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Identifying the Effect of Behavioral and Functional Components of Urban Management on Improving Urban livability (Case Study: Ahvaz Metropolis)

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Abstract

Background: *According to many problems in contemporary cities, the emphasis is on new approaches and approaches to urban development and the creation of a favorable link between the urban environment and social life through the enhancement of the components of urban livability. The aim of the study was to identify the effective components of behavioral and functional good urban governance on promoting urban livability in the Ahvaz metropolitan area.*

Methods: *This study is a descriptive-analytical type. The statistical population of the study consisted of Ahvaz metropolitan citizens (1302591 persons) and academic professors and elites. The sample size of the citizens was 383 based on the Cochran model and the sample size of academic professors and elites was 100 people based on the Delphi method. The t-test in SPSS 23 software and structural equation modeling (SEM) based on partial least squares (PLS) were used for data analysis.*

Results: *The most desirable indicators of urban livability were recreation, leisure and public transport and the lowest desirable indicators were employment, income, environmental sustainability, and personal and social security. Also, among the components of behavioral and functional good urban governance, the highest impact on the promotion of the urban livability related to justice, transparency and responsibility were 0.753, 0.704 and 0.632, respectively. The goodness of fit (GOF) of models was found to be 0.513 which indicates the overall utility of the model.*

Conclusions: *The results show that Ahvaz metropolis is in poor condition in terms of components of good governance and urban livability.*

Keywords: Behavioral and functional components, Good urban governance, Livability, Ahvaz metropolis.
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Introduction

Sustainable new planning and management approaches to meet the increasing challenges of cities and the achievement of citizens for sustainability and well-being have become major issues for urban policy makers and managers.[1] Modification in indicators of quality of life has become the basis of many theories for urban development and sustainability in urban livability assessments.[2] In many studies, livability and quality of life are synonymous. The quality of life experienced by the citizens of a city is tied to their being able to access infrastructure, food, green space, and parks. In such a context, sustainability is the ability to enhance the quality of life.[3] Life is a quality that is not an inherent characteristic of the environment, but it is about the interactive behavior between environmental and personal characteristics.[4] According to Veenhoven, livable space is a degree of fit between the requirements of a place and the needs and capabilities of our citizens.[5] Cowan defines the need for the well-being of a region and the provision of a good life as livability.[6] Livability is human need for social adjustment, health and well-being, and includes individual and community well-being.[7] Hu considers livability as the degree that one is able to resolve the needs of their daily lives.[8] Livability at the city level refers to an urban system that focuses on the social, economic, physical, and mental health of all its residents.[9] It should be noted that conceptual livability goes beyond some measures of the quality of life for cities. Some researchers believe that the livability beyond quantity assesses the qualities that can guarantee real sustainability in cities and urban development.[10] Livability acts as a dynamic system for cities that gives citizens, all the qualitative and quantitative aspects of a reliable and relaxing life in cities.[11]

In order to improve the standard of livability in today's cities, there is a need to change the way we manage urban development and the shift from government concepts to governance and delegate powers from central government to local and private institutions along with empowering them. According to Van Dyke, in the face of widespread global developments and the increasing number of problems in today's cities, especially in the question of quality of life, the role of government and its levels in developing countries will inevitably change in the direction of governance.[12] Governance refers to the manner or system of administration where the boundary between organizations and the public and private sectors is permeable. The nature of governance is the interaction between and within government and non-government forces.[13] Good urban governances is also based on the rights of citizenship and all citizens should not be deprived of access to the essential needs of urban life including housing, occupational safety, health, education and nutrition, employment, and public safety.[14]

Regarding the importance of the issue of livability in modern metropolises as well as the impact of urban management behavior and performance on promoting these components, the present study evaluates the level of components of urban livability in Ahvaz and also the impact of good urban governance components on urban livability.

Materials and Methods

This study is a descriptive-analytical type. The statistical population of the study consisted of Ahvaz metropolitan

citizens (1302591 persons) and academic professors and elites. The sample size of the citizens was 383 based on the Cochran model and the sample size of academic professors and elites was 100 subjects based on the Delphi method. The t-test in SPSS software and structural equations model based on partial least squares (PLS) model in Smart-PLS3 software was used for data analysis.

The research data were collected through questionnaires using the Likert scale based on the components of table 1. In this study, due to the large number of sub-categories, only a small number of them are expressed and the value of each index is derived from the average of the sub-categories. It is also noteworthy that 400 questionnaires were collected from the citizens and in this study about one-third of Ahvaz's urban space is worn-out and informal space, and one-third of the questionnaires (114) were completed in these areas.

In the PLS method, the reliability of the variables must be calculated. The traditional coefficient for investigating the reliability of the variables is the Cronbach's alpha coefficient. But in research using SEM, the Composite reliability (CR) can also be used. In this study, both Cronbach's alpha coefficients and Composite reliability were investigated to evaluate the reliability of the variables. The acceptable value for these two coefficients is at least 0.7.

Both convergent and discriminant/divergent validity must be calculated to evaluate the validity of partial least square (PLS) models. The partial least squares method uses the average variance extracted (AVE) to calculate convergent validity. The minimum value for convergent validity for each variable is 0.5. Also, the root AVE for each variable should be used to examine the discriminant validity of the components. The root of AVE is calculated manually for each variable (table 5) and the obtained root should be higher than the correlation coefficient of that variable with other variables.

The structural equation model (SEM) is a model in which the relationships between latent and dependent variables are considered. A SEM consists of several measurement models and only one structural model; we considered the following criteria:

•Determination coefficient index (R2) of endogenous latent variables;

•Coefficients of Path (beta) and its significance.

Table1. The investigated components in this study

Items	components	
Urban livability		
Appropriate access to educational spaces and public libraries and study halls, quality of teacher teaching, safety of school buildings	Public education	Social (S)
A sense of belonging and dependency to life in the city of Ahvaz, hoping to improve living conditions in the city	Local dependency	
Easy access to shopping malls, variety and quality of goods and services, reasonable prices of consumer goods and services	Providing basic needs	Economic (E)
Sufficient income, fair access to diverse job opportunities in the city.	Employment, income	
Proper and adequate access to clinics and hospitals, Quality of clinics and hospitals services, Emergency performance 115	Health	Health & security (HS)
Overnight security, pedestrian safety of women and girls, security of parked vehicles, proper lighting	Personal and social security	
Quality of solid waste collection (time, order and continuity) and wastewater transport, cleanliness of public places, cleanliness of the river	Environmental sustainability	Environmental (En)
Beauty of buildings and preservation of indigenous architecture, preservation of historical and cultural monuments in the city, quality and beauty of river bank landscape	Vision (visual quality)	
Easy access to major routes in the city, quality and quantity of drinking water in the city, convenient distribution of facilities and services at the urban level	Infrastructure facilities and services	Physical (P)
Easy access to public transport (taxis and buses), satisfaction of public transport hours (proper timing), proper access to public parking	Public transportation	
Providing adequate and proper house, robustness to disasters (durable materials), proper price of house and rentals	Housing	Housing and leisure (HL)
Easy and adequate access to entertainment areas, access to adequate and appropriate cultural and sports facilities	Leisure and recreation	
Good urban governance		
fairness and equal application of law for all citizens, Impact of influential individuals and groups on urban managers' decision making	Legality (L)	
dialogue and consultation of city managers and officials with the people in making decisions about issues and problems in the city, the amount of delegated authority and duties of neighborhood management to local residents	Participation (P)	
Transparency of information and official dissemination of public auctions and contracts, incom and expenditures by city managers, desirable reflection of annual goals, programs, plans and projects by urban managers through local media	Transparency (T)	
Responsibility of urban manager in their performance, The compliance with timely implementation of civil projects in the city Responsibility of urban managers in dealing with citizens' complaints	Responsibility (R)	
Fairness in the distribution of utilities and services, fair access of citizens to job opportunities, Priority of Citizens' benefit over Personal benefit in Implementation of Urban Plans by Urban Managers	Justice (J)	
Cooperation and interaction of urban organizations with citizens in reaching a comprehensive agreement for the advancement of urban affairs, prioritization of municipal institutions and organizations in solving problems and implementing projects, supporting urban managers in the population benefit of the majority of groups and social classes in order to reach collective views	Consensus (C)	
Fulfillment of the promises made to the public by urban managers, easy access to senior urban managers, urban managers' accountability to citizens in public meetings	Responsiveness (Re)	
Efforts of urban managers to reduce costs and improve service quality and achieve greater satisfaction of citizens, efforts of municipal managers and officials to increase their skills, satisfaction with the functions of urban management in providing services in parks, recreational infrastructure, proper design of streets and roads	Efficiency and effectiveness (EE)	

Another test of the evaluation of the reflective measurement model is its quality assessment test, which is used to measure subscription validity. If the 1-SSE/SSO value is positive, the quality of the measuring tool is appropriate. This index measures the ability of the path model to predict the observable variables through their corresponding latent variables.

In the PLS model, the goodness of fit index (GOF) is proposed. This index takes into account both measurement and structural models and is used as a criterion for measuring the overall performance of the model. This index is calculated as the mean of R2 and the average common values:

$$GOF=\sqrt{\overline{communality} \times \overline{R^2}}$$

The range of this index is between zero and one and the three values of 0.01, 0.25 and 0.36 are reported as weak, moderate and strong values for GOF, respectively.

Results

Table 2 shows the results based on the mean components of constant value (test value=3) by the t-test. Ahvaz metropolis is in poor condition from the perspective of the studied components. Furthermore, the most desirable indicators were in recreation and leisure and public transport and the lowest desirable indicators were in employment, income and environmental sustainability and personal and social security. The results of the t-test also show that only the two components of leisure and public transport are worth more than 3 and have relative desirability.

The study of good urban governance in Ahvaz indicates the extreme undesirability of this new approach in the city management system. As the eight components affecting the achievement of good urban governance in Ahvaz metropolis have lower T values than the 3 values. (Table 3).

As shown in table 4, Cronbach's alpha coefficients and composite reliability for all variables are above 0.7, which means that the variables have good reliability. The minimum value for convergent validity for each variable is 0.5. Also, the root AVE for each variable should be used to examine the discriminant validity of the components (table 5) and the obtained root should be higher than the correlation coefficient of that variable with other variables.

Table 5 shows that AVE for the main variables in this study is between 1.000 and 0.595, which is higher than the minimum value of 0.5, indicating the appropriate convergent validity of the variables. Also, in investigating the discriminant validity of variables, the factor load of each item (observed variable) with its component (latent variable) is at least 0.1 higher than the factor load of that item on the other component. Outputs showed that the factor load of each item (observed variable) with its component (latent variable) was at least 0.1 higher than the factor load of that item on the other component.

Finally, to investigate the discriminant validity, the correlation matrix of the latent/structural variables and the root of AVE are used. In this obtained matrix (table 6), the root replaces the diagonal numbers of the matrix, in which the matrix root numbers must be greater than the correlation of component with component.

In table 6, the root of AVE for all components (Latent variables) is greater than its correlation coefficient with other components, indicating appropriate discriminant validity of the components.

To calculate the standard coefficients of the path between the variables, we need to use the PLS algorithm. The standardized coefficients between the independent and dependent variables indicate that the independent variable explains this percentage of the dependent variable changes. Figure 1 shows the standardized coefficients for the paths of each hypothesis.

Table 2. Current status of Ahvaz metropolis from the perspective of livability components

components	Mean	SD	SE mean	Pvalue	T-test
Public education	2.315	1.15	0.081	0.004	0.107
Local dependency	2.155	1.19	0.084	0.000	-7.085
Providing basic needs	2.376	1.06	0.075	00.000	2.089
Employment, income	1.856	1.34	0.095	0.495	-9.521
Health	2.183	1.13	0.08	0.000	-2.583
Personal and social security	2.009	1.12	0.079	0.286	-8.672
Environmental sustainability	1.917	1.22	0.086	0.271	-9.114
Vision (visual quality)	2.24	1.17	0.083	0.000	-2.065
Infrastructure facilities and services	2.087	1.23	0.087	0.864	-6.148
Public transportation	2.504	1.24	0.087	0.001	3.561
Housing	2.171	1.27	0.09	0.000	-3.119
Leisure and recreation	2.681	1.25	0.088	0.000	4.477

Table 3. Current situation of Ahvaz metropolis from the perspective of good urban governance

components	Mean	SD	SE mean	Pvalue	T-test
Legality (L)	1.803	1.34	0.095	0.874	-11.145
participation (P)	2.057	1.28	0.09	0.062	-8.492
Transparency (T)	2.113	1.12	0.079	0	-8.238
responsibility (R)	2.169	1.2	0.085	0.062	-7.463
Justice (J)	1.863	1.19	0.084	0.019	-9.827
Consensus (C)	2.311	1.21	0.086	0	-4.198
responsiveness (Re)	2.215	1.05	0.074	0	-5.677
Efficiency and effectiveness (EE)	2.207	1.17	0.083	0.674	-6.175

Table 4. Output of PLS algorithm in reliability test of measurement models

	CR	Cronbach's alpha
L	0.810	0.827
P	0.783	0.720
T	0.723	0.746
R	0.749	0.782
J	0.827	0.756
C	0.769	0.736
Re	0.754	0.835
EE	0.876	0.804

Table 5. Convergent validity of the variables (AVE) and the root of AVE

	AEV	√AEV
L	0.748	0.758
P	0.596	0.642
T	0.794	0.736
R	0.758	0.853
J	0.696	0.752
C	0.715	0.623
Re	0.816	0.781
EE	0.674	0.692

Table 6. Correlation matrix and root AVE

	L	P	T	R	J	C	Re	EE
L	0.75							
P	0.45	0.82						
T	0.33	0.38	0.91					
R	0.52	0.37	0.24	0.88				
J	0.18	0.25	0.32	0.20	0.76			
C	0.27	-0.08	0.49	0.44	0.36	0.79		
Re	-0.05	0.38	0.17	0.36	0.22	0.29	0.83	
EE	0.21	0.46	0.32	0.28	-0.11	0.31	0.18	0.74

Figure 1 shows that the 8 variables of the study explain 0.83% of good urban governance on the promotion of urban livability. Also, the most impactful components of good urban governance are related to justice, transparency, responsibility and legality (0.753, 0.704, 0.632 and 0.568, respectively).

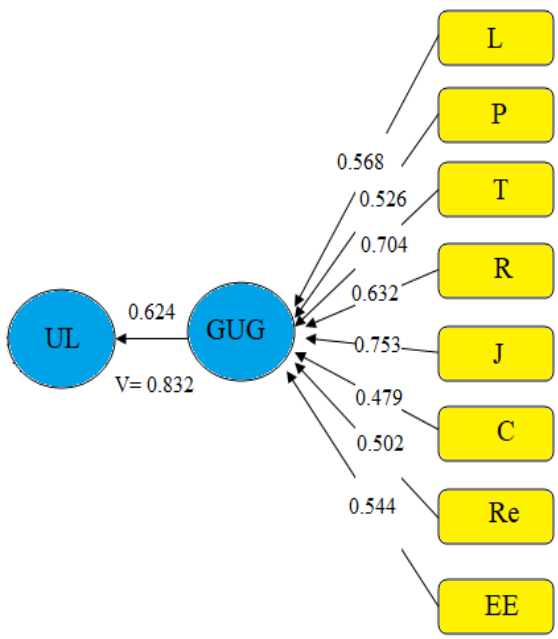

Figure 1. Impact of independent variable (s) on dependent variable (standardized coefficients)

In the PLS model, the statistical value of the model is used to examine the significance of the relationships between variables. The statistical value greater than 1.96 is significant at 95% confidence interval and statistical value greater than 2.58 is significant at 99% confidence interval (figure 2).

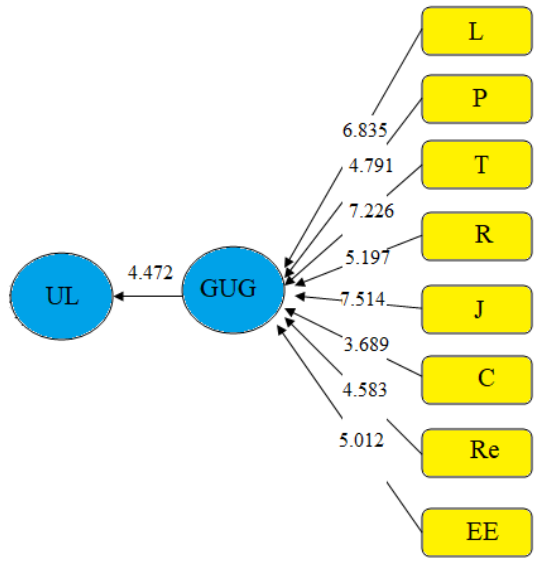

Figure 2. Structural equation model (SEM)

Statistical value in the research model for variables shows that all 8 variables of good urban governance have a higher statistical value of 2.58 which is significant at a 99% confidence interval.

Given the output of the PLS algorithm presented in table 7 and the positive values presented, it can be said that the calculated values are highly acceptable. As a result, the measurement model has good quality and the model can accurately predict.

The average common values of this model are 0.748 and the average R2 is 0.352. Finally, the GOF index of this model is 0.513 which indicates the overall appropriateness of the model.

Table 7. Testing the quality of measurement and structural models

components	1-SSE/SSO
L	0.174
P	0.184
T	0.082
R	0.129
J	0.146
C	0.177
Re	0.127
EE	0.093

Discussion

The modern metropolis faces many problems such as rising poverty, unemployment, social disadvantage, the expansion of informal settlements, unfair distribution of services, pollution, traffic and other economic, social and environmental problems that result in reduced livability in these cities. Ahvaz metropolis is no exception and as one of the metropolitan areas of Iran and in recent years, due to rapid industrial development

and population growth has seen increasing expansion and this type of expansion and development has not been able to comply with the indicators of urban sustainability. Ahvaz is one of the largest industrial cities in the country and the city's environmental instability and pollution have multiplied in recent years. In this regard, the present study evaluates the livability of Ahvaz metropolis and identifies the role of good urban governance in the promotion of livability.

The results of this study show that the Ahvaz metropolitan area, in terms of livability components is in a bad state, especially with respect to employment and income (sufficient income, fair access to various job opportunities), environmental sustainability (solid waste collection quality and solid waste transportation, cleanliness of places including and public spaces, cleanliness of the river) and personal and social security safety situation (safety at night, women's safety when walking alone, security of parked vehicles, proper lighting), as well as indicators of good urban governance. The results also indicate that proper planning to achieve good urban governance in Ahvaz metropolitan area can improve the city's livability. As the results show 8 variables of good urban governance can improve the livability of Ahvaz metropolitan, with the highest impact on the indicators of justice, transparency and responsibility with scores of 0.753, 0.704 and 0.632, respectively.

Comparison of the objectives of the present study with previous studies indicates the similarity of this research in examining the components of good urban governance such as efficiency and effectiveness, equality, equity, participation, responsiveness and security with the previous researches[15-17] and their impact on urban development and livability, as well as similarities with other researches[18,19] in the use of health indicators, safety, participation, economic, social and infrastructural indicators for measuring livability. The results of this study are in line with Jafari's study and Hatami Nejad et al on the non-viability of Tehran and Ahvaz metropolis in different dimensions.[20,21] The difference between the present and previous studies is that the relationship and effects of good urban governance on promoting livability components in Ahvaz metropolis is investigated.

In line with the results obtained from the research as well as the current situation of the metropolis of Ahvaz, the following strategies can be proposed to achieve the desired urban governance and improve its livability:

-Creating the need for managers to be responsive.

-Facilitating the enhancement of the relationship between citizens and officials through transparency in the programs as well as thinking about citizen participation to receive constructive feedback;

-Achieving spatial justice in the distribution of facilities and services,

-Employing various specialists in management systems.

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Conflict of Interest

The authors declare that they have no conflict of interest.

References

1. Glaeser EL. Triumph of the city: how our greatest invention makes us richer, smarter, greener, healthier and happier. 2011, Penguin Press: New York USA. p. 352.
2. Kahn ME. Green Cities: Urban Growth and the Environment. Brookings Institution Press. Washington, DC; 2006.
3. Timmer V, Seymoar NK. Vancouver Working Group Discussion Paper. The World Urban Forum 2006; 2005.
4. Pacione M. Urban liveability: a review. Urban Geography 1990;11:1-30. doi:10.2747/0272-3638.11.1.1
5. Veenhoven R. Happy life-expectancy. Social Indicators Research. 1996;39:1-58. doi:10.1007/BF00300831
6. Cowan R, Rogers L. The dictionary of urbanism: Streetwise press Tisbury; 2005.
7. Hankins KB, Powers EM. The disappearance of the state from "livable" urban spaces. Antipode 2009;41:845-66. doi:10.1111/j.1467-8330.2009.00699.x
8. Hu FX, Hu XJ. Construction on evaluation index system of urban livability. Advanced Materials Research 2015;1065-1069:2808-13. doi:10.4028/www.scientific.net/AMR.1065-1069.2808
9. Okulicz-Kozaryn A. City life: Rankings (livability) versus perceptions (satisfaction). Social Indicators Research 2013;110:433-51. doi:10.1007/s11205-011-9939-x
10. Kashef M. Urban livability across disciplinary and professional boundaries. Frontiers of Architectural Research 2016;5:239-53. doi:10.1016/j.foar.2016.03.003
11. Ruth M, Franklin RS. Livability for all? Conceptual limits and practical implications. Applied Geography 2014;49:18-23. doi:10.1016/j.apgeog.2013.09.018
12. Van Dijk MP. Managing cities in developing countries. The Theory and Practice of Urban Management. 2006.
13. Rakodi C. Forget planning, put politics first? Priorities for urban management in developing countries. International Journal of Applied Earth Observation and Geoinformation 2001;3:209-23. doi:10.1016/S0303-2434(01)85029-7
14. Habitat U. The global campaign on urban governance: concept paper. Nairobi, Kenya: United Nations Human Settlements Programme (UN-Habitat); 2002.
15. Downer A. Good governance: Guiding principles for implementation. Canberra USAID; 2000.
16. Morita S, Zaelke D, editors. Rule of law, good governance, and sustainable development. Seventh international conference on environmental compliance and enforcement; 2005.
17. Zayyari K, Pour Ahmad A, Hatami Nezhad H, Bastin A. Assessment of the good urban governance impact on urban livability (Case study: Bushehr City). Research and Urban Planning 2018;9:1-18.
18. Wang J, Su M, Chen B, Chen S, Liang C. A comparative study of Beijing and three global cities: A perspective on urban livability. Frontiers of Earth Science 2011;5:323-9. doi:10.1007/s11707-011-0182-1
19. VanZerr M, Seskin S. Recommendations Memo# 2 Livability and quality of life indicators. CH2M Hill: Portland; 2010.
20. Jafari-Asadabadi H. Surveying the Sustainability of Cities for Sustainable Urban Development, Case Study of Tehran Metropolis. Tehran: Kharazmi University of Tehran; 2014.
21. Hataminejad H, Modanlou-Jouybari M, Akhavan-Hadari K. Spatial analysis of physical liveability in Ahvaz metropolitan. Journal of Physical Development Planning 2019;4:11-23. [Persian]. doi:10.30473/PSP.2019.5828