

Criteria for feasibility of establishing an organizational roadmap for organizational entrepreneurship

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Abstract

Background: The present study aimed to investigate and explain the criteria for the feasibility of deploying an organizational roadmap in line with organizational entrepreneurship.

Methods: In the qualitative section, using the Delphi technique, experts' opinion about the designed questionnaire to identify the indices and status was obtained and then using the exploratory method, the model was designed. In the quantitative section, a descriptive-survey method and a researcher-made tool were used to measure its external effectiveness. The statistical population of the first group consisted of selected experts and academics that 21 respondents answered the questionnaire. The statistical population of the second group consisted of managers of municipalities and their deputies in 15 different districts of Isfahan municipality who were a total of 240 people. Based on the sampling method, 144 individuals were surveyed. Questionnaires were distributed in the same number of the statistical population and 203 questionnaires were collected at the end. After editing, coding, and entering the data, descriptive and inferential statistics methods and LISREL_{8.5}, SPSS₂₁, and Excel₂₀₁₃ were used to analyze the data.

Results: Indicators of organizational entrepreneurship introduced as agility, flexibility, innovation, opportunism, and low cost were approved by experts. Indicators of roadmap design including technical, economic, legal, operational, and temporal ones were approved by experts.

Conclusion: Mayors' use of entrepreneurship and creative ideas, in addition to urban development, prevents excess costs and time and waste of government facilities and achieves urban development goals in line with the organizational roadmap.

Keywords: Cities; Entrepreneurship; Iran; Organizations.

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Introduction

Entrepreneurship has received much attention in many countries as the key to economic and social growth (1) and the prevailing assumption is that entrepreneurial activities are useful in many ways (2). By looking at global

growth we will find that with the expansion of advanced technologies, the role and position of entrepreneurs grow increasingly such that in the West and in some other countries, the last two decades have been called the Golden Decades of Entrepreneurship (3). In most developed and developing countries, the issue of

entrepreneurship has been considered as the most important source of development. Examination of the process of economic and social development in developed countries indicates that the economy is affected by entrepreneurship, and entrepreneurs play a significant role in economic and social development (4). Over the past thirty years, especially in the last two decades, the concept of entrepreneurship has evolved in existing organizations and has been identified under a variety of names including organizational entrepreneurship, intra-organizational entrepreneurship, entrepreneurship management, and strategic entrepreneurship. It seems that organizational entrepreneurship has attracted the most attention as a concept (5). In the development of the roadmap also customer and market needs must first be fully identified and examined. Then the visions and strategies needed by the organization must be determined and these strategies must be planned from macro-level to short-term plans (1). The roadmap shows how to create value for an organization for stakeholders (customers, shareholders, employees, and the community). Urban planning and management in Iran are also no exception. As municipalities are suffering from parallel, repeated, and multi-repeated work, inability in funding, and so on, thus, providing a unified approach to urban management seems necessary.

Based on the developed theoretical framework, the conceptual model of the present study is designed to better understand the number and types of main and sub-variables of research, the nature and function of the variables, examine the relationships between them and finally how to achieve the final research model which is presented in graphical form

in Figure 1. This study was conducted to answer the following questions.

What are the criteria for the feasibility of designing an organizational roadmap, what is the status of feasibility criteria for developing an organizational roadmap, How is the optimal model of the organizational roadmap, and How much is the validity of the optimal model of the organizational roadmap in line with organizational entrepreneurship in the Isfahan Municipality?

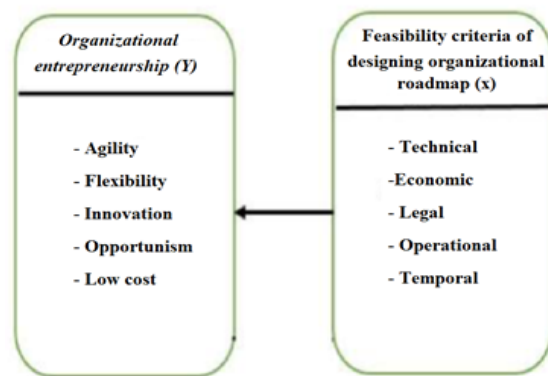


Figure 1. Conceptual model

Methods

The present study was applied and developmental in terms of purpose, descriptive case survey in terms of research method, quantitative in terms of approach, and exploratory research in terms of research strategy. The research process represents a set of sequential, relevant and regular actions that have been undertaken from the beginning to the end of the research to achieve the desired goals. In this regard, the present study consists of 4 stages and 16 actions. In the first stage which is referred to as “recognition”, identification of the subject, the problem and the goals of the research were pursued. In the second stage, named “explanation”, development of the proposed research model began by using exploratory studies. The main purpose of an exploratory research was to recognize a situation that there was not enough knowledge about it. In other words, in this type of research, the

researcher seeks to obtain information that through them he/she can understand the research subject well. In the third stage, called “analysis”, the questionnaires were developed based on the proposed research model. In the fourth stage, referred to as “verification”, given the results of field analyses, the (final) developmental model of research was developed and presented in the form of a questionnaire in order to evaluate the validity of the native model presented using the experts’ opinions.

The statistical population in the present study was divided into two groups:

The first group: includes selected and specialized experts and academics that had characteristics such as availability, experience, relevant educational degree, Ph.D. degree, teaching at university, and research and authorship experience in this regard who were 50 people. Their opinions were used in two sections. The first section was used for the questionnaires related to the identification of the research variables and the second section was used for measurement of validity and reliability of the final proposed model. The number of experts was 21.

The second group: included municipal managers and their deputies in 15 different districts of Isfahan Municipality who were a total of 240 people as follows:

Administrative, finance, construction, urban development, traffic, legal, and cultural deputies, and senior officers of operations, beautification, statistics, and planning, and informatics, and deputy of liberation and real properties from all 15 districts. The deputies located in the central municipality and deputies of municipalities and relevant managers were also in this group. Accordingly, in the present study, to select the suitable sample of senior managers community in different areas such as administrative and financial affairs, deputy of transportation, utilities, urban development, investment unit etc. in 15

different districts of Isfahan Municipality, multistage sampling method through simple random sampling was used. The sample size according to the above formulas was 144 people. In the present study, questionnaires were distributed in the same number of the statistical population and a total of 203 questionnaires were collected.

Accordingly, both field and library methods were used for data collection such that the library method was used to compile the research literature, and field method was used to collect the data related to the research variables. In the present study, after editing the data, descriptive and inferential statistics methods and software programs such as SPSS₂₁, Excel₂₀₁₃, and LISREL_{8.5} were used to analyze the data. The content validity method and Cronbach’s alpha were used to assess the validity and reliability of the questionnaires Table 1 and Table 2.

Table 1. Coefficients of content validity ratio of the research variables

Structure	Mean CVR coefficient of variables
Agility	0.81
Flexibility	0.905
Innovation	0.714
Opportunism	0.619
Low cost	0.905
Technical criteria	0.714
Economic criteria	0.81
Legal criteria	0.619
Operational criteria	0.714
Temporal criteria	0.81

Results

Examination of the demographic status of the respondents to the questionnaires showed that most of the respondents had a bachelor’s degree. Also, the most frequent organizational position was executive managers. The most frequent field of study was Governmental Management with Policy orientation. Also, the most frequent age group was 30-35 years old Table 3.

Table 2. Cronbach's alpha coefficients of the research variables

Variables	Cronbach's alpha	Variables	Cronbach's alpha
Organizational entrepreneurship	0.904	Agility	0.743
		Flexibility	0.704
		Innovation	0.806
		Opportunism	0.702
		Low cost	0.709
Roadmap design	0.876	Technical criteria	0.724
		Economic criteria	0.718
		Legal criteria	0.755
		Operational criteria	0.74
		Temporal criteria	0.724

Results of Delphi analysis of organizational entrepreneurship: In the first stage, among the five identified risk areas, the lowest average was related to opportunism and the highest average was related to agility according to experts' opinions. In the second stage, it can be seen that among the five identified indicators, the lowest average was related to opportunism and the highest average was related to agility according to experts' opinion. In fact, it can be said that there is a good consensus among experts. Therefore, indicators of agility, flexibility, innovation,

opportunism, and low cost, given the agreement among experts, are in an acceptable and appropriate level, and the above-mentioned indicators are approved by the experts.

Results of Delphi analysis in roadmap design areas: In the first stage, it can be seen that among the five identified areas, the lowest average is related to the operational area and the highest average is related to the legal area according to experts' opinions. In the second stage, it can be seen that among the five identified

Table 3. Demographic information of the participants

Variable	Number	Percentage	
Organizational position	Deputy of Administrative Affairs	12	5.9%
	Deputy Minister of Finance	31	15.3%
	Deputy of Urban Development	26	12.8%
	Deputy of Traffic	19	9.4%
	Legal Assistant	17	8.4%
	Cultural Department	22	10.8%
	Senior beautician	18	8.9%
	Senior Officer of Statistics and Planning	13	6.4%
	Informatics	8	3.9%
	Deputy for Liberalization of Property	3	1.5%
	Deputy Mayor	5	2.5%
	Other	4	2%
	Senior Executive Officer	25	12.2%
Education Degree	Expert	125	66.5%
	Master	58	28.6%
	Ph.D.	10	4.9%
Age	25 -30 years	34	16.7%
	30 - 35 years	63	31%
	35 - 40 years	42	20.7%
	40 - 45 years	10	4.9%
	45 -50 years	24	11.8%
	50 -55 years	16	7.9%
55 - 60 years	14	7%	

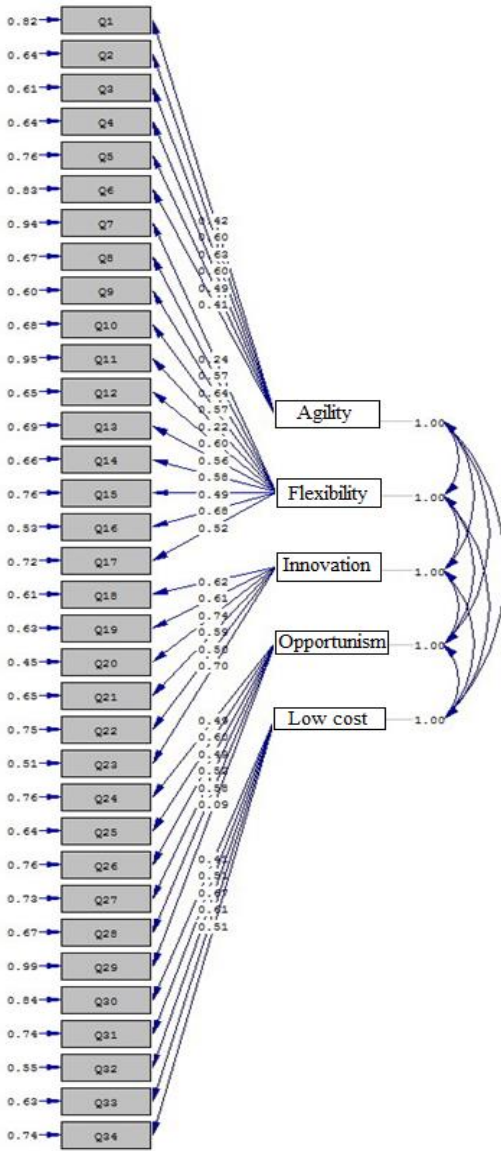


Figure 2. Factor analysis of organizational entrepreneurship variable

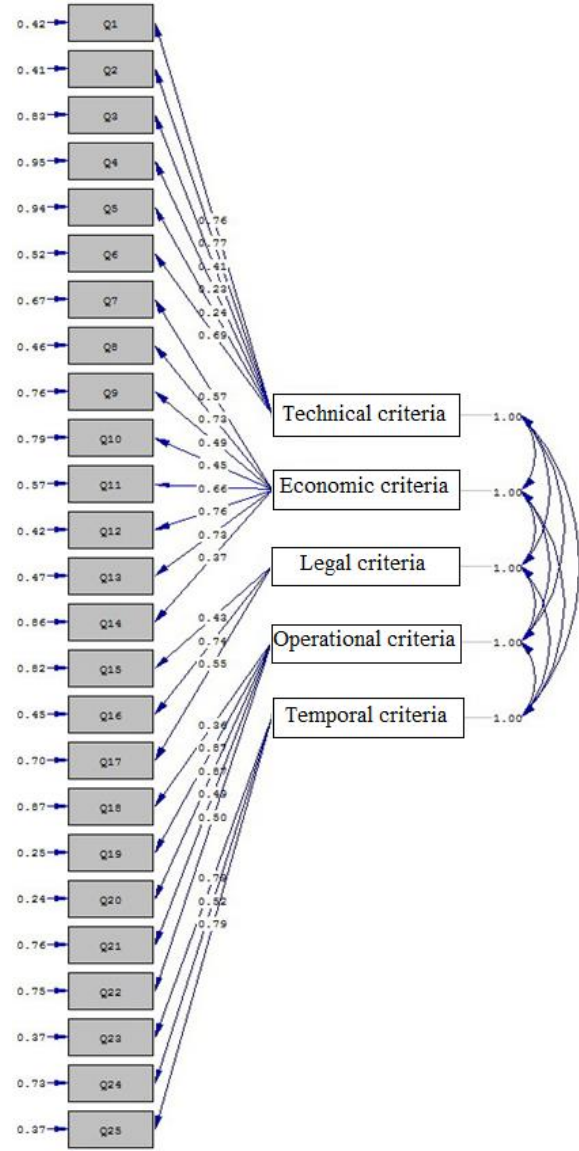


Figure 3. Factor analysis of the roadmap design variable

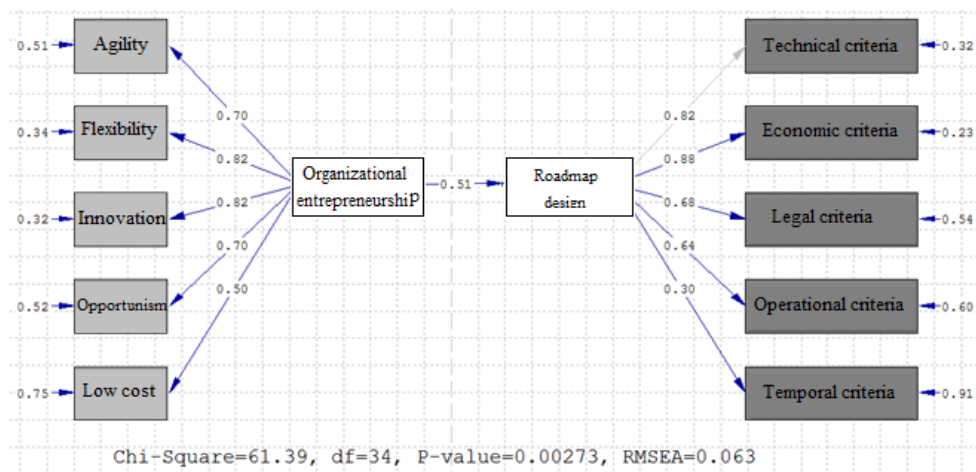


Figure 4. Final model of research

indicators, the lowest mean is related to the operational dimension and the highest average is related to the temporal dimension according to experts' opinions (Figure 2). In fact, it can be said that there is a good consensus among experts. Therefore, technical, economic, legal, operational, and temporal indicators, given the agreement among experts, are in an acceptable and appropriate level, and the above-mentioned indicators are approved by the experts (Figure 3).

In Figure 4 Factor analysis shows the relationship between roadmap design indicators (as rectangular) and technical, economic, legal, operational, and temporal dimensions (as an oval). The estimated coefficient for the relationship between indicators and dimensions must be higher than 0.4. Given the calculated values, it can be seen that for most of the indicators of this variable, this is at an acceptable level and they can be a good criterion for measuring the dimensions of roadmap design. It should be noted that questions 3, 4, 5, 10, 14, 18 were excluded from the model in order for a better fit of the model. It can be seen that in technical dimension, the highest factor load belongs to question number 2 with 0.88; for economic dimension, question number 12 with a factor load of 0.84; for legal dimension, question number 16 with a factor load of 0.84; for operational dimension, question number 20 with a factor load of 0.92; and finally for temporal dimension, question number 23 with a factor load of 0.81 Table 4.

Table 4. Fitness indices of the measurement model

Index	Acceptable range	Value	Result
X^2/df^1	$X^2/df \leq 4$	3.34	Relatively acceptable
RMSEA	RMSEA < 0.1	0.11	Relatively acceptable
GFI	GFI > 0.9	0.82	Relatively acceptable
CFI	CFI > 0.90	0.84	Relatively acceptable
IFI	IFI > 0.90	0.84	Relatively acceptable

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The Table 4 shows that confirmatory factor analysis of the questionnaire constructs has the goodness of fit and the questionnaire constructs represent the relevant variables well.

Discussion

The results of examinations showed that the identified sub-criteria and organizational entrepreneurship variables are above the average level. Therefore, all the identified sub-criteria in the research sample are above the average level and in a favorable position. Also, the sub-criterion of agility with an average of 3.9 has the highest average, and the sub-criterion of low cost with an average of 3.53 has the lowest average. Entrepreneurship not only as an economic driving and developing force but also in a wider dimension, as a dynamic social factor has been addressed by urban planners; and in addition to its role in the development of economic activities of the private sector, reducing unemployment, increasing manufacturing and business skills, as well as economic profitability, is also a dynamic and evolving factor in promoting social security of the society (6). Thus, the preparation and design of a roadmap in the administrative system and management of municipalities have become not an option but an inevitable necessity, and if it fails at this stage of the organizational life of municipalities, it will incur significant costs to citizens. Isfahan municipality is no exception (7).

Therefore, the identification of features of a good context for attracting and growth of entrepreneurs is one of the most essential issues for organizations today (8). Organizational entrepreneurs expect their performance to be properly encouraged. Although organizational entrepreneurship can have positive effects on an organization's performance, in some conditions the organizations may fail to take advantage of its benefits (9). Larwood et al., identify strengthening standard practices, the tendency of the organization to control rather than planning, task-based

management, and equally rewarding as barriers to organizational entrepreneurship (10). Have referred to a lack of organization's tendency to precise planning and lack of enough organizational support from entrepreneurial activities. Which is consistent with the results of the present study (11).

Also, all the identified sub-criteria and roadmap design variables are above average. Therefore, all the identified sub-criteria in the research sample are above the average level and in a favorable position. The technical sub-criterion with an average of 3.7 has the highest average and the operational sub-criterion with an average of 3.14 has the lowest average. Using the Pearson correlation test, the relationship between feasibility criteria of organizational roadmap design and level of organizational entrepreneurship in the municipality of the metropolitan city of Isfahan was examined and the results showed that technical, economic, legal, and operational sub-criteria have a significant relationship with organizational entrepreneurship. Therefore, there is a positive and significant relationship between technical, economic, legal, and operational sub-criteria and organizational entrepreneurship. So, it can be concluded that if the above-mentioned sub-criteria improve, the amount of organizational entrepreneurship will increase as well. But for the temporal sub-criterion, the relationship between the two variables is not significant and is not confirmed. The positive impact that organizational entrepreneurship has on organizational performance has led organizations to provide an appropriate context within the organization and seek to grow the creativity and innovation of organizational members. For this purpose, properly designing an organizational structure, human resource management techniques, control systems, organizational culture, and support from senior executives all lead to a spirit of entrepreneurship in the organization and the creative power of employees will

become active According to Klein & Convertino (12). Recent research areas related to entrepreneurship roadmap indicate that a combination of entrepreneurship and strategy, along with increasing recognition, is a path to growth in most organizations and national economies (13). Organizational entrepreneurs expect their performance to be properly encouraged. Although organizational entrepreneurship can have positive effects on an organization's performance, in some conditions the organizations may fail to take advantage of its benefits (9). Strategic entrepreneurship results from the intervention of strategic management knowledge and entrepreneurship. Entrepreneurship and strategic management are associated with growth and the creation of wealth (7). According to this study, six key elements are identified for strategic entrepreneurship, including opportunity identification, innovation, risk-taking, flexibility, vision, and growth (13). Apostolos & Zaridis, believe that new currents have been formed in entrepreneurship, which include social entrepreneurship, environmental entrepreneurship, public entrepreneurship, organizational entrepreneurship and humanitarian entrepreneurship (14). Organizational entrepreneurship is the emergence of behaviors or behavioral ratios outside the norm of doing business. Organizational entrepreneurship promotes entrepreneurial behavior in the organization and includes trends and activities that increase the organization's ability to face risks and facilitate the hunting of opportunities and innovations (15). Pedrini et al., in a research show that entrepreneurship education programs affect some physiological characteristics, skills and knowledge. Participants, who prioritize entrepreneurial goals, have a positive effect that is consistent with the present study (16). In an ultra-modern industrial society, it is related to the organizational structure, how it can be organized to make the right

decision that can be used to process information (17).

Identifying six dimensions of entrepreneurship (roadmap): inspirational, illustrative, realistic, flexible, public, and conservative. These dimensions are well agreed upon in the management and entrepreneurship literature. Entrepreneurship vision (roadmap) is defined as a futuristic picture of new businesses that stimulate entrepreneurs and all stakeholders to move toward achieving a desirable and possible future. Entrepreneurship can be implemented across all levels and systems in society, but the most important and efficient of these systems, we can definitely claim that it is the most effective of them. Implementation and deployment of an organizational roadmap in line with organizational entrepreneurship in entities, especially municipalities, can help much in different aspects of urban development. In other words, municipalities can use various tools such as training in order to teach creativity in a true manner in line with the organizational roadmap. In fact, training is an important tool for entrepreneurship transfer, and today, in various countries, many organizations are engaged in entrepreneurship training. Entrepreneurship training is the process or set of activities that seek to empower individuals and develop their knowledge, skills, values, and understanding of entrepreneurship. This process not only is related to unlimited activities but also many problems that need to be identified, defined, determined and resolved during it.

Recommendations

Entrepreneurship is a very important issue that many developed and developing countries pay serious attention to it.

1. It is therefore suggested that in these societies, especially in Iran, entrepreneurship should become a powerful tool to create good opportunities that use of them can remove problems such as

employment crisis, shortage of creative and dynamic human resources, significant decline of efficiency, reduced quality of products and services, economic recession, and increased competition. That can prioritize the education and training of entrepreneurs in their socio-economic development programs. So, they can prioritize educating and training of entrepreneurs in their socio-economic development programs.

2. It is suggested to the government to use entrepreneurship to relieve the poor from poverty, and many non-governmental organizations to present it as an important tool to assist their activities, hoping that senior executives of organizations and government will pay attention to the issue of entrepreneurship and entrepreneurs.

3. It is suggested that organizations should, by using new methods of service, promoting employee and customer satisfaction, appropriate use of workforces in the organization in order for optimal use of their capabilities and talents, training their employees to increase factors of risk-taking, acceptance of change, and embracing of challenges in them, appropriate management of entrepreneurial behaviors, and enhancing good organizational culture in line with organizational entrepreneurship, seek to create and develop entrepreneurship in their organization.

4. As organizational entrepreneurship has a synergistic effect on the long-term development of society in different social, economic, and cultural dimensions, societies need to implement entrepreneurship rules in order for growth and development, and they must direct the nature of their activities and goals toward this and take steps in this path.

Today, roadmap design has become a vital planning tool for entities, including growing municipalities.

1. It is suggested that roadmaps for implementation of e-government should be

founded heavily influenced by investments on key technologies. In other words, successful roadmap implementation will lead to significant development; so, it can be said that these investments are very important.

2. It is suggested to look for evaluating different methods of development roadmap design and implementation of e-government which is the final output of strategic planning so that finally, the overall framework of the planning process and general methodology of roadmap development for governmental departments can be extracted.

Conclusion

Based on the research results, municipalities and government organizations are expected to improve the level of knowledge, skills and human resources of municipalities according to their job needs based on competency models and systems, design and implementation of the top mayor festival with an entrepreneurial approach with the aim of celebrating the top mayors on Mayor's Day based on the performance management system in municipalities, nurturing successors, nurturing competent people and meritocracy in order to nurture new entrepreneurial approaches in line with the organizational roadmap, knowledge-based and meritocracy based on Islamic ethics in determining the task and promotion of creative managers and entrepreneurs. It is necessary to create the ground for the spiritual growth of human resources and upgrade their level of knowledge, expertise and skills, create a knowledge-based administrative system by applying the principles of knowledge management and information integration according to new services and in line with the organizational roadmap, the institutionalization of work conscience, discipline social, culture of self-control, fiduciary, savings, simple living and preservation of government property in line with the organizational roadmap,

supporting the spirit of innovation and promoting its culture and its continuous improvement for the dynamism of the administrative system to be considered by managers and policymakers. Given the country's long-term future planning and the country's non-reliance on underground resources economically, attention to modern-day science and technology is of particular importance. And on the other hand, in today's world, given the different technologies, those individuals or companies will succeed that have the first and the best thought or idea in their field of work which invokes the same entrepreneurship debate. So today, given that governmental facilities, especially in municipalities, can be used to implement entrepreneurship issues in line with urban development, it can be said that it is of particular importance. So, it can be concluded that if mayors can use entrepreneurship in urban development, and incorporate creative and entrepreneurial ideas into the implementation of the organizational roadmap, in addition to urban development, they can prevent surplus costs and surplus time and waste of governmental facilities and achieve urban development goals in line with the defined organizational roadmap.

Author's contribution

Shahla Yaghoubi and Saeed Sayadi developed the study concept and design. Sanjar Salajegheh acquired the data. Shahla Yaghoubi and Saeed Sayadi analyzed and interpreted the data, and wrote the first draft of the manuscript. All authors contributed to the intellectual content, manuscript editing and read and approved the final manuscript.

Informed consent

Questionnaires were filled with the participants' satisfaction and written consent was obtained from the participants in this study.

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Conflict of interest

The authors declare that they have no conflict of interests.

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Appendix 1: Organizational Entrepreneurship Factors

Organizational Entrepreneurship Factors	Indicators
Agility	<p>Q1. Speed in carrying out activities can promote entrepreneurship.</p> <p>Q2. The development of competencies provides entrepreneurial incentives.</p> <p>Q3. Improving products and services provides the necessary ideas to create new ideas.</p> <p>Q4. Learning provides the basis for creating entrepreneurial conditions.</p> <p>Q5. Measuring the market situation provides conditions for organizational entrepreneurship in order to improve the future situation of the organization.</p> <p>Q6. The state of productivity is a factor in order to strengthen the foundations of entrepreneurship in the organization.</p>
Flexibility	<p>Q 7. Our employees can move from the current job to a new job with similar responsibilities in a short time.</p> <p>Q 8. Our employees can go to more suitable (higher quality) jobs in a short time.</p> <p>Q 9. Employees in our unit have many skills that can be used in tasks corresponding to other jobs.</p> <p>Q 10. Employees in this unit (department) try to constantly update their skills and abilities.</p> <p>Q 11. Employees in this unit learn the procedures and processes introduced in their jobs in a short period of time.</p> <p>Q 12. Employees in this unit anticipate future skill requirements that may be needed to perform their jobs.</p> <p>Q 13. When employees in this unit are unable to perform certain tasks, they quickly learn how to perform that task.</p> <p>Q 14. When employees identify problems in doing their jobs, they voluntarily try to identify the causes of these problems.</p> <p>15. Most of the changes that happened in this unit were suggested by the staff.</p> <p>Q 16. Employees in this unit act effectively when problems arise, even in cases where they do not have complete information about the problem.</p> <p>Q 17. Employees in this department work effectively under uncertain and ambiguous conditions.</p>
Innovation	<p>Q 18. Innovative ideas are necessary for the proper supply of services with new functionality.</p> <p>Q 19. In order to provide better services, we try to present new plans and ideas.</p> <p>Q 20. The organization has the ability to implement new services when it is on the agenda.</p> <p>Q 21. Innovative and creative employees can be encouraged with financial and non-financial rewards.</p> <p>Q 22. The organization can look for ways to promote innovative and innovative employees.</p> <p>Q 23. The organization can use experiences and innovative ideas to improve technical and appropriate products.</p>
Opportunism	<p>Q 24. There are situations in the market that are recognized as controllable and positive results are expected.</p> <p>Q 25. Circumstances arise so that activities and services are carried out in order to improve the current situation of the organization.</p> <p>Q 26. Can be controlled by the organization.</p> <p>Q 27. Situations and opportunities bring positive results for the organization.</p> <p>Q 28. It refers to the possibility of meeting the needs of the market.</p> <p>Q 29. It is defined in order to create a solution to solve the problem.</p>
Low cost	<p>Q30. Low cost can be defined in the direction of proper planning to achieve the desired goals of the organization.</p> <p>Q31. Being low-cost makes activities in line with the goals of the organization to be carried out with the criterion of financial savings.</p> <p>Q32. Being low-cost changes the attitude of managers towards investing in new opportunities.</p> <p>Q33. Being low-cost makes the organization have the tendency to reject high-risk projects.</p> <p>Q34. Being low-cost makes the organization make different efforts in the direction of rebuilding the main ideas and goals.</p>

Appendix 2: Roadmap Design Factors

Roadmap Design Factors	Indicators
Technical criteria	Q1. Technological capacity Q2. Flexibility Q3. Technical and scientific reliability (lack of risk) Q4. Quality of service Q5. Degree of localization required Q6. Ease of implementation and management of activities
Economic criteria	Q7. Entrepreneurial experience Q8. Income Q9. Work experience Q10. Individual values Q11. Professional qualification Q12. Management experience Q13. Tolerance of working hours Q14. Experience failure
Legal criteria	Q15. Government and legal support Q16. Current laws and regulations and approvals Q17. Legal barriers
Operational criteria	Q18. Ability to learn Q19. The ability of the organization to keep the knowledge related to technology up to date Q20. Details of the operational plan in execution Q21. Determining the person responsible for the implementation of all stages of the operational plan Q22. Determining the annual financial impact of the operational plan and the necessary resources for its implementation
Temporal criteria	Q23. Determine the time frame Q24. Progress in the goals and objectives of the program Q25. Reducing the time period of implementing the program with any level of assurance