Urban Economics and Management, Vol. 5, No4(20), 87-104
www.iueam.ir
Indexed in: ISC, EconLit, Econbiz, SID, RICeST, Magiran, Civilica, Google Scholar, Noormags, Ensani.
ISSN: 2345-2870

Determining Scenario-Based Strategies in the Land and Housing Organization of Mashhad City

Maryam Ramezani*
Master of Business Administration-Marketing, Faculty of Humanities, Islamic Azad University, Neyshabur Branch, Neyshabur, Iran
Mohammad Salehifard
PhD student in Geography and Urban Planning, Payam Noor University, Tehran, Iran
Hasan Ebrahimi
Master of Economics, Faculty of Management and Economics, Sharif University of Technology, Tehran, Iran
Ali Rahnama
Researcher of Tourism Economics Department, Iranian Academic Center for Education, Culture and Research (ACECR), Khorasan Razavi and Ph.D. student of Agricultural Economics Engineering Policy and Agricultural Development, Faculty of Environmental Sciences and Sustainable Agriculture, University of Sistan and Baluchestan, Zahedan, Iran
Nasrin Khorsani
Master of Economy of Energy, Economic and Administrative Sciences, Ferdowsi University of Mashhad, Mashhad, Iran

Received: 2017/03/05 **Accepted: 2017/05/27**

Abstract: The aim of this research is to codify scenario-based strategies in the Land and Housing Organization that has been done with drawing pictures of the future. In the present study, we used Schwartz and simultaneous methods in order to determine the strategies. The present study has been done in the year 2015 within the time horizon of 10 years. The statistical population included all senior municipal managers and experts in the Land and Housing Organization of Mashhad city (27 persons) which 15 persons selected purposefully. In the present study, the required information has been collected through library studies and semi-structured interview, trends, and uncertainty factors have been identified. Then, the impact/uncertainty matrix was drawn. Specifying dimensions by using simultaneous (combined) method, four scenarios of high impact- high uncertainty, low impact- high uncertainty, high impact- low uncertainty, low impact- low uncertainty were codified and four strategies of (protection - supporting - participation), (correction - intervention, supporting), (non-intervention -guiding) ,(resistance-transforming) were proposed.

Keywords: scenario, Strategy, Land and Housing Organization
JEL Classification: Q15, R15, R14, N95

* Corresponding Author: mari_ramezani@yahoo.com

[Downloaded from mail.iueam.ir on 2026-09-28]
[DOR: 20.1001.1.23452870.1396.5.20.6.8]
[DOI: 10.29252/iueam.5.20.83]

[Downloaded from mail.iueam.ir on 2026-09-28]

[DOR: 20.1001.1.23452870.1396.5.20.6.8]

[DOI: 10.29252/iueam.5.20.83]

1- Introduction

Human being always tries to design pattern based on the created world then he can justify the past events and predict the future events. However, due to greatness of the world and its present elegancy, the human being can design some parts of the world qualitatively based on the needs and his expertise over years and then analyzes them. Therefore, modeling is important in different areas including mathematics, physics, engineering, economics, and finance (Hafezi & Esmaeelzadeh, 2014).

The contemporary world is on the verge of tremendous change and transformation. The smartest approach of humans and communities is to prepare for confrontation with unpredictable events and to welcome future (Zarei, 2014). Many managers invest in their programs and plan them based on the predictions of the past trends or the most probable future. Gradually, the organizations, which wait for likely future, find themselves confused; then they lose when they encounter adverse events to which they are not ready to deal with.

Scenarios are designed to protect decision-makers in order to achieve the better understanding of consequences resulted from decision. In spite of their popularity to predict information technology, one of main obstacles is the complexity of strategic decision and its different interpretations of scenarios. Therefore, this selection should be done about the experts who write the scenario and level at which they work on the details (Combs et al., 2014).

The Scenario writing method is one of most important methods to study future and an approach to improve decision-making for probable future. The main focus of this method is on how to extend the external environment of the organization (the macro environment) with regard to internal environment in the future. Therefore, an organization can expand wide range of probable scenarios of future; factors unrelated in the organizations' external environment are getting important within the framework; then the behavior and method of the organization against the uncertainties of each crisis are identified in the scenario (Van der Heijden, 1998). Scenario- based Planning is a method in which main and key categories such as political factors, economic structure, and information flow, and cultural changes and so on are included and which play main role in the evaluating organizational strategies (Rahmati & Charsoghi, 2013).

Therefore, assessment, recognition, and management of uncertainties are necessary prerequisite to create a sustainable and long-term program in the current business environment using design of scenarios. The forward- looking organization always are ready for future while their competitors in industry are struggling to cope with a shocking event, they have already been prepared to take advantage of the opportunities and avoid the threats posed by the incident. In short, forward-looking companies do not easily take unawares; then this feature leads them to progression and superiority over the competitors. But recognition of future is not possible with regard to the wide range of changes that will occur. Such changes increase the complexity and uncertainty that surround the future. Scenario is one of the best and the strongest tools for scientific recognition and assessment of the future by which the environmental change and uncertainty can be recognized and dealt with (Hajaghamemar et al., 2013).

[Downloaded from mail.iueam.ir on 2026-09-28]

[DOR: 20.1001.1.23452870.1396.5.20.6.8]

[DOI: 10.29252/iueam.5.20.83]

Land and Housing Organization of Mashhad Municipality is established to implement Article 84 of municipal rule according to paragraph 7 of Article 11 of the constitution of the organization of the municipalities and rural managers. Some main purposes of this organization are that (1) adoption of the necessary measures for the provision of land and the construction of affordable homes for the poor and low- income people, especially the slummers, (2) organizing forcible entry and illegal accommodation of marginalized people and migrants in villages and countryside located in the legal area and city limits and (3) increasing capabilities and proper scientific management to protect and preserve land and to have regulatory power over land use in the legal area and city limit of Mashhad. Furthermore, other missions of this organization are (1) services provision for preservation and regularization of land and properties and ownership of area required for participation in development projects of the municipality of Mashhad, (2) contribution in providing sustainable municipal financial resources, (3) assistance in doing social missions associated with land and properties in order to contribute to house construction of low- income and deprived people, (4) empowerment of inhabitants of unofficial settled areas located marginalized and worn-out urban texture.

There are many approaches and techniques for analysing the program (Kangas et al., 2003) and the strategies of organizations while scenario-based approach is not taken into consideration in such approaches and techniques. This method allows the analysers to consider internal and external factors to adopt optimal decision in probable future (Akbari & Zahedi, 2008). Therefore, assessment, recognition, and management of uncertainty are necessary perquisite of Land and Housing Organization using design of scenario and presentation of strategies proportional to scenario. However, Land and Housing Organization makes effort to meet social needs, but it does not have specific pattern for probable future. Regarding role played by this organization in the construction of house especially affordable house, so it can be said that category of scenario writing is of great importance for this organization. Therefore, this study deals with the scenario- based strategies in the Land and Housing Organization of Mashhad city.

2- Literature Review

a) Foreign Researches

Gunnarsson-Östling & Höjer (2011) conducted a study to assess the environmental consideration and justice using the scenario planning of sustainable development in Stockholm. Conceptual elements were used in four scenarios for the future of Stockholm, focusing on the purchase nodes inside and outside suburb. The results of scenario show that such shopping areas are sometimes seen as signs of unsustainable urban development, which require further discussions in the future.

Zhang et al., (2014) examined and analyzed the key uncertainties to create alternative scenarios for ecommerce content delivery. In this study, the scenario planning process and two workshops are organized to identify the key trends and uncertainties; finally, 94 forces are identified and two uncertainties (i.e. the role of revenue model and role of service provider) are identified as the most important uncertainties that are based on the four scenarios.

Page et al., (2010) study and examine scenario planning as a tool for understanding the uncertainty in tourism (an example of Scotland's transport and tourism in 2025. The study examines two scenarios to look at two extreme cases of how transport and tourism would be interconnected to shape the destination and ability to access different types of tourism product and experience. The results show that Scottish tourism framework needs to be changed.

Postma (2015) investigates scenario planning- a European tourism perspective, highlights the research methodology of the scenario planning group of the European Tourism Futures Institute (ETFI), provides an insight in research foundation of scenario planning in a tourism context and ETFI's conceptual framework.

Nyuur (2015), who conducts a research called unlocking the potential barriers on SMEs' uptake of scenario planning, aims to discuss the value of scenario planning to small and medium size enterprises (SMEs), and further examine the challenges constraining the uptake of scenario planning by SMEs; then he comes to this conclusion that SMEs' managerial mental models, SMEs' managerial time orientation, severe resource constraints, and industry complexity are the most important obstacles.

b) Iranian Researches

Zahedi & Khanloo (2011) conduct a study called "future study on the accountability of nongovernmental organizations in the field of health and wellbeing of Iran" in 1404. First, macro- scenarios is determined for futures study on accountability of NGO, and then condition of accountability and its properties are analyzed in each of compiled macro- scenarios and the questions of the study are answered in each of scenarios. In order to collect data in this study, two kinds of questionnaire (i.e. cross-impact questionnaire and uncertainty questionnaire) are applied using semi-structured interview, archival studies, documentary review, specialized panel and exploratory studies. The results show that two challenges that are faced by these organizations in 1404 are (1) increase or decrease in the capabilities of nongovernmental organizations in field of Iran's health and wellbeing and (2) public participation in nongovernmental activities; furthermore, (a) government position, (b) the role of nongovernmental organizations in ability empowerment and (c) awareness of people to participate in nongovernmental activities have effect on the future of accountability of non- governmental organizations (NGOs).

Haj-agha-memar et al., (2013) assess the global business network scenarios. In this study, first, the time horizon and subject of scenario are dealt with, and then environmental factors affecting the company's market including (a) trends, (b) pre-specified elements and (c) two key uncertainties including "sanctions" and "government support" have been identified while collecting information and conducting semi- structured interviews. After that, four scenarios including "limited market and declining share", "broad domestic market and increased competition", "broad domestic and foreign market" and "perfectly competitive free markets" are compiled using key uncertainties and building scenario matrix in the previous step.

Yavarizade & Azari-yekta (2014) conduct a study called "scenario writing, a method to support strategic planning in uncertainty." This paper aims to introduce scenario –based planning as strong tool to help strategic decision making of organizations and even governments in

[Downloaded from mail.iueam.ir on 2026-09-28]
[DOR: 20.1001.1.23452870.1396.5.20.6.8]
[DOI: 10.29252/iueam.5.20.83]

the uncertain conditions. With regard to written points in this paper, the managers are recommended that scenario approach be used as strong tool to support strategic planning of their organization, and then they can contribute to the stability of organization planning in uncertain condition of future by means of scenario thinking along with strategic thinking.

3- Theoretical Framework

The use of scenario dates back to the 1940s and works of Herman Kahn done exactly after World War II. Although in this period of history, the term "scenario" is used in the political literature, and it is not identified as systematic method. In 1945, an institute called "RAND" affiliated with the United States Air Force feeds this military force as think tank. Herman Kahn invents the method of scenario writing and scenario-based planning in RAND, using scenario concept in the films. After he left RAND, Kahn established Hudson Institute in 1961, then he developed scenario methods and scenario- based planning. Then he used this method in many projects of U.S. Air Force. In this way, the scenario was developed from the defense and military sectors. Hermann Kahn's famous explanation for the scenario is "thinking about the unthinkable." In 1976, Kahn wrote his famous book "Next 200 Years" (Alizadeh et al., 2009).

Scenario writing is systematic disciplined method used to discover key forces in the context of rapid changes, extraordinary complexities, and uncertainties. Through this approach, leaders and managers looking at unexpected events in the future and having deep understanding of their probable consequences define and discover several distinct stories or narratives about the possible future. This scenario is a tool to regularize the insights and inferences of the managers and directors. The purpose to define scenario is not just to select desirable future, to hope its fulfillment, to find the most probable idea, and to try to adapt to it. Nevertheless, the main goal of scenario is to adopt strategic decision-making that is reasonable and sustainable enough for all believable future (Alizadeh et al., 2009).

Unlike some future study, the scenario writing does not claim the prediction of deterministic and definite future. But, this method using available information compiles reasonable and cohesive story about the future world. The scenarios explain the alternative futures. Scenarios are stories, pictures, and designs of future revealment. The main focus of scenario is the uncertainties. The main purpose of scenarios is to recognize and identify the main important uncertainties that have effect on the strategic decision of organization. The decisions, whose consequences are specified, are evaluated against the uncertainties of future (Haj-agha-memar et al., 2013).

4- Research Method

The current research is a case study in applied research using qualitative method, and it collects information by means of a semi-structured interview. Total statistical population is 27 people who are the senior managers of the municipality and experts in urban land and housing field of Land and Housing Organization. Only 15 people are purposefully chosen with regard to specialty, experience and long-term perspective on organization. It should be noted that the sample size is not significant in quantitative studies, but the saturation stage is very important (Zaboli & Ajam, 2013). First,

[Downloaded from mail.iueam.ir on 2026-09-28]
[DOR: 20.1001.1.23452870.1396.5.20.6.8]
[DOI: 10.29252/iueam.5.20.83]

necessary information is collected by library method in the current study; then effective factors and variables are identified by semi- structured interviews.

The method to conduct interviews for profound research and case study is considered a good one, because the number of subjects studied is limited in this method, but the study is comprehensive. Therefore, the researchers can examine the different aspects of the study (Ghafoori et al., 2014). In this study, raw information concepts or data (repetitive or meaningful phrases) were extracted from respondents' responses and were named in such a way as to indicate the content. Raw informational data were categorized in meaningful groups proportional to each other, and these meaningful groups were named as influential key factors. Variables (meaningful sentences related to the subject matter of the research stated by the interviewees) and influential key factors (meaningful expressions that include a number of variables and represent one of the main topics to which the interviewees referred) are fully investigated. In order to confirm these concepts, the original texts of these interviews were examined on several occasions through rigorous comparison to ensure that the variables and influential factors are appropriately reflecting the views and experiences of the interviewees. Ultimately, the whole process was examined and approved by qualified professors who have experience in the field of qualitative research.

Content analysis method was selected in order to analyze the responses obtained from the interview in this research. Content analysis is a qualitative method to analyze verbal and behavioral data with the aim of categorizing, summarizing and tabulating data (Angit, 2005). Therefore, the data obtained in this study was analyzed using content analysis technique. In the semi-structured interview, the questions are set, but, some other questions are presented based on the responses of the interviewee. Interview questions in this study were designed to use the free association technique. The first question that was asked of respondents was about conditions that will have effect on the organization in 1404. In the process of content analysis, the question was considered by the researcher. In this regard, the researcher attempted to encode answers received from the interview. Using the PESTEL method, key macro factors (economic, social/ cultural, political / legal, technological, and environmental factors) and key micro factors were identified by means of a resource-based approach. In the encryption process, the researcher reviewed the responses received from the interviewees and provided a checklist based on the data obtained. Finally, the most frequent features were selected based on this checklist. The impact-uncertainty table was then determined according to the scores given by the respondents using the average calculation method and the optimistic and pessimistic states; scenario-strategy and the effect-uncertainty matrices were depicted.

The method of scenarios building with a critical uncertainty approach consists of six general steps that are:

1. Definition of the project scope
2. Cognitive analysis
3. Analysis of trends and uncertainties
4. Scenario building
5. Strategy formulation
6. Monitoring and control (Schwenker & Wulf, 2014)

[Downloaded from mail.iueam.ir on 2026-09-28]
[DOR: 20.1001.1.23452870.1396.5.20.6.8]
[DOI: 10.29252/iueam.5.20.83]

[Downloaded from mail.iueam.ir on 2026-09-28]

[DOR: 20.1001.1.23452870.1396.5.20.6.8]

[DOI: 10.29252/iueam.5.20.83]

Step 1: Definition of the Project Scope

In the first step, the general scope of the project is specified.

Step 2: Cognitive Analysis

In this step, the views and perspectives of stakeholders are involved in the changes and development of the industry in the future. The output of the second stage is a list of main factors that have potential effect on the industry's future. After identifying these factors, we evaluate and give score to them according to the impact, which can have effect on the firm's performance, as well as the uncertainty degree of each of them.

Step 3: Analysis of Trends and Uncertainties

In the third step, the identified factors in the second phase are structured in such a way as to form the basis of two main dimensions for the development of scenarios. These dimensions are very important for the development of scenarios in the fourth stage. The implementation framework used in the third phase is the impact - uncertainty diagram. This tool was first introduced by Hayden in the 1970s as a solution to the construction and prioritization of a large number of input variables in traditional scenario planning approaches. This solution was first used by Shell Oil Company to develop scenarios. Impact -uncertainty diagram determines their positions systematically based on the extent to which each identified factor can affect the firm's performance as well as the degree of uncertainty associated with each of the factors.

Impact- uncertainty diagram is divided into three parts. The lower side of diagram includes factors that have a relatively small impact on the company's performance; these “insignificant” factors are removed from the scenario-based strategic planning process and will not be cited. The upper left side of the diagram illustrates the factors that have a high impact on the performance of the company and their prediction is relatively easy. These are the factors we know as trend.

The upper right part shows the most important factors for the development of scenarios: "critical uncertainties". These are factors that have a huge impact on the performance of the company and are still associated with extreme uncertainty. These factors play an important role in identifying the two main dimensions that underlie the development of scenarios. Generally, the two main dimensions are identified by the precise combination and division of these factors. In practice, between three and seven critical uncertainties are identified for industry or businesses. Dimensions are then determined in a synchronous (hybrid) manner.

Step 4: Scenario Building

In step 4, specific scenarios are built for company and industry. Implementation framework used at this stage is the scenario matrix. The scenario matrix uses the results obtained from the process of analyzing trends and uncertainties. Like the impact- uncertainty diagram, the scenario matrix was also developed in the 1970s by Hayden and was used at the Shell Oil Company. After classifying the key factors and driving trends, we will reach the pivot on which difference of the final scenarios is based. The ultimate goal is to reach the scenarios in which the differences between them are remarkable for decision-makers.

Step 5: Strategy Formulation

In this step, manager of organization go beyond thinking about the future and develops specific executive actions. Then, a set of strategic proposals associated with the four scenarios is compared with

each other and the common elements that exist between them are identified. Eventually, the organization brings together these common elements and, defines the main strategy of the company based on them. The company can implement its main strategy under all circumstances, regardless of changes and developments that will occur in the future.

Step 6: Monitoring and Control

The sixth stage is the final stage. At this point, the organization implements its formulated strategy. This step aims to monitor the changes and developments that are taking place at the industry level and to apply modifications and considerations related to strategy wherever needed (Schwenker & Wulf, 2014).

Regarding the above-mentioned explanations, the aims of this study is to develop future scenarios for land and housing market and to provide strategies that are appropriate to the scenarios.

5- Research Findings

Step 1: Definition of the Project Scope

In this step, time horizon should be specified, so it is determined with regard to views of managers in 1404.

Step 2: Cognitive Analysis

At this stage, while using library information as well as conducting unstructured interviews by PESTEL method, key macro factors (including economic, social / cultural, political/ legal, technological, and environmental factors) and key micro factors are identified by means of a resource-based approach. Because of the high number of variables, they were categorized as follows:

Table1. Key factors that affect micro and macro environments

Effective key factors	Variables
Condition of buildings with regard to the use of technical, human and technological expertise	luxuriousness, traditionality, quality, use of native and non-native knowledge, worn out texture
Implementation of laws and regulations	Tax, issuance of license, construction on the outskirts of the city, legal and lawful gaps, alienation, document of title, illegal alienation, seizure, position of tall building, worn-out texture, existence of arid lands
Interaction of organizations involved in controlling and monitoring the land and housing market	overlap of duties, party and factional struggles, political influence
Growth rate	The rate of population growth, housing production, housing transactions, inflation, prices, land prices relative to housing cost, high added value, the price of materials
Financial, technical, executive, and managerial conditions and human resources in Land and Housing Organization	Managerial stability, efficient managers, amount of funds, method to finance appropriate and inadequate tools (secondary mortgage market, house exchange, housing leasing) in Land and Housing Organization in order to control the land and housing market
The rate of public, private and governmental investment	Investment and performance of mass production companies
Facilities	Grace period, credits and loans, facility profit rates
Infrastructure	Surface-water disposal, sewage disposal, Intra-city transit network, transit network
Stagnation	Unemployment, economic problems
Rents, intermediation, brokerage	Rents, intermediation, brokerage
Information	Information registration system
Government	Supportive status
Use of capabilities and potentials	Qualification and quantification process, utilization of natural and social capabilities and potentials for attracting city tourists, the preparation and implementation of tourism projects, the destruction of historical and cultural values, and immigrability
Buildings' safety factor	Vulnerability to natural disasters, existence of construction incompatible with regional conditions
Development management system	Policy making, planning, coordination in implementation, supervision and evaluation

[Downloaded from mail.iueam.ir on 2026-09-28]
[DOR: 20.1001.1.23452870.1396.5.20.6.8]
[DOI: 10.29252/iueam.5.20.83]

The final variables identified in Table 1 has classified into 15 effective factors, such that the factor of condition of buildings with regard to the use of technical, human and technological expertise with regard to use of luxuriousness, traditionality, quality, use of native and non-native knowledge, worn out texture, the factor of implementation of laws and regulations with regard to use of tax, issuance of license, construction on the outskirts of the city, legal and lawful gaps, alienation, document of title, illegal alienation, seizure, position of tall building, worn-out texture, existence of arid lands ,the factor of interaction of organizations involved in controlling and monitoring the land and housing market with regard to use of overlap of duties, party and factional struggles, political influence, the factor of growth rate with regard to use of the rate of population growth, housing production, housing transactions, inflation, prices, land prices relative to housing cost, high added value, the price of materials, the factor of Financial, technical, executive, and managerial conditions and human resources in Land and Housing Organization with regard to use of managerial stability, efficient managers, amount of funds, method to finance appropriate and inadequate tools (secondary mortgage market, house exchange, housing leasing) in Land and Housing Organization in order to control the land and housing market, the factor of the rate of public, private and governmental investment with regard to use of investment and performance of mass production companies, the factor of facilities with regard to use of grace period, credits and loans, facility profit rates, the factor of Infrastructure with regard to use of surface-water disposal, sewage disposal, Intra-city transit network, transit network, the factor of stagnation with regard to use of unemployment, economic problems, the factor of rents, intermediation, brokerage with regard to use of rents, intermediation, brokerage, the factor of information with regard to use of information registration system, the factor of government with regard to use of supportive status, the factor of use of capabilities and potentials with regard to use of qualification and quantification process, utilization of natural and social capabilities and potentials for attracting city tourists, the preparation and implementation of tourism projects, the destruction of historical and cultural values, and immigrability , the factor of buildings' safety factor with regard to use of vulnerability to natural disasters, existence of construction incompatible with regional conditions, the factor of development management system with regard to use of policy making, planning, coordination in implementation, supervision and evaluation.

Each of the key determinants has been presented in Table 2, and has both optimistic and pessimistic states. In the optimistic state, the situation is positive and appropriate; but in a pessimistic state, the negative and inappropriate condition of the key influential factors that may occur in the future is determined.

[Downloaded from mail.iueam.ir on 2026-09-28]
[DOR: 20.1001.1.23452870.1396.5.20.6.8]
[DOI: 10.29252/iueam.5.20.83]

Table2. Effective key factors

Effective key factors	Variables	Optimistic state	Pessimistic state
Condition of buildings with regard to the use of technical, human and technological expertise	luxuriousness, traditionality, quality, use of native and non-native knowledge, worn out texture	Suitable	Unsuitable
Implementation of laws and regulations	Tax, issuance of license, construction on the outskirts of the city, legal and lawful gaps, alienation, document of title, illegal alienation, seizure, position of tall building, worn-out texture, existence of arid lands	Efficient implementation	Inefficient implementation
Interaction of organizations involved in controlling and monitoring the land and housing market	overlap of duties, party and factional struggles, political influence	Appropriate interaction	Inappropriate interaction
Growth rate	The rate of population growth, housing production, housing transactions, inflation, prices, land prices relative to housing cost, high added value, the price of materials	Low growth	High growth
Financial, technical, executive, and managerial conditions and human resources in Land and Housing Organization	Managerial stability, efficient managers, amount of funds, method to finance appropriate and inadequate tools (secondary mortgage market, house exchange, housing leasing) in Land and Housing Organization in order to control the land and housing market	Good	Bad
The rate of public, private and governmental investment	Investment and performance of mass production companies	Appropriate	Inappropriate
Facilities	Grace period, credits and loans, facility profit rates	Appropriate	Inappropriate
Infrastructure	Surface-water disposal, sewage disposal, Intra-city transit network, transit network	Appropriate	Inappropriate
Stagnation	Unemployment, economic problems	Low	High
Rents, intermediation, brokerage	Rents, intermediation, brokerage	Low	High
Information	Information registration system	Appropriate	Inappropriate
Government	Supportive status	Appropriate	Inappropriate
Use of capabilities and potentials	Qualification and quantification process, utilization of natural and social capabilities and potentials for attracting city tourists, the preparation and implementation of tourism projects, the destruction of historical and cultural values, and immigrability	Low	High
Buildings' safety factor	Vulnerability to natural disasters, existence of construction incompatible with regional conditions	Low	High
Development management system	Policy making, planning, coordination in implementation, supervision and evaluation	Appropriate	Inappropriate

[Downloaded from mail.iueam.ir on 2026-09-28]
[DOR: 20.1001.1.23452870.1396.5.20.6.8]
[DOI: 10.29252/iueam.5.20.83]

Step 3: Analysis of Trends and Uncertainties

After scores are determined, the impact-uncertainty matrix, which is the ultimate goal of the structured interview, is depicted and the uncertainties that have the highest impact are identified.

According to the figure, the factors including (a) buildings' condition with regard to the use of technical, human and technological expertise, (b) the implementation of laws and regulations, (c) growth rates, (d) stagnation, (e) rents, intermediation, brokerage, and (f) safety factor of buildings are at the highest levels in uncertainty and impact.

Table3. Final score of uncertainties

Row	Effective Key factors	Variables	Impact	Uncertainty
1	The condition of buildings with regard to use of technical, human and technological expertise	Luxuriousness, traditionality, quality, use of native and non-native knowledge, worn out texture	3.5	3.1
2	Implementation of laws and regulations	Tax, issuance of license, Construction on the outskirts of the city, legal and lawful gaps, alienation, document of title, illegal alienation, seizure, position of tall building, worn-out texture, existence of arid lands	3.7	3.4
3	Interaction of organizations involved in controlling and monitoring the land and housing market	overlap of duties, party and factional struggles, political influence	1.7	2.5
4	Growth rate	The rate of population growth, housing production, housing transactions, inflation, prices, land prices relative to the housing cost, high added value, the price of materials	3.4	3.8
5	Financial, technical, executive, and managerial conditions and human resources in the Land and Housing Organization	managerial stability, efficient managers, amount of funds, method to finance appropriate and inadequate tools (secondary mortgage market, house exchange, housing leasing) of Land and Housing Organization to control the land and housing market	3.4	1.7
6	The rate of public, private and governmental investment	Investment and performance of mass production companies	2.8	2.4
7	Facilities	Grace period, credits and loans, facility profit rates	2.3	2.9
8	Infrastructure	Surface-water disposal, sewage disposal, Intra-city transit network, transit network	2.3	1.6
9	Stagnation	Unemployment, economic problems	2.9	3.3
10	Rents, intermediation, brokerage	Rents, intermediation, brokerage	3.5	2.7
11	Information	Information registration system	2.4	1.5
12	Government	Supportive status	3.3	3.4
13	Use of capabilities and potentials	Qualification and quantification process, the rate of utilization of natural and social capabilities and potentials for attracting city tourists, and the preparation and implementation of tourism projects, the destruction of historical and cultural values, and immigrability	1.2	1.9
14	Buildings' safety factor	Vulnerability to natural disasters, existence of construction incompatible with regional conditions	3.7	3.6
15	Development management system	Policy making, planning, coordination in implementation, supervision and evaluation	2.9	1.8

[Downloaded from mail.iueam.ir on 2026-09-28]
[DOR: 20.1001.1.23452870.1396.5.20.6.8]
[DOI: 10.29252/iueam.5.20.83]

Table 3 describes the scores of impact and uncertainty of each influential key factor. Such factors as "implementation of laws and regulations", "the safety factor of buildings", "condition of buildings with regard to use of technical, human and technological expertise," and "rent, intermediation, and brokerage" have higher scores in the impact. Such factors as "growth rates", "implementation of laws and regulations", "stagnation", and "condition of buildings with regard to the use of technical, human and technological expertise" have higher scores in uncertainty.

After scores are determined, the impact-uncertainty matrix, which is the ultimate goal of the structured interview, is depicted and the uncertainties that have the highest impact are identified.

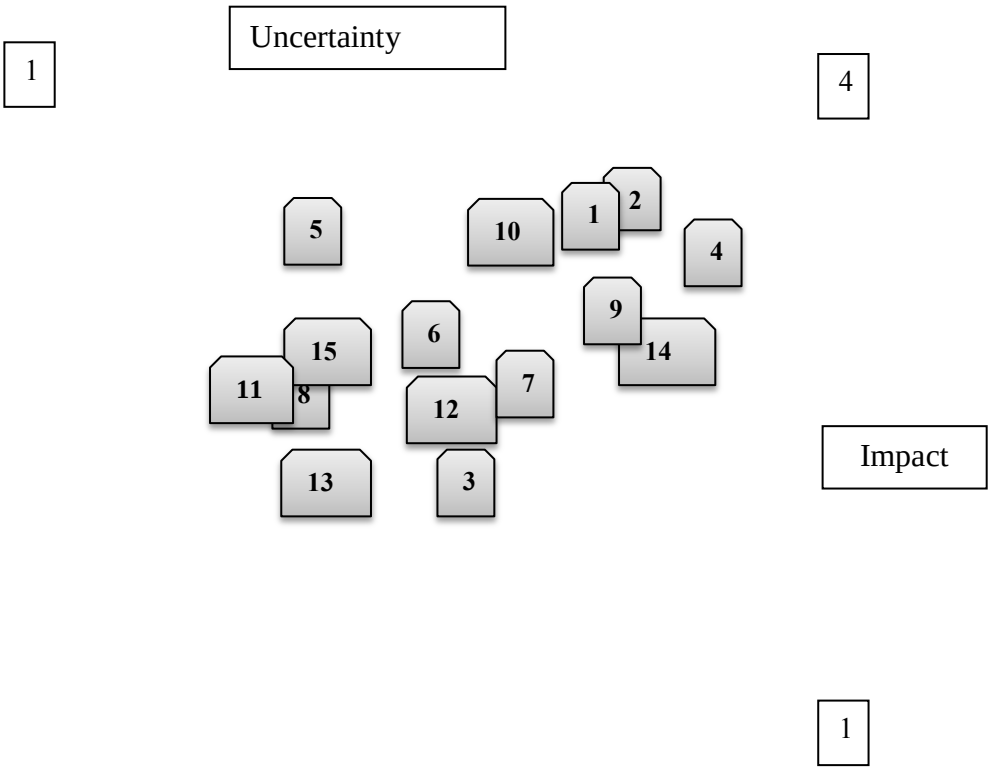

Figure1. Impact- uncertainty matrix

According to the figure, the factors including (a) buildings' condition with regard to the use of technical, human and technological expertise, (b) the implementation of laws and regulations, (c) growth rates, (d) stagnation, (e) rents, intermediation, brokerage, and (f) safety factor of buildings are at the highest levels in uncertainty and impact.

Step 4: Scenario Building

After specifying the impact and uncertainty matrix, such factors as (a) the condition of buildings with regard to use of technical, human and technological expertise, (b) implementation of laws and regulations and (c) building safety, (a) rents, intermediation, brokerage, (b) growth rate coefficient and (c) stagnation were classified into two groups of enrichment and decay using the synchronous (hybrid) method. Then each group is divided into two sub-groups i.e. "high decay and low decay" and "high enrichment and low enrichment." Four

[Downloaded from mail.iueam.ir on 2026-09-28]
[DOR: 20.1001.1.23452870.1396.5.20.6.8]
[DOI: 10.29252/iueam.5.20.83]

strategies including (1) perseveration-protection- participation, (2) modification-intervention- support, (3) nonintervention-guidance and (4) resistance- transformation are proposed.

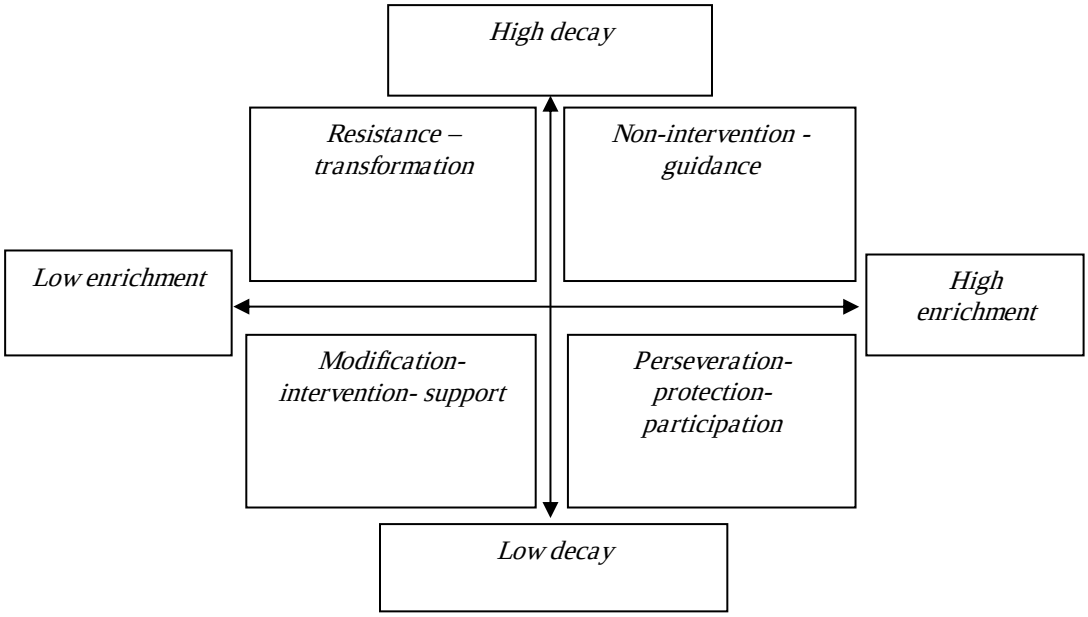

Figure2. Strategy- scenario matrix

Step 5: Strategy Formulation

The Atmosphere of the First Scenario: High Decay- High Enrichment

Strategy: Nonintervention - Guidance

It shows that both decay and enrichment are high in Land and Housing Organization.

This scenario occurs when (1) the condition of buildings with regard to the use of technical, human and technological expertise is suitable; (2) implementation of laws and regulations is efficient; (3) safety factor of building is high; (4) rate of rent, intermediation, and brokerage is high; (5) growth rate is high; and (6) rate of stagnation is high. The pattern of price changes is a very important issue in the analysis of the housing market, which is rooted in the macroeconomic structure of the country, but what is more important is that this pattern and the resulting shocks have devastating effects on the effective demand of the household and cause severe periodic fluctuations in housing production such that the production is severely reduced during the years when price in the chart has no change. This decline will reduce supply and thus, will intensify increase in price during the fluctuation of prices. In these circumstances, housing costs involves high proportion of household expenditure; even small changes can impose a significant burden on household expenditure.

Strategy proposed in this situation is non-intervention in the overall condition of land and housing because of the suitable condition of the buildings, the implementation of laws and regulations and the suitable safety factor. But in the field of macroeconomics, due to the severe impact on the Land and Housing

[Downloaded from mail.iueam.ir on 2026-09-28]
[DOR: 20.1001.1.23452870.1396.5.20.6.8]
[DOI: 10.29252/iueam.5.20.83]

Organization, it is necessary for Land and Housing Organization to conduct intellectual and practical guidance as much as possible. The necessary action should be taken to guide at macroeconomic level while identifying the effective factors that have the potential for imagined future change.

Atmosphere of the Second Scenario: High Decay- Low Enrichment

Strategy: Resistance– Transformation

It shows condition in which decay in Land and Housing Organization is high and enrichment is low.

This scenario occurs when (1) the condition of buildings with regard to the use of technical, human and technological expertise is suitable; (2) implementation of laws and regulations is inefficient; (3) building's safety factor is low; (4) rate of rent, intermediation, and brokerage is high; (5) growth rate is high; and (6) rate of stagnation is high. The housing sector, along with fluctuations and changes in the internal variables, has always faced a multi-sectoral problems; improving urban space in this situation is of great importance due to the turbulence in the urban environment and the disturbance of the internal and external environment. Some factors that have effect on the housing sector are (a) increase in liquidity which is mainly driven by capital investment in the housing market and which creates inflationary effects, (b) expectations and expected prices in the housing market, and (c) change in the exchange rate and stock. For example, the expectations of a reduction in the price of a currency or stock will result in the withdrawal of active capitals in business related to currency and stock transactions, and will move them towards the housing sector and vice versa. The lack of efficiency of the banking system in attracting long-term deposits will move these deposits towards the land and housing market and will raise the price in this market. In this scenario, the status of the internal environment of land and housing will not be desirable.

Therefore, the proposed strategy in this scenario is to resist changes, fluctuations and inefficiencies in the land and housing market, and it is proposed to have transformation in the areas that can be controlled and pursued. Therefore, all necessary measures should be taken to change the situation in 1404 regarding "the condition of buildings", "the implementation of laws and regulations", "the safety factor of buildings", "rent, intermediation, brokerage", "rate of growth" and "the rate of stagnation"; plans and arrangements to change the state of this negative upcoming condition of the Land and Housing Organization, which is also the worst possible situation in the Land and Housing Organization, are to be ratified and implemented.

Atmosphere of the Third Scenario: High Decay- High Enrichment

Strategy: Perseveration- Protection- Participation

It shows the condition in which the decay in land and hosing organization is low and enrichment is high.

This scenario occurs when (1) condition of the buildings with regard to the use of technical, human and technological expertise is suitable; (2) implementation of laws and regulations is efficient; (3) building safety factor is high; (4) rate of rent, intermediation, and brokerage is low; (5) growth rate is low; and (6) rate of stagnation is low. Fluctuations of housing market that are influenced by the macroeconomic structure of the country follow a particular model. Therefore, the main responsible authorities in this scenario are the

[Downloaded from mail.iueam.ir on 2026-09-28]
[DOR: 20.1001.1.23452870.1396.5.20.6.8]
[DOI: 10.29252/iueam.5.20.83]

government at the macro level, and the municipality, Land and Housing Organization and other organizations active in the field of land and housing at the micro level. In this scenario, there is no specific problem in field of land and housing for five years. According to these conditions, the price of housing during the five-year period has a relative stability and there is no gap between supply and demand; and excess demand over supply is eliminated. This situation comes with a reduced demand and price stability due to sticky-down prices. In this scenario, the conditions of building in terms of the safety factor and the use of technical and specialized knowledge are suitable.

Suggested scenario is for scenario of perseveration, protection and participation. In the event of the emergence of this perspective in the future, the Land and Housing Organization can contribute to the creation and sustainability of this situation through (a) protecting the proper conditions, (b) supporting the situation of land and housing in the conditions of improvement and (c) participation in the creation of appropriate conditions. Therefore, given appropriate status of this scenario where condition of building, implementation of law and regulation, safety factor, rate of rent, intermediation, brokerage, growth rate and stagnation rate are suitable, it is recommended that the current process be protected and that the necessary support and participation be taken place in order to keep these conditions in all effective factors.

Atmosphere of the Fourth Scenario: Low Decay- Low Enrichment

Strategy: Modification- Intervention- Support

It shows the condition in which both decay and enrichment are low in Land and Hosing Organization.

This scenario occurs when (1) the condition of buildings with regard to the use of technical, human and technological expertise is suitable; (2) implementation of laws and regulations is inefficient; (3) building safety factor is low; (4) rate of rent, intermediation, and brokerage is low; (5) growth rate is low; and (6) rate of stagnation is low. In this scenario, due to the problem in the condition of buildings, the implementation of laws and regulations, and the safety factor of buildings, organizations that are involved in the field of land and housing are responsible. In this atmosphere, the Land and Housing Organization is dependent on governmental organizations in decision-making area, this condition occurs in the specialized field of Land and Housing Organization; the subject can be coped with professionally. Any administrative reform and management review can prevent and respond to such a situation at a high organizational level. The implementation of public participation policies in this area can also satisfy capabilities of the Land and Housing Organization.

Suggested scenario is for scenario of modification- intervention- support. In such condition, the involved organizations such as the Ministry of Roads and Urban Development, Municipality, Land and Housing Organization, and other specialized areas must undertake reform process from now on. If necessary, they can prevent such situation by intervention in the affair; so organizations which can prevent occurrence of such situation should be supported.

Step 6: Monitoring and Control

It is recommended that the strategies and considerations be taken after implementation of the strategy.

[Downloaded from mail.iueam.ir on 2026-09-28]

[DOR: 20.1001.1.23452870.1396.5.20.6.8]

[DOI: 10.29252/iueam.5.20.83]

6- Conclusion and Discussion

In this research, we investigated the key factors affecting Land and Housing Organization in 1404. In this regard, the factors that have the highest impact-uncertainty were selected as pivot of scenario and are similar to researches of Haj-agha- memar et al., (2013), Zahedi and Khanloo (2011), Schwenker and Wulf (2014) and Wulf et al. (2010) in terms of method. In this study, the "scenario-strategy" matrix has also been developed to integrate strategies using a forward-looking perspective that is innovative aspect of the current study. Therefore, this study can develop some kind of coherence between scenarios and strategic planning for the integration and use of dual strategies. In the strategic planning and management system, the perspective is formed relying on the internal interests and priorities of the organization. However, the perspective from which outputs of the scenario process emerge, in addition to the interests and priorities of the organization, depends on the driving forces and key factors that are effective outside the organization. This creates a more logical perspective with a wider standpoint. Furthermore, in the strategic management system, the effects of the business environment are constantly monitored through information sensors in the environment inside and outside organization. We try to identify all possible strategies for the organization from contrasting with each other. We do not discuss which roots and causes result in their changes and deviation effective on the environmental factors. While strategic and expertise team conducts a lot of deep researches about driving forces and their impressionability and effect on each other. This results in the ability to recognize the deeper and wider grange of environmental changes. As a result, the organization with a better understanding will move forward smoother and more reliably (Khooshdahan, 2009). Therefore, future researchers are suggested to integrate strategic plan strategy with scenario- based strategy and to create new perspective and to expend optimal resource in order to present suitable methods and strategies regarding current position, future perspective, and prediction of future condition. The survey indirectly refers to sanctions and exchange rates that are cited in the study of Haj- agha-memar et al. (2013) and governmental limitation, public participation, and responsiveness outside of organization that are cited in the study of Zahedi and Khanloo (2011). Furthermore, strategies suggested in this study are strategy of nonintervention- guidance, strategy of resistance- transformation, strategy of perseveration-protection- participation, strategy of modification- intervention-support, while Maleki and Alavi-bakhteiarvand (2007) refer to attraction to participation in their studies; Kahrizi et al.(2015) refer to modification, optimization and design and reengineering; Doostar et al. (2011) refer to activation strategy of private sector in their studies; Poorasadi (2015) refers to modification in his study; Whitehouse (2002) refers to support, participation, and protection in his study; and Shariatmadari et al. (2013) refer to monitoring, determining appropriate policies, strict and precise regulations, support and encouragement.

Given that scenario is a tool to provide special insight and vision; therefore it is suggested that the Land and Housing Organization seek to identify environmental factors that have an uncertain impact on

[Downloaded from mail.iueam.ir on 2026-09-28]
[DOR: 20.1001.1.23452870.1396.5.20.6.8]
[DOI: 10.29252/iueam.5.20.83]

land and housing considering the developed scenarios and the use of proposed strategies to continuously counteract the probable negative effects of uncertainties, then they take advantage of the opportunities ahead and manage and control the potential threats as much as possible.

7- References

Akbari, N., & Zahedi-keivan, M. (2008). *Application of ranking and multi-criteria decision-making methods*, 1st Ed., Tehran: Publication of Municipalities and Rural Managers.

Alizadeh, A., Vahidi-motlagh, V., & Nazemi, A. (2009). *Scenario writing or scenario-based planning*, 1st Ed., Tehran: Publication of Andisheh Ati Negar;

Chermack, T. J., & Swanson, R. A. (2008). Scenario planning: human resource development's strategic learning tool. *Advances in Developing Human Resources*, *10*(2), 129-146.

Cobb, A. N., & Thompson, J. L. (2012). Climate change scenario planning: a model for the integration of science and management in environmental decision-making. *Environmental Modelling & Software*, *38*, 296-305.

Comes, T., Wijngaards, N., & Van de Walle, B. (2015). Exploring the future: Runtime scenario selection for complex and time-bound decisions. *Technological Forecasting and Social Change*, *97*, 29-46.

Doostar, M., Amini, M.T., & Koohneshinleili, M. (2011). Organizational management planning in a city (case study: municipality of Lahijan city), *Quarterly journal of technical and vocational education 6*(4), 48-58.

Ghafoori, M., Kheibari, M., &Madani, Y. (2016). Strategies for psychological preparation of Iranian elite goalkeepers during a competition, *Journal of Sports Management and Motor Behavior*, 12(24), 135-150.

Gossling, S. & Scott, D. (2012). Scenario planning for sustainable tourism: an introduction, *Journal of Sustainable Tourism, 20*(6), 773-778.

Gunnarsson-Östling, U., & Höjer, M. (2011). Scenario planning for sustainability in Stockholm, Sweden: environmental justice considerations. *International Journal of Urban and Regional Research*, *35*(5), 1048-1067.

Hafezi, R., & Esmaeelzadeh, H. (2014). *Guidance to scenario writing based on the B. Shop paper, first section: Introduction and Definition of the Problem*, Academic Center for Education, Culture and Research Publication.

Haj-agha-memar, H., Rahimnia, F., & Khorakian, A. (2013). Scenario writing of global business network, *Journal of Strategic Management Studies*, 4(16), 61-87.

Kahrizi, M., Bagheri-dehbaghi, M. & Asadi, Z. (2015). *Strategy development of western regional electric company based on identifying factors of SWOT matrix*, 30th International Electrical Conference, Tehran.

Kangas, J., Kurttila, M., Kajanus, M., & Kangas, A. (2003). Evaluating the management strategies of a forestland estate—the SOS approach. *Journal of environmental management*, *69*(4), 349-358.

Khooshdahan, A. (2009). *Future study with scenario building technique*, 1st Ed., Publication of Iranian Research and Training Center.

Maleki, A., & Alavi-bakhtiarvand, S.N. (2007). *Strategies to promote a solid waste recycling system by SWOT analysis in Iran*, Third National Conference on Waste Management, Tehran.

Njite, D. (2005). *Examining brand associations that influence consumers' restaurant preferences* (Doctoral dissertation, The Ohio State University).

Nyuur, R. B. (2015). Unlocking the potential barriers on SMEs' uptake of scenario planning. *Journal of Strategy and Management*, *8*(2), 139-154.

[Downloaded from mail.iueam.ir on 2026-09-28]

[DOR: 20.1001.1.23452870.1396.5.20.6.8]

[DOI: 10.29252/iueam.5.20.83]

Page, S. J., Yeoman, I., Connell, J., & Greenwood, C. (2010). Scenario planning as a tool to understand uncertainty in tourism: The example of transport and tourism in Scotland in 2025. *Current Issues in Tourism*, *13*(2), 99-137.

Poorasadi, M. (2015). Development of effective strategies to improve the health of NAJA traffic police using SWOT model, *Journal of Traffic Research Studies*, 5(16), 83-115.

Postma, A. (2015). Investigating scenario planning–a European tourism perspective. *Journal of Tourism Futures*, *1*(1), 46-52.

Rahmati, M., & Chaharsoghi, S.K. (2012). *Presentation of process to evaluate strategies by means of scenario planning*, First National Conference on Future Studies, Tehran.

Ramirez, R., & Selsky, J.W. (2014). Strategic Planning in Turbulent Environments: A Social Approach to Scenarios. *Long Range Planning*, *49*(1), 90-102.

Schwartz, P. (1997). *The Art of the long view: planning for the future in an uncertain world*. Translated by: Aziz Alizadeh, Tehran: Center for the Future Study of Defense Science and Technology.

Schwenker, B., & Wulf, T. (2014). Scenario-based strategic planning (developing strategies in an uncertain world), translated by Beyrami, M.H., Tehran: Donyaye Eghtesad.

Shariatmadari, M., Sarfaraz, A. H., Hedayat, P., & Vadoudi, K. (2013). Using SWOT analysis and SEM to prioritize strategies in Foreign exchange market in Iran. *Procedia-Social and Behavioral Sciences*, *99*, 886-892.

Van der Heijden, K. (1998). *Scenarios: the art of strategic conversation*, Defense Industry's Training and Research Institute.

Whitehouse, K. (2002). Local housing strategies for people with learning disabilities: Creating a plan that survives its publication. *Housing, Care and Support*, *5*(4), 17-22.

Wulf, T., Meissner, P., & Stephan, S. (2010). *A Scenario-based Approach to Strategic Planning.* Center for Scenario Planning, Roland Berger Research Unit, 1-32.

Yavarizadeh, M.R., & Azari-yekta, F. (2014). *Scenario writing, a method to support strategic planning in uncertainty*, Third National Conference on Future Studies, Tehran.

Zaboli, R., & Ajam, M. (2013). Learning strategies among emergency department staff in crisis, *Journal of Military Medicine*, 15(1), 25-36.

Zahedi, Sh., & Khanloo, N. (2011). Future study on the accountability of nongovernmental organizations in the field of health and wellbeing of Iran, *Journal of Management Science of Iran*, 6(21), 47-76.

Zarei, E. (2014). *Introduction to futures studies, future studies*, Publication of Jihad-e-Deneshgahi.

Zhang, N., Smura, T., Grönvall, B., & Hämmäinen, H. (2014). Scenario analysis for commercial Internet content delivery. *info*, *16*(3), 54-71.

[Downloaded from mail.iueam.ir on 2026-09-28]

[DOR: 20.1001.1.23452870.1396.5.20.6.8]

[DOI: 10.29252/iueam.5.20.83]