







Developing strategic scenarios to enhance the resilience of dilapidated urban fabric (Case study: Central part of dilapidated fabric of Ahvaz city)

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Abstract

Background and Objective: With the intensification of climate crises, the ecological behavior of employees has become the driving force of organizational sustainability. This necessity is of strategic importance in the metropolis of Ahvaz, due to the acute environmental and industrial challenges. The realization of these behaviors requires more than formal requirements, the internalization of green culture and strengthening organizational commitment to institutionalize voluntary environmental actions in the context of this region. In this regard, the aim of the present study is to rank the factors affecting the ecological behavior of employees in Ahvaz with an emphasis on commitment and green culture.

Methodology: The present research is of an applied type and is descriptive-analytical in terms of methodology. In the first step, by systematically monitoring theoretical literature and international experiences, key indicators promoting green behaviors were extracted. In the operational phase, to analyze the network of internal relationships and determine the final weight of the criteria, the DANP hybrid multi-criteria decision-making approach (combination of DEMETL and ANP) was used. Finally, using the opinions of the expert panel (consisting of 50 environmental management and human resources experts), the final ranking of the indicators was developed to present a native model that is consistent with the industrial ecosystem of Ahvaz.

Results and Findings: The results of the study showed that green organizational culture is the main foundation of ecological behavior in Ahvaz, and the indicators of "green learning" and "awareness of the micro-dust crisis" have the highest priority in the behavioral transformation of employees. Based on the Dematel and Supermatrix analysis, tangible symbols and managerial values are considered as causal factors, the main drivers of the formation of emotional commitments and innovative (deflective) behaviors in the organization. Also; the findings indicate that organizational pride and recognition of the depth of the environmental disaster have a much greater impact on improving ecological performance than external rewards or mandatory laws. Finally, success in ranking the factors affecting the green behavior of Ahvaz employees does not depend on coercion, but on specialized climate training and institutionalizing identity links with the organization's environmental goals.

Keywords: Environmental attitude, ecological behavior, green commitment, green culture, DANP model, Ahvaz.

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EXTENDED ABSTRACT

Introduction

The concept of urban resilience has emerged as a critical concept in addressing the increasing challenges facing cities. In fact, the increase in natural and human-made hazards, especially in cities in developing countries, has led to increased attention to concepts such as vulnerability and resilience. This is because many cities have infrastructure that was not designed for current challenges, including water and sewage networks, electricity, transportation and communications, which are vulnerable to these shocks, and the state of this infrastructure in times of crisis can disrupt rescue and relief operations and slow down the recovery process.

In dilapidated urban areas, which are themselves full of physical, social and economic vulnerabilities, understanding and strengthening resilience is of dual importance. Because dilapidated areas with high population density and poverty are examples of vulnerable urban areas. Dilapidated areas have a set of physical, social, economic and management characteristics that cause high vulnerability and low ability of these areas to various crises and shocks (such as natural disasters, economic and social changes, etc.). Dilapidated urban areas in Iranian cities usually have other characteristics such as a lack of road networks, poor visual quality and urban landscape, deterioration and lack of urban infrastructure and facilities, including old and dilapidated water, electricity, gas and sewage networks, and in the economic dimension, lack of attractiveness for investment, decreased land and property values, poverty and unemployment, which lead to their instability, inefficiency and vulnerability. Considering the above issues, it can be said that the vulnerability of cities, and especially old and dilapidated urban areas, to disasters has become one of the main concerns of urban planners and managers in recent years.

With the intensification of climate crises, the ecological behavior of employees has become the driving force of organizational sustainability. This necessity is of strategic importance in the metropolis of Ahvaz, due to the acute environmental and industrial challenges. The realization of these behaviors requires more than formal requirements, the internalization of green culture and strengthening organizational commitment to institutionalize voluntary environmental actions in the context of this region. In this regard, the aim of the present study is to rank the factors affecting the ecological behavior of employees in Ahvaz with an emphasis on commitment and green culture.

Methodology

The present study was conducted with the main aim of developing strategic scenarios for enhancing the resilience of the dilapidated fabric in the central part of Ahvaz city. From the perspective of the objective, this study has an applied nature and attempts to increase the effectiveness of resilience enhancement programs in these vital fabrics by providing practical analyses and strategic paths. This research is in fact a normative analysis that, by applying futures research approaches, addresses the complex and multifaceted issues of this field and determines the optimal and desirable paths for facing future uncertainties. The present research is of an applied type and is descriptive-analytical in terms of methodology. In the first step, by systematically monitoring theoretical literature and international experiences, key indicators

promoting green behaviors were extracted. In the operational phase, to analyze the network of internal relationships and determine the final weight of the criteria, the DANP hybrid multi-criteria decision-making approach (combination of DEMETL and ANP) was used. Finally, using the opinions of the expert panel (consisting of 50 environmental management and human resources experts), the final ranking of the indicators was developed to present a native model that is consistent with the industrial ecosystem of Ahvaz.

Results and Findings

In this regard, the overall analysis of the future state of the resilience study of the dilapidated fabric of Ahvaz, despite the relative dominance of desirability, indicates the fragility of the system and significant risks; so that out of a total of 342 situations governing 18 key factors, almost half (48 percent) are assessed as completely desirable, indicating a strong potential for development. However, 34 percent of the situations are in a static state, which indicates stagnation and lack of progress in important sectors, and more importantly, 18 percent of the situations are critical; this high level of crisis in sub-sectors, along with widespread stagnation, confirms the need to emphasize eliminating critical weaknesses and activating static factors in order to prevent the system from slipping towards pessimistic scenarios and transform desirable potentials into comprehensive sustainability. Finally, it can be said that this general situation in the future study of the resilience of the dilapidated fabric of Ahvaz shows that, despite the existence of a strong and significant potential for development and achieving favorable conditions in many areas, the system is simultaneously facing high fragility and serious risks. The presence of a large number of factors in a static state indicates stagnation and lack of full exploitation of capabilities and the need for stimulating measures for activation; while the significant presence of critical situations sounds the alarm about critical weaknesses.

Therefore, this analysis emphasizes the need to immediately focus on removing obstacles and critical factors, as well as removing static parts from their state of stagnation, in order to prevent the system from sliding towards a pessimistic future and transform existing positive potentials into comprehensive and secure sustainability.

Conclusion

The final conclusion emphasizes that the future of the region's resilience depends on the strategic choices of policymakers, and to prevent stagnation and collapse, strengthening the social dimension and reforming institutional (financial) structures must be prioritized immediately so that existing potentials can be transformed into comprehensive sustainability.

The results of the study showed that green organizational culture is the main foundation of ecological behavior in Ahvaz, and the indicators of "green learning" and "awareness of the micro-dust crisis" have the highest priority in the behavioral transformation of employees. Based on the Dematel and Supermatrix analysis, tangible symbols and managerial values are considered as causal factors, the main drivers of the formation of emotional commitments and innovative (deflective) behaviors in the organization. Also; the findings indicate that organizational pride and recognition of the depth of the environmental disaster have a much greater impact on improving ecological performance than external rewards or mandatory laws. Finally, success in ranking the factors affecting the green behavior of Ahvaz employees does not depend on coercion, but on specialized climate training and institutionalizing identity links with the organization's environmental goals.

Declarations

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Authors' Contribution

Authors contributed equally to the conceptualization and writing of the article. All of the authors approved the content of the manuscript and agreed on all aspects of the work declaration of competing interest none.

Conflict of Interest

The authors declare no conflict of interest.

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References

- Ahmadi, A., Fathi, S. and akbbari, E. (2018). Assessment of Urban Resilience against Natural Hazards with an Emphasis on Earthquake and Using Fuzzy Logic and GIS (A Case Study of Urmia City). *Journal of Geography and Environmental Hazards*, 7(3), 57-73. [doi: 10.22067/geo.v0i0.69540](https://doi.org/10.22067/geo.v0i0.69540)[In Persian]
- Ahvaz Municipality, Vice-Chancellor of Research and Technology, Shahid Chamran University of Ahvaz. (2019). Regeneration plan, urban design, and landscape improvement of the worn-out central fabric of Ahvaz city with a development-stimulating approach.
- Alibakhshi,S , Saeidi rezvani,N and Rashidzadeh,K . (2026). Assessment and Prioritization of Urban Resilience with an Emphasis on Sustainable Land Consumption Management (Case Study: Oshan, Fasham, and Meygun). (e240502). *Journal of Sustainable Urban & Regional Development Studies (JSURDS)*, (), e240502 https://www.srds.ir/article_240502.html?lang=en[In Persian]
- Ardalan, D., Davudpour, Z., Ziari, K. (2019). Comparing two theories of urban governance and institutional resilience in the urban management system using content analysis method and presenting an improved model (case study: Qazvin city), *Quarterly Journal of Human Settlement Planning Studies*, 15(1), 141-159. http://jshsp.iaurasht.ac.ir/article_672740.html[In Persian]
- Asadi Azizabadi, M., Ziari, K., Vatankhahi, M. (2018). Measuring and evaluating the resilience of dilapidated urban textures against environmental hazards (case study: dilapidated texture of Karaj metropolis). *Quarterly Journal of Urban Research and Planning*, 9(35), 111-122. [SID. https://sid.ir/paper/220294/fa](https://sid.ir/paper/220294/fa)[In Persian]
- Darmani, N., Parvaresh, D., Alipour, V. (2024). Investigating the resilience of Bandar Abbas city in environmental dimensions and components and presenting urban management strategies. *Environmental Planning*, 64(17), 45-72. <https://civilica.com/doc/2058243>. [In Persian]
- Darvish,A. P. , Mansouri,B. and Javidinejad,M. (2024). The role of incentive policies for the construction of dilapidated urban fabric in the quality of space and housing (Study: District 9 of Tehran Municipality). *Geography and Regional Planning*, 13(9), 1-19. [doi: 10.22034/jgeoq.2024.276275.2965](https://doi.org/10.22034/jgeoq.2024.276275.2965). [In Persian]

- Eskandari, M., Nasiri Hinde Khaleh, A., Hosseini, S., Bordbar, M. (1403). Physical resilience assessment with emphasis on environmental components (case study: Saghari-Sazan neighborhood). *Geographical Engineering of the Landm*, 45(2), 44-56. (In Persian).[doi:10.22034/JGET.2025.449587.1551](https://doi.org/10.22034/JGET.2025.449587.1551)[In Persian]
- Gorji, Mahshi, Khadem Al-Husseini, Ahmad, Azani, Mehri, Saberi, Hamid. (1400). Explaining the social resilience of dilapidated urban fabric using PLS structural equations. Research sample: Area 3 of Isfahan city. *Spatial Planning*, 11(3), 145-166. [doi:10.22108/sppl.2021.126690.1554](https://doi.org/10.22108/sppl.2021.126690.1554). [In Persian]
- Haji Alizadeh, J., Rashidi, A. (2019). Investigating the role of territorial management institutions in regional resilience with emphasis on risks arising from climate fluctuations (Study area: Bonab). *Environmental Planning*, 13(49), 57-83. <https://sid.ir/paper/395713/en>. [In Persian]
- Hatami, A., Parvizi, S., Akbari Monfared, B. (2022). Evaluation of dimensions and indicators of urban resilience in the dilapidated fabric of Boroujerd city. *Economic Geography Research*, 3(9), 39-58. [doi:20.1001.1.27173747.1401.3.9.2.3](https://doi.org/20.1001.1.27173747.1401.3.9.2.3). [In Persian]
- Hejazi, S. (2020). Evaluation of public participation in the implementation of urban regeneration plan (case study: dilapidated central fabric of Ahvaz city). *Geographical Engineering of Land*, 4(1), 117-132. (In Persian) [doi:20.1001.1.25381490.1399.4.7.9.4](https://doi.org/20.1001.1.25381490.1399.4.7.9.4).
- Heydari Sarban, V. (2020). Investigating spirituality by improving the resilience of villagers regarding the earthquake crisis, case study: North Ozomdel Rural District, Varzeghan County. *Spatial Planning and Geomatics*, 24(3), 170-200. [doi:20.1001.1.16059689.1399.24.3.7.9](https://doi.org/20.1001.1.16059689.1399.24.3.7.9)[In Persian]
- Ilanloo, M and Sohrabi, E . (2022). Valuating the Level of Physical Resilience of Old Tissue against Natural Hazards with an Emphasis on Earthquakes (Case Study: Javadieh Neighborhood of the Region 16 in Tehran). *Journal of Sustainable Urban & Regional Development Studies (JSURDS)*, 3(3), 98-119. https://www.srds.ir/article_163840.html?lang=en[In Persian]
- Ilanloo, M and Sohrabi, E . (2022). Valuating the Level of Physical Resilience of Old Tissue against Natural Hazards with an Emphasis on Earthquakes (Case Study: Javadieh Neighborhood of the Region 16 in Tehran). *Journal of Sustainable Urban & Regional Development Studies (JSURDS)*, 3(3), 98-119. https://www.srds.ir/article_163840.html?lang=en[In Persian]
- Jumepour, M., Latifi, G., Ghanbari, S. (2023). Explaining strategies for adapting vulnerable urban neighborhoods with a resilience approach (case study: Nazi-Abad neighborhood in Tehran). *Sustainable Urban Development*, 4(12), 21-48. [doi: 10.22034/usd.2023.707471](https://doi.org/10.22034/usd.2023.707471). [In Persian]
- Karimi Hatami, J. , Ramesht, M. H. and Nojavan Besnighan, M. R. (2026). The role of creative tourism in enhancing urban sustainability indicators (Case study: Ahvaz city). *Journal of Sustainable Urban & Regional Development Studies (JSURDS)*, 7(1), 224-249. https://www.srds.ir/article_230405.html?lang=fa. [In Persian]
- Khoshpasand, P., Pourshikhian, A., Asghari, H., Hassani Mehr, P. (2023). The role of urban management in recreating the worn-out urban fabric (case study: the area around the central market of Rasht), *Human Settlement Planning Studies*, 11(18), 171-16. [doi:20.1001.1.25385968.1402.18.2.16.5](https://doi.org/20.1001.1.25385968.1402.18.2.16.5). [In Persian]
- Lotfalizadeh, , Goodarzi, M. and Soltani, Z. (2026). Evaluation of the Role of Urban Social Resilience in Encountering the Consequences of War (Case Study: Ahvaz City). *Journal of*

- Sustainable Urban & Regional Development Studies (JSURDS), 7(1), 476-502. https://www.srds.ir/article_243177.html?lang=en. [In Persian]
- Maleki, S. and Nasiri Alvan, E. (2024). Identifying and evaluating the key factors affecting the resilience of the worn-out fabric of Behbahan city with a future research approach. *Safe City*, 7(2), 133-152. [doi: 10.22034/ispdrc.2024.2015795.1065](https://doi.org/10.22034/ispdrc.2024.2015795.1065). [In Persian]
- Parvizian, A., Ahmadi, H. (2019). Measuring the resilience of metropolitan cities against earthquakes; A case study of Ahvaz metropolis, First National Congress of Research, Entrepreneurship and National Development with the Approach of Supporting National Production, Tehran. <https://civilica.com/doc/910120>. [In Persian]
- Rasouli, M., Hajizadeh Anari, H., Saeedpour, S., Houshang, M., Ghobadi, S. (2023). Presenting event-based regeneration strategies in dilapidated urban textures (Case study: dilapidated texture of Sanandaj city). *Sustainable Urban Development*, 4(11), 51-70. [doi:10.22034/usd.2023.706525](https://doi.org/10.22034/usd.2023.706525). [In Persian]
- Safaepour, M. and damanbagh, S. (2019). Analysis of Urban Regeneration Components in the Centralized Old Texture of Ahvaz City. *Physical Social Planning*, 6(3), 103-122. [doi: 10.30473/psp.2019.6392](https://doi.org/10.30473/psp.2019.6392). [In Persian]
- Sarvar, H. (2019). identification worn-out urban textures Based on the physical parameters Case Study: Region One Tabriz city. *Sustainable city*, 2(1), 1-14. [doi: 10.22034/jsc.2019.91206](https://doi.org/10.22034/jsc.2019.91206). [In Persian]
- Tobchi-Sani, A., Mohammadi, M., Mirzaei, M., Tobchi-Sani A. (2022). Evaluating the importance of physical resilience criteria of dilapidated urban textures using the improved analytic hierarchy process (IAHP) method. *Knowledge of Crisis Prevention and Management*, 12 (4): 409-422. [doi: 20.1001.1.23225955.1401.12.4.2.8](https://doi.org/20.1001.1.23225955.1401.12.4.2.8). [In Persian]
- Totunchi, S., Bahreini, H., Tabibiyan, M. (2023). Evaluation of physical resilience indices of deteriorated structures against earthquakes (Case study: Qale neighborhood of Dezful city), *Human Settlement Planning Studies*, 18 (3), 239-253. [doi: 20.1001.1.25385968.1402.18.3.16.7](https://doi.org/20.1001.1.25385968.1402.18.3.16.7). [In Persian]