	0	0	0	0	0	0	0	0
C4	0	1	0	0	0	0	0	0	0
C5	0	1	0	0	0	1	0	0	0
C6	0	0	0	0	0	0	0	0	0
C7	0	1	0	0	0	0	0	0	0
C8	0	0	0	0	0	0	0	0	0
C9	0	0	0	1	0	0	0	0	0

Source: Investigator calculations

**Table 9. The matrix of calculation of effective and effective factors affecting the Demand of Spiritual Tourism in Tehran**

	C1	C2	C3	C4	C5	C6	C7	C8	C9
<b>d</b>	2.56	1.96	2.14	2.11	2.30	2.08	2.30	2.16	2.19
<b>r</b>	2.21	2.57	1.96	2.38	2.17	2.30	2.25	2.04	1.93
<b>d+r</b>	4.77	4.53	4.10	4.49	4.47	4.39	4.56	4.19	4.11
<b>d-r</b>	0.35	-0.60	0.19	-0.26	0.12	-0.22	0.05	0.12	0.26

Source: Investigator calculations

All the values obtained for  $D + R$  and  $DR$  are fuzzy numbers whose  $D + R$  values are always positive and indicate the weight or importance of the agent in the system. Also,  $DR$ , if positive, is a definitive and otherwise is an effective determinant, which is referred to as the impact ratio in the system.

C1: Appropriate planning and management

C3: Direct supervision of the government and institutions on those active in the field of tourism

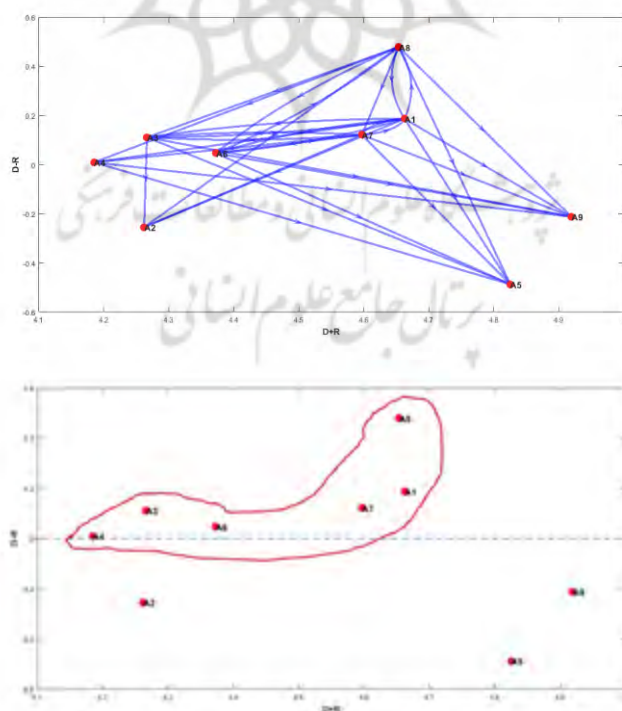
C4: Presence of experts fluent in live languages of the world beside tourism attractions

C6: Attracting foreign investment for the development of Spiritual city tourism activities with contracts and special facilities

C7: Marketing, advertising, and introducing tourism attractions in national and international areas

C8: Culturalization of tourism development and promotion of tourist acceptance culture among city residents

According to these results, the cause and effect network structure was obtained as follows:



**Figure 2. The cause and effect network**

Therefore, using the fuzzy DEMATEL method, influential factors affecting Spiritual city tourism development were detected as follows:

Appropriate planning and management, Direct supervision of the government and institutions on those active in the field of tourism, Presence of experts fluent in live languages of the world beside tourism attractions, Attracting foreign investment for the development of Spiritual city tourism activities with contracts and special facilities, Marketing, advertising and introducing tourism attractions in national and international areas, and Culturalization of tourism development and promotion of tourist acceptance culture among city residents.

Also, factors including Training and education of human resources in the field of tourism, Participation of private sector in the field of investment in regional tourism, and Paying attention to the resources that lead tourists to spirituality indirectly influence Spiritual city tourism development.

## **5. Conclusion**

Spiritual city tourism is one of the concepts and forms of sustainable development in which all available sources in rural regions are used. Such development has the least malicious effect or even lacks such effects. In this regard, the efficient promotion in regions, employment creation, the reform of income distribution, participation of local residents, and providence of proper methods to confirm beliefs and traditional values to modern conditions make urban areas (especially remote cities) benefit from increasing such income sources. In summary, the results of this study showed that among factors affecting Spiritual city tourism development the following ones are influential on Spiritual city tourism development: Appropriate planning and management, Direct supervision of the government and institutions on those active in the field of tourism, Presence of experts fluent in live languages of the world beside tourism attractions, Attracting foreign investment for the development of Spiritual city tourism activities with contracts and special facilities, Marketing, advertising and introducing tourism attractions in national and international areas, Culturalization of tourism development and promotion of tourist-acceptance culture among city residents. These factors directly influence the development of Spiritual city tourism and are required to be decision-making priorities in planning. Moreover, Training and education of human resources in the field of tourism, Participation of private sector in the field of investment in regional tourism, and Paying attention to the resources that lead tourists to spirituality and high values are factors effective in Spiritual

city tourism development that indirectly influence Spiritual city tourism development but are required to be taken into consideration.

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