

## **SOCIO-CULTURAL CRITERIA FOR COMPREHENSIVE APPROACH TOWARD PERFORMANCE-BASED DESIGN OF URBAN SPACES**

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### **ABSTRACT**

Nowadays Tourism is one of the most important strategic tools for economic development of each country, which has a direct impact on the increase of revenue, prosperity and development of different regions and contributes to improving the quality of each country's cultural, social and political relationships. It is significant to understand consideration of importance of the subject, the purpose of this research is to examine the role of the physical, functional, conceptual and environmental factors on the tourism environment and understanding of city metabolism in the framework of sustainable development for optimizing the quality of destinations, life style, attraction of tourism and Utilizing the environmental quality value system and making the city attractive. The method of this research is analytical-descriptive and survey. First, we achieved to the criteria of the quality by Literature Review, and then experts prioritized them. Subsequently, these components were scored according to the polling process. Using multiple criteria decision-making, which includes "DEMATEL" and "ANP" methods, the DEMATEL method, is used to visualize the structure of complicated causal relationships between criteria and obtain the influence level of these criteria. Moreover, these influence level values are adopted as the base of normalization super matrix for calculating ANP weights to obtain the relative importance. By the concept of ideal point, some important conclusions drawn from a practical application can be referred by practitioners that we evaluated and measured the most important criteria for coding the performance of urban spaces. On the one hand The results show that the factors of "symbolic ", "materials, and colors", "latent energy", "access and permeability ", "Energy consumption" ,are the most effective to enhance the quality of the environment .on the other hand "vitality ", "environmental comfort" , "sense of

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belonging", "security, "ecosystem stability "are the most affected factor by environment respectively.

**Keywords:** Socio-Cultural Criteria, Performance-Based Design, Urban Spaces, DEMATEL method

## INTRODUCTION

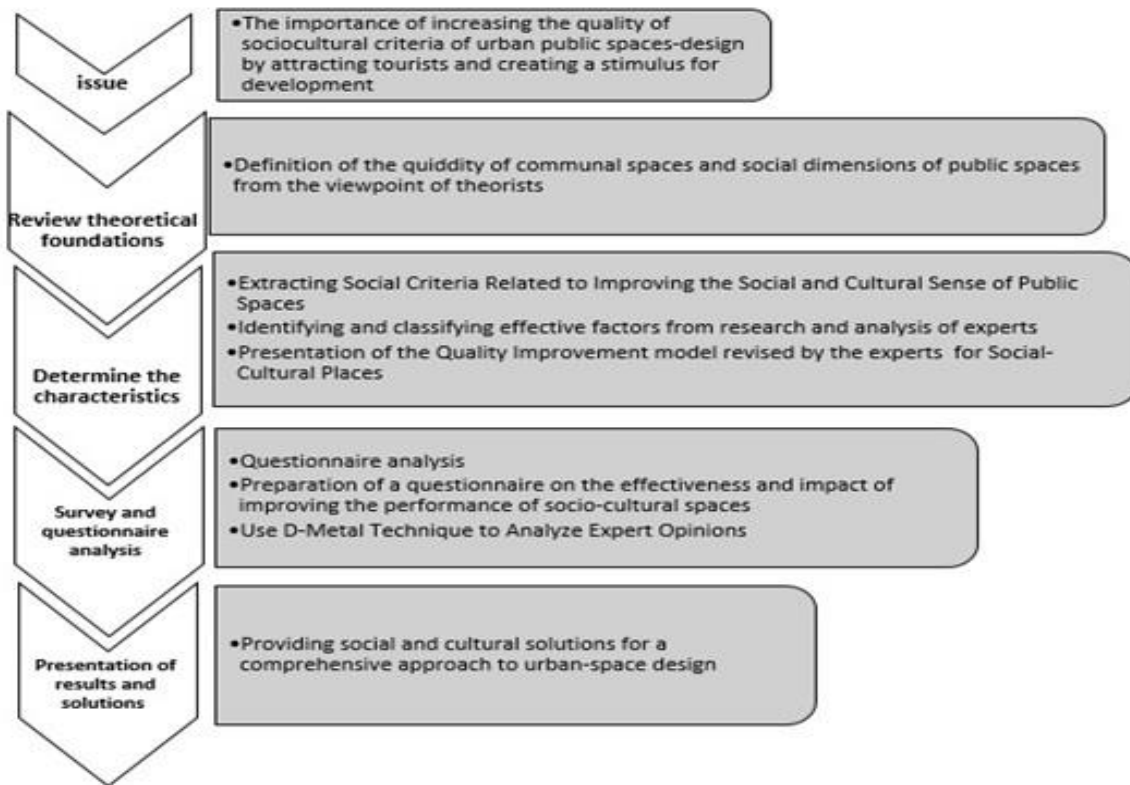
The More Healthy architecture and urban planning is one the most challenging issues in contemporary era. Nowadays human being jeopardizes his health because of living in the modern urban spaces, modern cities and especially modern residential buildings. Therefore it is obvious that we are in need of socio-behavioral approach in order to establish more healthy houses and cities(Mahdavejad:2011) cities are the most important and most complete form of settlement Human, the best and greatest effect of attitudes, values and conditions Social Self-Employed (Appelyard, 1979:451) rapid urbanization generates risks and opportunities for sustainable development. Urban policy and decision makers are challenged by the complexity of cities as social–ecological–technical systems. Consequently, there is an increasing need for collaborative knowledge development that supports a Whole-of-system view and transformational change at multiple scales (Webb: 2018). Sustainable development is today the most important concern for the tourism industry. Providing this new debate on sustainable tourism, coverage of places, concepts and case studies that provide a global perspective for a global issue also discusses the impact of tourism on local culture and the environment (McCool & Moissy: 2001). The concept of urban tourism has entered in the research since the 1980s and evaluation of sustainable development of countries too. As leisure was important for urban life and the number of urban tourists was increasing, urban tourism was an important issue. Became a sustainable local and urban development. Understanding urban tourism and the outcome of the life cycle of urban goals has complex methods for analyzing forms and functions. New research and methods for tourism and tourists in the urban environment are currently in rapid progress and are targeted by many surveys (Dindari, 2010). According to a research conducted by Ramley in the year2015, it is stated the democratic society, urban public spaces are for people to enjoy nature and provide gathering places for social events is to demonstrate of characteristic of the an urban landscape and real life scenarios stages, it is to improve the quality of urban environment ,promote people exchanges reminiscent the urban history and

culture as well as to arouse the peoples sense of identity and belonging to all and it play very important role. Contemporary urban public spaces and environment are facing a significant shift from the comprehensive range of political, economic, technological, social and cultural brought. Recognizing the important of the rule and function of urban public spaces. Sustainable design has a lot to do with society, economy and environment's principles, and these elements should be considered in design process. Social aspects of sustainability, is in need of community participation (Mahdavinejad: 2011). This study aims to develop a measurement framework that can be used to interpret and formulate aspects of the urban social and cultural life of citizens by interpreting the interactions between urban and environmental systems and between critical resources and its effects on the environment.

## **RESEARCH PROCESS**

This article is based on analytical-descriptive and survey method. The main purpose of this paper is to develop a special model of measurement that can be based on this, the Socio-Cultural dimensions of the urban spaces. In order to formulate this model, three main steps have been performed in the form of a regular process, the description of which is as figure 1. First, using library tools, the subject records have been investigated in the form of defining the concept of their collective space. Then, social dimensions of public spaces are presented from a theoretical point of view in various ways. In the following, after comparisons of individuals and resources on the social dimensions of the public space, criteria that are closer to the space, are derived from the extraction table and used to provide a quality improvement of urban spaces model.in continue, using this model, some of the examples of collective space the basis of deep field observations in the form of a case evaluation checklist Reviewed then they were prioritized by experts. Subsequently, these components were scored according to the polling process. Finally, the leading and lagging quality criterion on social spaces were evaluated in relation to the urban environment and each other, and based on these, solutions are proposed.

Figure 1. Research Process (authors)



### Research objectives

- To Organize the Urban Spaces Using the Adoption of cause and effect Criteria for Sustainable Development of Tourism Opportunity.
- Optimal use of urban spaces and the creation of sustainability and vitality in these spaces.
- Attracting tourists and capital by taking advantage of the value system of environmental quality, adding color of attractiveness and desirability to the location of the city and turning the abandoned space into an environment for the reception of visitors, tourists and capital
- Creating a sense of local community in urban areas and better understanding the existing dependencies between urban areas and developing unity and integration in metropolitan cities.
- Understanding physical, functional activity, conceptual and environmental urban spaces.

### The concept of public space and its social dimensions

According to Niksich research published in Uvod journal one of the definitions defines the open public urban space as a space amidst built structures, which is

accessible to all without limitations regardless of their conviction and social or economic status. Space so defined is continuous in the physical sense and flows uninterruptedly amidst the built structures. Physical continuity is clearly shown in the presentations of the morphological structure according to the Gestalt principle, in which the open public space is an unbroken form (a positive) spreading without interruption amidst individual objects (negatives). Khalighi in 2002 explained that The public space is defined in terms of socio-cultural perspective as a place for the creation and strengthening of external interfaces and relationships, interactions, changes and social encounters, and the place where different groups with different interests come together (Rafiean, 2005, 36). According to this definition, one of the important dimensions of such spaces is its social dimension. The social dimension of the public space refers to people and their activities for the creation, operation and management of these spaces (Mitchell, 1996, 128). In other words, it includes the concept of free access to the public and the provision of physical grounds for collective activities and social interactions (Madanipour, 2010, 89). According to the above definition, the most important aspect of social dimensions of public spaces is the occurrence of social interactions. Social interactions in the sense of dynamic action between two or more individuals (Latour, 1996, 229). Or the occurrence of collective activities in the public space of the city. This category of activities, according to Jan Gehl, is related to the presence of others and involves active engagements such as talking, greeting and listening to passive interactions such as watching people and listening to people's testimonies (Gehl, 2011). It should be noted that the main condition for the activation of collective activities, either actively or passively, is the existence of appropriate environmental conditions and the presence of other people who have been referred to the space for voluntary and necessary activities (Tang, 2012, 204). Therefore, it is necessary to pay attention to a set of criteria and indicators for measuring the occurrence of collective activities in one space, and it is necessary for a public environment supporting the social interactions to assess it. The meanings of social measures are all the great ones that are derived from the measurement of the relationship between people and space (Coles, 2001, 5). On the one hand here is the purpose of public spaces. On the other hand, it is a variable indicator used by the social criteria to assess conditions in relation to goals and objectives ([www.merriam-webster.com](http://www.merriam-webster.com)). After reviewing the theoretical foundations and mentioning some of the most important ones in the

table, after reviewing and reviewing the experts, the model for promoting the quality of the socio-cultural environment was presented in Fig. 2.

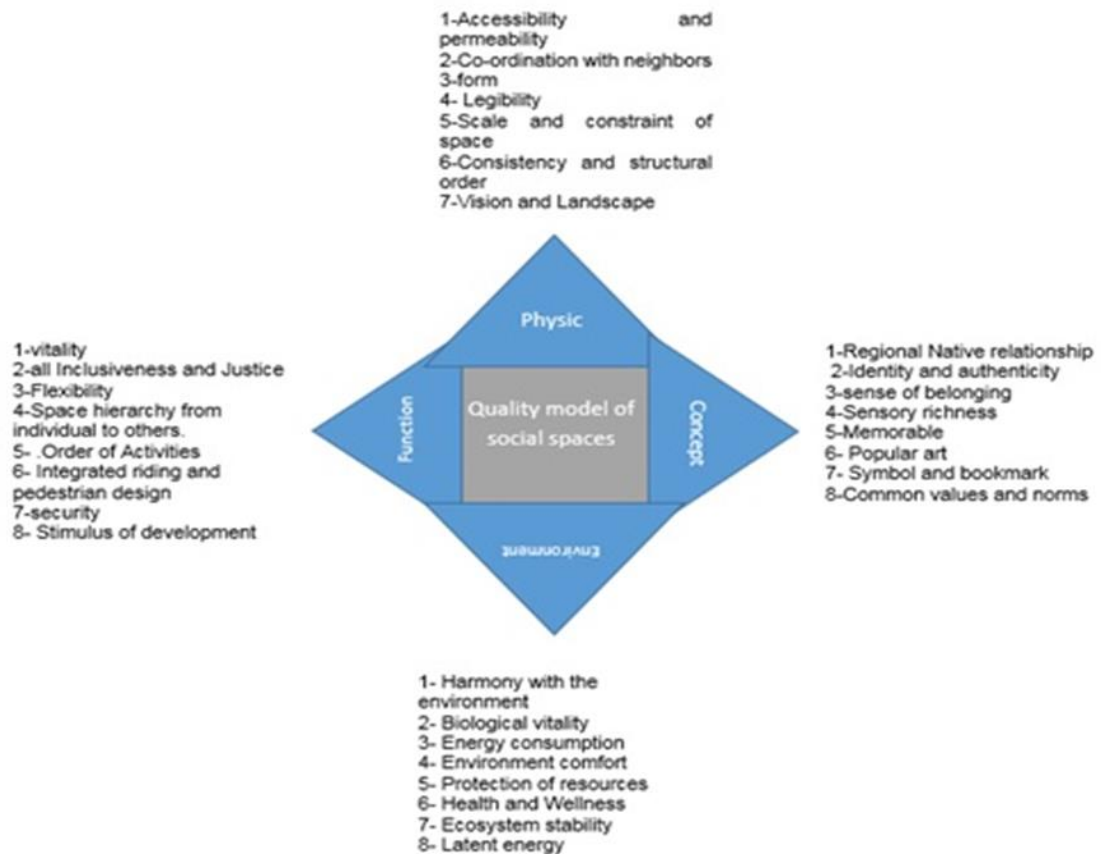
## DEMATEL FACTOR TECHNIQUES

After collecting the questionnaire from 14 experts and calculating the average of all their points, we calculated the amount of the effective and affected of the indicators in the below. In this regard, it should be noted that there are 32 sub-indicators in this study, the scores are reduced to a decimal point, but in the calculations performed by the Excel software, the scores are calculated correctly and accurately. As follows, it should be noted that with respect to the increase of sub-indices, instead of drawing the matrices of M, its derivatives are used in tables.

Table1- Indicators extracted from theoretical foundations(authors)

theorist	criteria
<b>Bentley, (1985)</b>	Permeability, diversity, readability, flexibility, visual fit, sensory richness, color accretion, energy consumption, cleanliness, maintenance of ecosystems
<b>Carmona,2003</b>	Appropriate access to public space, all-inclusiveness, space hardness and softness, mixing and density of functions, time management of space use
<b>Gehl,2011</b>	Occurrence of collective activity, participation, group in space and non-participation activities (sitting, seeing, eating)
<b>Tibbalds, (1989)</b>	Lessons from the past, complexity, scale, comfort, all categories of society, readability, flexibility, visual pleasure
<b>Haughton G. &amp; C. Hunter, 1994</b>	Major Democracy (Democracy), Permeability, Scale, Design, Engineering, Tools, Creativity, Flexibility, Participation of Users
<b>Jacobs, A &amp; D. Appleyard, 1987</b>	Vitality, identity and control; access to opportunities, imagination and happiness, originality and meaning, social life, and the environment for all
<b>Lynch, 1981</b>	Vitality, meaning, "(sense of compatibility), access, control and supervision"
<b>Project for public spaces (p.p.s),2001</b>	Diversity, Neighborhood, Partnership, Friendship, Supervision, Involvement, Storytelling, Relation, Readability, Walkability, Access, Attractiveness, Spirituality, History, Sitting, Green, Cleanliness, Security, Celebration, Sustainability, Liveliness
<b>Punter J. V. &amp; M. Carmona, 1997</b>	Access, security, visual quality, visual feature, attention to historical background, energy consumption, lighting and audio
<b>Goodey,1993</b>	Vitality, harmony, existence, diversity, scale, permeability, "personalization, readability, flexibility, location", "measured and controlled" change, "relationship," a kind of a "kind of order", the clarity of the equivalence of equilibrium,
<b>Trancik,1986</b>	Establishing communication, enclosure of spaces, edges, control of axes and perspectives, mating spaces inside and outside
<b>Coleman, 1987</b>	Historic conservation and urban restoration, design for hiking, vitality, litter and cultural environment, bed and natural environment, attention to the architectural values of the environment
<b>Montgomery,1998</b>	Economic activity, memory, readability, sensory experience, perception and acceptance, scale, density of sign permeation, vitality, presence of people, local traditions, hours of activity

Figure 2- Quality Improvement model for Social-Cultural Places (Authors)



(Table 2) .The Dematel Technique Questionnaire Based on Expert Opinion (authors)

	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
32	3.8	3.7	3.7	3.7	1	3.9	3.7	3.7	1.6	1.9	1.8	1.6	1.7	1.4	1.3	1.1	1.6	2.2	3.7	3.8	2.3	3.4	2.4	2.1	2.9	1	1.3	1.8	1.8	3.9	3.7	1	1
31	2.2	3.1	1.9	2.9	2.6	2.2	2.9	2.1	1.1	1.3	1.2	1.2	3.8	1.1	1.1	3.5	1.2	1.1	3.9	3.9	2.9	3.5	3.7	3.8	1	3.7	1.1	1.2	1	2.2	1	2.1	2
30	2.1	3.1	3.2	2.9	2.3	3.1	2.3	2.3	1.2	1.2	1.3	1.4	1.2	1.2	1.5	3.1	1.4	1.2	3.7	2.3	2.5	3.4	3.5	1	3.9	3.7	1.5	1.3	3.4	1	2.3	2.3	3
29	2.1	3.4	2.3	3.2	2.9	2.1	2.1	2.3	1.3	1.2	1.3	1.3	1.9	1.4	1.2	2.1	1.8	3.3	3.9	1.8	2.9	3.9	1	2.9	3.7	3.8	1.2	1.3	1	2.1	2.1	2.3	4
28	1	2.3	2.1	1.9	2.9	2.3	2.9	2.3	1.1	1.2	1.3	1.2	3.2	1.8	1.9	3.7	2.1	3.2	3.8	3.9	3.2	1	1.8	1.9	2.1	2.3	1.9	1	2.2	2.3	2.9	2.3	5
27	3.8	1	1.5	2.3	3.5	2.1	2.7	2.1	1.1	1.2	1.3	1.4	1.1	1.3	1.4	2.1	1.2	2.8	1.9	1.8	1	2.7	2.8	1.8	3.2	1.9	1	1.3	1.2	2.1	2.7	2.1	6
26	3.7	3.9	1	3.1	3.4	2.5	2.7	2.1	1.4	1.3	1.5	1.8	1.3	2.1	2.8	2.1	2.6	3.9	3.9	1	1.9	3.1	2.3	3.1	2.7	1	2.8	1.5	3.8	2.5	2.7	2.1	7
25	3.4	3.5	1.9	1	2.9	2.8	2.9	2.1	1.3	1.1	1.1	1.3	1.2	3.6	3.7	3.8	1.1	2.3	1	3.4	2.7	2.6	3.1	1.6	1	1.9	3.7	1.1	3.8	2.8	2.9	2.1	8
24	3.8	3.7	3.7	3.7	3.1	3.9	3.7	3.7	1.6	1.9	1.8	1.6	1.7	1.4	1.3	1.1	1.6	1	3.7	3.8	2.3	3.4	2.4	1	2.9	3.4	1.3	1.8	3.6	3.9	3.7	3.7	9
23	3.7	3.4	3.6	3.7	3.8	3.1	3.8	3.7	1.3	1.5	1.4	1.3	1.6	1.8	3.4	3.2	1	1.9	2.4	2.2	2.2	3.3	1	2.3	2.3	2.9	3.4	1.4	3.8	1	3.8	3.7	10
22	2.8	3.9	3.8	3.7	3.5	3.4	3.4	3.9	1.2	1.1	1.2	1.3	1.4	1.3	1.3	1	1.6	2.9	3.4	1.2	1.3	1	1.5	1.3	1.4	1.2	1.3	1.2	2.1	3.4	1	3.9	11
21	1.1	1.3	1.2	1.2	3.8	3.7	3.9	3.4	1.3	1.4	1.5	3.9	3.8	1.2	1	1.4	1.5	2.1	3.7	3.8	1	2.1	1.5	1.4	1.3	1.2	1	1.5	3.4	3.7	3.9	1	12
20	1.3	1.9	1.8	2.1	1.3	1.1	1.2	3.8	3.2	1.5	1.4	3.9	3.7	2.3	1.2	1.3	1.4	3.9	2.9	1	3.9	2.1	1.6	1.3	1.1	1.6	1.2	1.4	1.7	1.1	1.2	3.8	13
19	1.4	1.2	3.9	1.5	1.4	1.3	1.2	2.3	3.9	2.3	3.8	3.9	2.5	2.1	3.9	2.1	3.9	2.3	1	3.6	3.7	3.6	1.2	1.1	1.2	1.3	3.9	3.8	1.3	1.3	1.2	2.3	14
18	1.3	1.6	1.5	2.3	1.3	1.4	1.3	1.5	3.9	3.8	2.5	2.4	3.5	3.8	2.3	2.3	3.9	1	2.1	3.8	3.9	2.1	1.9	1.1	1.2	1.3	2.3	1	1.2	1.4	1.3	1.5	15
17	1.4	1.4	1.3	2.3	1.1	1.3	1.1	1.2	3.9	3.8	2.3	3.1	3.9	2.1	3.3	3.9	1	2.1	2.9	2.1	3.9	2.1	2.7	1.5	1.3	1.2	3.3	1	3.7	1.3	1.1	1.2	16
16	1.9	2.1	2.4	1.4	1.4	1.3	2.3	1.1	3.8	2.5	3.9	3.9	2.9	3.9	3.5	1	1.9	2.7	2.1	3.4	1.8	3.4	2.4	1.2	3.8	3.7	3.5	3.9	3.1	1.3	2.3	1.1	17
15	3.7	1.3	2.1	3.8	1.2	1.3	1.1	1.2	2.3	3.9	3.7	3.7	3.9	1.5	1	2.1	3.8	3.4	3.6	1.7	1.5	1.3	2.4	1.5	1.4	1.6	3.3	3.7	1.9	1.3	1.1	1.2	18
14	3.9	1.2	2.1	3.7	1.2	1.4	1.3	2.5	3.6	3.5	3.9	3.7	3.9	1	1.5	3.5	3.3	3.4	2.3	1.3	1.2	1.5	3.1	1.4	1.5	1.6	1	3.9	1	1.4	1.3	1	19
13	3.7	1.2	2.4	3.8	1.4	1.3	2.3	1.3	3.7	3.9	3.9	3.8	1	3.9	2.4	1.8	3.1	3.4	2.4	1.2	1.3	1.2	3.1	1.9	1.2	1.8	2.4	3.9	3.9	1.3	1	1.3	20
12	2.4	1.3	2.6	1.3	1.3	2.3	1.3	1.3	3.9	3.9	1.9	1	3.9	3.4	3.5	2.4	2.1	2.3	3.4	3.7	2.7	2.7	3.2	1.5	1.4	1.3	3.5	1.9	3.9	1	1.3	1.3	21
11	3.1	1.3	3.4	1.3	1	1.5	1.5	1.2	3.8	3.7	1	3.7	3.1	2.1	3.8	2.4	3.4	2.3	3.9	3.1	1.9	3.1	3.2	1.3	1.8	1.7	3.8	3.9	3.8	1.5	1.5	1.2	22
10	2.1	3.9	2.3	1	1.1	1.2	1.3	1.2	3.9	1	3.8	3.9	2.3	2.9	3.9	3.9	3.4	3.8	2.8	1.9	3.2	3.2	3.1	1.3	1.5	1.6	3.9	3.8	3.7	1.2	1.3	1.2	23
9	2.6	1.9	1	3.1	1.1	1.2	1.1	1.3	1	3.7	3.7	3.2	1.5	3.9	3.4	1.8	3.9	3.7	2.3	2.7	3.4	2.8	3.3	1.5	1.3	1.1	3.4	3.7	1.1	1.2	1.1	1.3	24
8	2.8	1	3.2	3.9	1.3	1.1	1.2	1	3.8	3.7	3.9	3.7	3.9	2.3	3.9	3.8	3.1	2.1	2.3	3.9	1	3.8	3.7	3.8	3.8	3.2	3.9	3.9	1.3	1.1	1.2	1.3	25
7	1	3.5	2.3	3.3	1.4	1.3	1	1.3	1.8	3.9	3.8	1.6	3.4	2.3	3.2	3.9	3.9	3.9	3.7	3.9	3.7	1	3.7	3.8	2.8	3.8	3.2	3.8	3.4	1.3	1.2	1.3	26
6	3.8	3.7	3.7	3.7	2.3	1	3.7	3.7	1.6	1.9	1.8	1.6	1.7	1.4	1.3	1.1	1.6	1	3.7	3.8	1.2	1.3	1.1	1.2	1	3.9	1.3	1.8	3.9	3.9	3.7	3.7	27
5	2.3	2.5	3.5	3.8	1	2.3	3.9	3.8	2.1	3.8	3.9	2.1	1.9	1.1	1.1	1.3	1.2	1.2	3.8	3.7	3.9	1	1.3	1.4	1.5	1.3	1.1	3.9	1.7	2.3	3.9	3.8	28
4	2.5	1	3.9	1	3.3	3.9	1.9	2.1	2.9	2.1	3.9	2.1	2.7	1.5	1.3	1.9	1.8	2.1	1.3	1.1	1.2	3.8	1	1.5	1.4	1.5	1.3	3.9	1.6	3.9	1.9	2.1	29
3	3.9	3.9	1	3.9	3.5	3.6	1.9	2.7	2.1	3.4	1.8	3.4	2.4	1.2	1.4	1.2	3.9	1.5	1.4	1.3	1.2	2.3	3.9	1	3.8	3.8	1.4	1.8	1.1	3.6	1.9	2.7	30
2	3.4	1	1.9	1	2.9	2.8	2.9	2.1	1.3	1.1	1.1	1.3	1.2	3.6	3.7	3.8	1.1	2.3	1	3.4	2.7	2.6	3.1	1.6	2.9	1.9	3.7	1.1	3.2	2.8	2.9	2.1	31
1	1	3.7	3.7	3.7	1	3.9	3.7	3.7	1.6	1.9	1.8	1.6	1.7	1.4	1.3	1.1	1.6	1	3.7	3.8	2.3	3.4	2.4	2.1	2.9	3.4	1.3	1.8	3.8	3.9	3.7	3.7	32

The relationships shown in the set-up graph are shown as a matrix, which, due to the large number of sub-indicators, is displayed in the table.

$$M = \alpha * \text{initial matrix}$$

$$\alpha = \frac{1}{87.9} = 0.01138$$

After calculating the value of  $\alpha$ , multiplying it in all numbers of the matrix  $M^{\wedge}$  (initial matrix) to obtain the matrix  $M$ . Further, it is necessary to calculate the strength of the direct relations, for this purpose We attempt to calculate the relative intensity of the existing direct and indirect sub-indices from the relation  $M(1-M)^{-1}$ . In this case, the sum of each row determines the matrix of the values of  $R$  and the sum of Each column specifies the  $J$  values for that index. (Table 3) After performing the above steps and determining the extent of the relative intensity of the existing direct and indirect relationships of sub-indices, we calculate the relation  $M^2 (1-M)^{-1}$  to calculate the impact and impact of each of the sub-indices. To this end, we obtain the values of  $R$ ,  $J$ ,  $R + J$  and  $R-J$ .

In table 4, the arrangement of column elements ( $R$ ) shows the hierarchy of intrusive elements, and the arrangement of column elements ( $J$ ) represents the hierarchy of intrusive elements. The real space of each element in the final hierarchy is represented by the columns ( $R-J$ ) and ( $R + J$ ), so that ( $R-J$ ) shows the position of the element (along width axis), and this position is definitely a penetration and effective if it is positive ( $R-J$ ) and if they are negative, they will definitely be affected. ( $R + J$ ) represents the sum of the intensity of an element (along long axis), both effective and affected. In table 4, the arrangement of column elements ( $R$ ) shows the hierarchy of intrusive elements, and the arrangement of column elements ( $J$ ) represents the hierarchy of intrusive elements. The real space of each element in the final hierarchy is represented by the columns ( $R-J$ ) and ( $R + J$ ), so that ( $R-J$ ) shows the position of the element (along width axis), and this position is definitely a penetration and effective if it is positive ( $R-J$ ) and if they are negative, they will definitely be affected. ( $R + J$ ) represents the sum of the intensity of an element (along long axis), both effective and affected.

Table 3. the relative severity of the direct and indirect relationships between the indices on each other (authors)



(R+J)	(R-J)	J	R	The relative severity of the direct and indirect relations
-1.86063	-0.93371	-0.46346	-1.39717	Health and sanitary
-3.39668	-0.50046	-1.44811	-1.94857	Biological vitality
4.79554	1.49452	1.65051	3.14503	Regional native culture
10.96378	1.817844	4.572968	6.390812	Sense of belonging
-2.06874	-0.16454	-0.9521	-1.11664	integrated design for riding and pedestrians
2.062696	-1.41222	1.737456	0.32524	Identity and originality
3.920961	1.076641	1.42216	2.498801	Conservation of resources
0.046384	-3.12643	1.586408	-1.54002	Space hierarchy from person to public
-5.5485	7.525925	-6.53721	0.988715	Vision
-5.61769	-0.72853	-2.44458	-3.17311	Material and colors
-1.78798	-0.07026	-0.85886	-0.92912	popular art
-0.32089	0.110307	-0.2156	-0.10529	Flexibility
-0.17264	-0.22647	0.026912	-0.19956	All-inclusiveness and justice
-7.32501	0.978968	-4.15199	-3.17302	Energy lies
-7.01885	-6.12655	-0.44615	-6.5727	Eligibility
0.500591	0.079795	0.210398	0.290193	Development stimulus
-6.61867	-3.77967	-1.4195	-5.19917	Continuity and structural order
6.219578	4.994802	0.612388	5.60719	Sensory richness
-8.26199	-10.6342	1.186095	-9.44809	Order of Activities
4.148162	4.907742	-0.37979	4.527952	Security
-26.8494	-6.14437	-10.3525	-16.4969	Symbol and sign
3.064144	6.923104	-1.92948	4.993624	Enclosure of space
6.479834	5.52989	0.474972	6.004862	Accessibility and permeability
-12.2247	-13.2951	0.535229	-12.7599	Values and norms of the customer
3.713917	6.492577	-1.38933	5.103247	Ecosystem stability
-1.08866	-2.31153	0.611434	-1.70009	Form
-7.02408	-8.69634	0.83613	-7.86021	harmony with the environment



-0.5287	0.16334	-0.34602	-0.18268	Vision and land scape
0.261786	0.501186	-0.1197	0.381486	Material materials and colors
-0.05578	0.04466	-0.05022	-0.00556	popular art
-0.00341	0.023407	-0.01341	0.009997	Flexibility
-0.02761	-0.00887	-0.00937	-0.01824	All-inclusiveness and justice
-0.28565	0.23635	-0.261	-0.02465	Latent energy
-0.02544	0.0137	-0.01957	-0.00587	Eligibility
-0.09252	-0.15248	0.029979	-0.1225	Development stimulus
-0.02839	0.044893	-0.03664	0.008253	Continuity and structural order
-0.01122	-0.07738	0.033084	-0.0443	Sensory richness
0.179286	0.060722	0.059282	0.120004	Order of Activities
-0.22993	-0.18165	-0.02414	-0.20579	Security
-0.47317	0.655973	-0.56457	0.091403	Symbol and sign
-0.23194	0.00336	-0.11765	-0.11429	Enclosure of space
0.209211	0.172135	0.018538	0.190673	Accessibility and permeability
0.124035	0.072385	0.025825	0.09821	Values and norms of the customer
-0.30808	-0.16768	-0.0702	-0.23788	Ecosystem stability
0.173101	0.091097	0.041002	0.132099	Form
-0.11623	-0.12889	0.006334	-0.12256	harmony with the environment
-0.20169	-0.36061	0.079459	-0.28115	Environmental comfort
-0.08065	-0.00503	-0.03781	-0.04284	Coordination with neighbors
-0.15585	-0.08543	-0.03521	-0.12064	Memorable
-0.5805	-0.50748	-0.03651	-0.54399	Vitality
0.023839	0.170699	-0.07343	0.097269	energy consumption

## CONCLUSION

Table 6 Progenies from the review and determination of effective and effective criteria (authors)

Affected factors			Effective factors		
Weights	factor	N	Weights	factor	N
-0.50748	Vitality	1	0.655973	Symbol and sign	1
-0.36061	Environmental comfort	2	0.501186	Material materials and colors	2
-0.27754	Sense of belonging	3	0.23635	Latent Energy	3

-0.18165	Security	4	0.172135	Accessibility and permeability	4
-0.16768	Ecosystem stability	5	0.170699	energy consumption	5
-0.16141	Regional native bindings	6	0.16334	vision and landscape	6
-0.15248	Development stimulus	7	0.096498	integrated design for riding and pedestrians	7
-0.12889	harmony with the environment	8	0.091214	Biological vitality	8
-0.10645	Identity and originality	9	0.091097	Form	9
-0.08543	Memorable	10	0.072385	Values and norms of the customer	10
-0.08041	Health	11	0.060722	Order of Activities	11
-0.07889	Conservation of resources	12	0.044893	Continuity and structural order	12
-0.07738	Sensory richness	13	0.04466	Popular art	13
-0.06141	Space hierarchy from person to public	14	0.023407	flexibility	14
-0.00887	All-inclusiveness and justice	15	0.0137	Eligibility	15
-0.00503	Coordination with neighbors	16	0.00336	Enclosure of space	16

The quality of the built environment in terms of the choices made by architects during the design process has a significant impact on human health and the surrounding environment of the building. As a systematic process in forming the physical environment via the use of natural resources, architecture is a key factor in the preservation or destruction of the environment and human health (Mohtashami:2016). Furthermore, Sustainable cities can be considered as the basis for achieving sustainability goals that have social prosperity and rehabilitation of citizenship rights and socio-environmental justice. In other words, Sustainable design and sustainable urban planning is in need of social sustainability (Mahdavinejad:2011). What we have done in this study was the determination of the qualities of urban social-cultural spaces that are admitted to

Improvement of performance and sustainable urban development. The quality of the social-cultural environment is a topic that either is affected by the environment.society and culture or be effective by them.After calculating the effectives and affected of the factors through the Dematel technique, the weights of the effective and affected factors separated and based on their priority and weights, the results described in the following table.

Based on the results of the Dematel technique and the identification of the effective and affected factors described in Table 7, the first eight effective factors include symbolic (materials and colors), latent energy, access and permeability Energy consumption, visibility and landscape, integrated design for riding and pedestrians and biological vitality are the most rewarding factors, respectively. Based on the results of the Dematel technique, the following diagram is depicted. Those under the x-axis are affected by the factors and those that are high on the X-axis. In the following, for eight effective and influential factors, it has been proposed to provide effective and affected reasons as well as strategies to improve them.

Figure 3 Effective and affected Factors Based on the results of the Dematel Technique (authors)

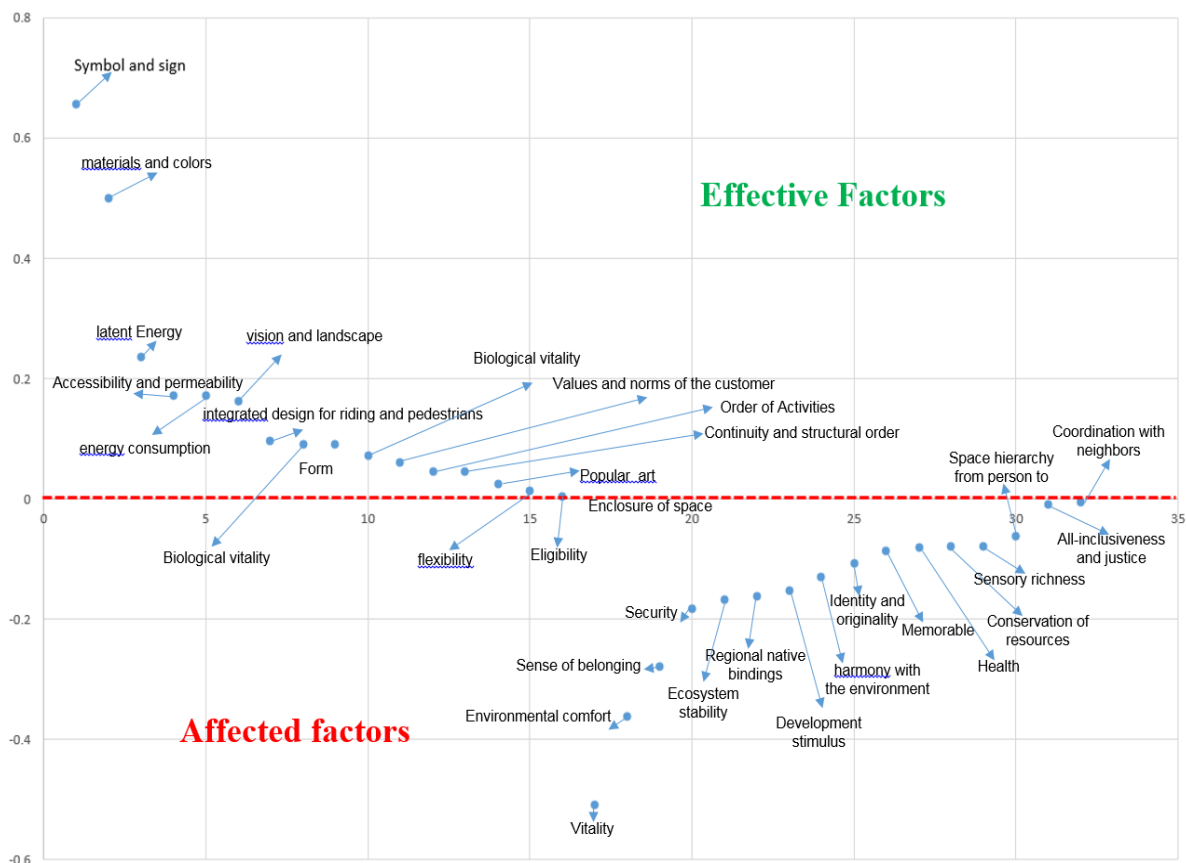


Table 7: The reasons for the effectiveness of the factors and the ways to improve the performance of socio-cultural spaces (authors)

Proposed Strategies for Improving the Performance of Socio-Cultural Space	The cause of affected	factor	N
1-The mixing of the socio-cultural space with cafes ,restaurants, libraries, commercial and entertainment (parks and cinemas) 2-Create spaces for children 3-Use trees and shade spaces and appropriate furniture	1-Affected due to the need to carry out a series of design processes to create vitality	Vitality	1
1-Control of temperature, humidity, average temperature of the radiation by natural ventilation and taking into account the cost of clothing and the amount of activity 2-Use proper sound insulation 3-Create the right landscape and vision	1-Influence of techniques and design necessary for control and desirability of factors such as sound and temperature	Environmental comfort	2
1- Creating cuffs. Resorts or galleries and ... in harmony with the natural and social-cultural environment for handicaps and venues for friendly hangouts.	1-Influence of effective factors in the dominant culture of the region	Sense of belonging	3
1-Fit furniture 2-Increase permeability 3-Space reputation 4-Proper social monitoring 5-Understandable identity 6-create spaces with the time of day-to-day use to monitor and control people's activities 7-Designing places to guard the premises and buildings	1-Impact of a series of executive processes in order to control and monitor the benefits and incomes	Security	4

<p>8-Creating multipurpose open spaces for the presence of women, children and the elderly in space</p> <p>9-The quality of the flooring, on the pedestrian path Quality of lighting and lighting There are routes,</p> <p>10-emergency exits, or quick access to local help vehicles</p>			
<p>1-Coping with drought before drought and beginning of low rainfall</p> <p>2-Use of empirical and indigenous knowledge and promotion of ecosystems and drought management.</p>	<p>1-Impact of the need to manage and use systematic mechanisms for overlapping the surrounding ecosystem environment and ecosystem sustainability</p>	<p>Ecosystem stability</p>	<p>5</p>
<p>1-People's participation</p> <p>2-Natural constructivism</p> <p>3-Natural modeling</p> <p>4-Natural absolutism</p> <p>5-Attention to the native culture of the region</p>	<p>1-Affected by doing undergraduate work to identify effective factors in enhancing factors</p>	<p>Regional native relationship</p>	<p>6</p>
<p>1-Establishing business spaces such as shops and restaurants. Galls and nightlife areas to attract tourism.</p> <p>2-The construction of various venues for displaying several films and shows on a daily basis</p> <p>3-The motives of trade and investment in the region</p> <p>4-Design of quality public landscapes</p>	<p>1-Affected by adopting a proper policy mix for the proper management of texture synchronization factors in terms of employment rate for socio-cultural development</p>	<p>Development stimulus</p>	<p>7</p>

1-An urban location be combined with the environment without interruption , not in order to protect the field, but to promote it	1-Affected from clever design to match the surrounding environment and texture	harmony with the environment	8
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Table 8: The reasons for the affected of the factors and the ways to improve the performance of socio-cultural spaces (authors)

Proposed Strategies for Improving the Performance of effective factor in Socio-Cultural Space	The cause of effective	Factor	N
The design is supposed to be beyond the scope of its own, and its perception is beyond the scope of the existing field, which in turn creates for itself.	1-Expanding the culture of urbanization 2-The Importance of Symbols on the Branding of Places 3-The Importance of Symbols and Elements in International Culture and its Assimilation on the Creation of Identity by Symbol and Sign	Symbol and sign	1
1-Use of building materials such as soil and external shell cover with plants and grass to control the quality of heating, cooling the building and to create harmony with the environment. 2-use of smart materials can have their suggested roles when extensively be welcomed by the professional activists in the field of	1-The use of vernacular materials affects compliance with environmental conditions and culture 2-It affects the beauty and the level of socio-cultural acceptance	Material and colors	2



construction industry(Mahdavinejad:2011)			
<p>1-Design for a long time, environmentally adaptable, durable materials with minimal repair</p> <p>2-Ensure materials that can easily separate. (The connection is very important).</p> <p>3-Rehabilitation and renovation instead of destruction or expansion</p> <p>4-Ensuring the health of the materials that used to destroy existing buildings. Also, the materials that Consumed and recycled.</p> <p>5-Use of materials derived from local resources that can include materials that damaged during normal use.</p>	<p>1-The direct effect on the expense of transportation of materials and equipment to the site, the use of recycled materials for damaged buildings and ...</p>	Latent energy	3
<p>1-Extension of passages and within-area accesses</p> <p>2-Attention to the proximity of the socio-cultural space to the public transport network and highways</p>	<p>1-Anyway, the more close to Urban transport lines the more impact on the site's permeability</p>	Accessibility	4
<p>1-Conduct of energy management plans in office buildings, hospitals, schools and commercial complexes.</p> <p>2-Promote the insulation of exterior walls of buildings and the use of a double glazed window.</p>	<p>1-the more Saving energy the more effect on the cost reduction</p> <p>2-help the greening of the architecture</p>	energy consumption	5

<p>3-Standardization of building components and components.</p> <p>4-Development of general and specialized education for energy management in the country's industries.</p>			
<p>1-Dragging the Void to the walls of the building, this allows you to see the natural scenery and outdoors.</p>	<p>1-Direct tire on the ability of the visibility and attractiveness of the city</p>	<p>Vision and land escape</p>	<p>6</p>
<p>1-Separation of riding paths and embedding space among active buildings to enhance safety and space Designing specific routes for pedestrians and cavalry and their separation in the collective space (uncovered)</p>	<p>1-Impact on the management and layout of parking lots and cars in major cities</p> <p>2-Effective on providing calm, security and consumer satisfaction</p>	<p>integrated Design for riding and pedestrian</p>	<p>7</p>
<p>1-Protecting habitats and protecting wild animals, plants, fungi and microorganisms.</p> <p>2- Ensuring the sustainable use of wild and farmed species and their genetic diversity.</p> <p>3-Safeguarding access to the world's genetic resources, ensuring the equitable distribution of benefits resulting from the use of such genetic resources, and thereby improving the development opportunities of poorer countries in particular, which are often Rich in biodiversity (www.bfn.de).</p>	<p>1-The impact of potential factors on the site, such as vegetation, river and mountain vista on the quality of the site</p>	<p>Biological Diversity</p>	<p>8</p>

## REFERENCES

Appleyard, D. (1979). The Environmental Social, Symbol: Journal of American Planning Association, 45 (2), 143-153.

Appleyard, (1986), "Toward an Urban Design Manifesto" JAPA, 12(6): 663-630.

Bentley, (1986) I. et al., "Responsive Environments: A Manual for Designers", London: The Architectural

Carmona, matthew, heath, time, Oc. Tanner, Tiesdell, Steve (2003): public places, urban spaces, Architectural press, Oxford.

Coleman J. (1987). *Opportunities for Invasion in Urban Design Education*, Australian Planner.

Dinari, Ahmad (2010), Urban Tourism in Iran and the World, Second Edition, Mashhad: Vocabulary of Wisdom Publications

Gehl, Jan (2011), *Life Between Buildings (6th edition)*, Washington, D.C.: Island Press.

Haughton G. & C. Hunter, (1994) "Sustainable Cities", London, Jessica Kingsley, Jacobs, A & D.

Latour, Bruno (1996), *On Interobjectivity*, University of California, San Diego: Mind, Culture and Activity, volume 3, 228 - 245.

Lynch, K, (1981), "A Theory of Good City Form", Cambridge, Mass: MIT Press.

Matej NIKI,(2006), the dimensions of urban public space in the user's mental image, vol. 17, No. 1-2/06

McCool & Moissy: (2001), Tourism, Recreation and Sustainability: Linking Culture and the Environment (Cabi) , May 4

Mahdavinejad, M., Bemanian, M., Abolvardi, G., & Khaksar, N. (2011). The Strategies of Outspreading Smart Materials in Building Construction Industry in Developing Countries; Case Study: Iran. In *International Conference on Intelligent Building and Management Proc. of CSIT* (Vol. 5, pp. 1-8).

Mohammadjavad Mahdavinejad and Sima Mansoori, (2011), Architectural Design Criteria of Socio-Behavioral Approach toward Healthy Model, Asia Pacific International Conference on Environment-Behaviour Studies, Salamis Bay Conti Resort Hotel, Famagusta, North Cyprus, 7-9 December.

Mohammadjavad Mahdavinejad , Masoome Amini (2011), Public participation for sustainable urban planning In Case of Iran, 2011 International

Conference on Green Buildings and Sustainable Cities, *Procedia Engineering* 21 (2011) 405 – 413

Mahdavinejad, M., & Abedi, M. (2011). Community-oriented landscape design for sustainability in architecture and planning. *Procedia Engineering*, 21, 337-344.

Mahdavinejad, M., & Amini, M. (2011). Public participation for sustainable urban planning in case of Iran. *Procedia engineering*, 21, 405-413.

Mahdavinejad, M., Zia, A., Larki, A. N., Ghanavati, S., & Elmi, N. (2014). Dilemma of green and pseudo green architecture based on LEED norms in case of developing countries. *International journal of sustainable built environment*, 3(2), 235-246.

Mahdavinejad, M., Shamsirband, M., Pilbala, N., & Yari, F. (2012). Socio-cultural approach to create an educative city case: Tehran-Iran. *Procedia-Social and Behavioral Sciences*, 51, 943-947.

Mahdavinejad, M., Ghanavati, S., Elmi, N., Iarki, A. N., & Zia, A. (2014). Recombinant Materials and Contemporary Energy Efficient Architecture. *Advanced Materials Research*, 936.

Mahdavinejad, M., Bahtooei, R., Hosseinikia, S. M., Bagheri, M., Motlagh, A. A., & Farhat, F. (2014). Aesthetics and Architectural Education and Learning Process. *Procedia-Social and Behavioral Sciences*, 116, 4443-4448.

Mahdavinejad, M., Shamsirband, M., Ebrahimi, M., & Pilbala, N. (2012). Fundamentals of Creation of Socio-Cultural Interaction with Particular Reference to Educating City Theory in Case of Iran, Tehran. *Journal of Advanced Social Research Vol*, 2(6), 280-296.

Mahdavinejad, M., & Mashayekhi, M. (2011). Principles of the Socio-Cultural Mosque Design Based on Socio-Cultural Approach.

Mahdavinejad, M. J., Sadraie, A., & Sadraie, G. (2014). Social Sustainability of High-Rise Buildings. *Journal of Social Economics Research*, 1(2), 9-19.

Mahdavinejad, M., & Naghani, N. (2011). Expression of Motion Concept in Contemporary Architecture of Iran.

Mahdavinejad, M., Ghasempourabadi, M., Mirzaei, F., & Asgari, A. Usage of Climatic Potentials in Green Urban Design (Case: Rearrangement of Shoushtar Touristic Pathway).

Mohtashami, N., Mahdavinejad, M., & Bemanian, M. (2016). Contribution of City Prosperity to Decisions on Healthy Building Design: A case study of Tehran. *Frontiers of Architectural Research*, 5(3), 319-331.

Montgomery, j,(1998)making a city: urbanity ,vitality and urban design ,journal of urban design ,Vo.13 ,No 1.

Negar Mohtashami, Mohammadjavad Mahdavinejad, Mohammadreza Bemanian (2016) Contribution of City Prosperity to Decisions on Healthy Building Design: A case study of Tehran ,KeAi, Volume 5, Issue 3, September 2016, P 319-331

Nina Khaliqi, Mohammad Reza Pourjafar, Mohammad Reza Bomanian, (2002), Measurement of social dimensions of space of stations Metro Terminal \* Case Study: Shahid Soltani Metro Terminal Terminal Karaj, Fine Arts - Architecture & Urban Development Volume 17 Issue 3.

Rafiean, Mojtaba and Mahsa Sifani (2005), Urban public space Qualitative Review and Evaluation, Department of Fine Arts, No. 23, pp. 35- 42.

Robert Webb, Xuemei Bai, Mark Stafford Smith,(2018-2017), Sustainable urban systems: Co-design and framing for transformation,KVA, 47:57–77

Tang ,Hoay Nee, and Tareef Hayat Khan (2012), Revisiting Strategies to enhance Social Interaction in Urban Public Spaces in the context of Malaysia, *British Journal of Arts and Social Sciences*, pp198-212.

Tibbalds, F. (1989), Planning and Urban Design:A New Agenda", *The Planner*, ,17(7):7.

Trancik, R,(1986). "Finding Lost Space: Theory of Urban Design", New York: Van Nostrand Reinhold

[www.pps.org/articles/whatisplacemaking](http://www.pps.org/articles/whatisplacemaking): 90/11/18.

[www.bfn.de](http://www.bfn.de)

[www.merriam-webster.com](http://www.merriam-webster.com)