An Interpretive and Content-Aligned Framework for Urban Entrepreneurship Toward Sustainable Income Generation: Utilizing Thematic Analysis Approach

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Abstract

In the contemporary era, cities, as primary hubs of economic and social growth, are facing complex challenges in securing sustainable financial resources. Urban entrepreneurship, as an innovative strategy, can bridge individual creativity with collective development, steering cities toward sustainable income generation. The present study aims to design an interpretive and structured framework for urban entrepreneurship geared toward sustainable income generation, utilizing the thematic analysis approach. This research is applied in purpose and descriptive in terms of data collection, conducted with an exploratory approach based on the interpretivist paradigm. The study's participant community comprised university professors specializing in entrepreneurship and urban management, as well as municipal managers from the country's major metropolitan areas. Sampling was carried out using a purposive sampling method, reaching theoretical saturation after 25 interviews. Data collection tools included semi-structured interviews and questionnaires. The findings of this study revealed four overarching themes (infrastructural factors, urban entrepreneurship, sustainable income generation policy, and sustainable income generation), 12 organizing themes (entrepreneurial ecosystem, creative city, policy and urban prosperity, entrepreneurial production conditions, entrepreneurial mindset, entrepreneurial capability, entrepreneurial aspirations, marketing strategy, environmental performance, economic performance, social performance, and sustainable urban economy), and 69 basic themes. To assess the reliability of the identified organizing themes and to explain them within the context of urban entrepreneurship policymaking for sustainable income generation, a fuzzy Delphi analysis was conducted. Based on the evaluation of the first and second phases of the Delphi analysis, all dimensions were confirmed, enabling their assessment through interpretive structural modeling (ISM). Consequently, efforts were made to identify the most influential themes in the urban entrepreneurship policymaking model for sustainable income generation. In analyzing the results, it should be noted that, as indicated in the model, the variables of the entrepreneurial ecosystem, creative city, policy and urban prosperity, and entrepreneurial production conditions were identified as the most impactful themes in the urban entrepreneurship policymaking model for sustainable income generation..

Keywords: *Policymaking, Urban Entrepreneurship, Sustainable Income Generation, Municipalities of Major Metropolises*.

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1. Introduction

Entrepreneurship contributes to addressing issues and challenges related to sustainable development. From this perspective, entrepreneurship within the framework of sustainable development is referred to as "sustainable entrepreneurship," as it facilitates the discovery, creation, and exploitation of opportunities. Additionally, through the development of new products and services while adhering to environmental considerations, it leads to economic development and sustainable revenue generation. Sustainable entrepreneurs can act as active agents against social and environmental threats while achieving economic development goals. Attaining such an approach in the field of entrepreneurship requires policy-making by legislative institutions and regulatory bodies in different countries [1]. Entrepreneurial policy provides functional evidence for participants in the regional innovation system, including universities, companies, and governments. It also offers financial facilities, tax incentives, and support for companies and entrepreneurial individuals to encourage innovation and entrepreneurial activities, which constitutes an integral part of entrepreneurship policy-making. Regional policies should be able to attract investment and talented human resources to foster growth and prosperity. Through the implementation of such policies, regional economic dynamism and sustainable growth become feasible [2].

If the efficiency and effectiveness of entrepreneurship in a country are to improve, a fundamental shift in policies by regulatory organizations is necessary. Reforming these policies is essential for transforming a country into an entrepreneurial and economy-driven nation. In recent years, a significant portion of the government's budget has been allocated to entrepreneurship under various ministry programs, including the Ministry of Science, Research, and Technology, the Ministry of Labor and Social Welfare, and the Ministry of Education. Proper and efficient utilization of public funds in the entrepreneurship sector and related scientific research requires a structured policy-making system. Accordingly, identifying an entrepreneurial development model that emphasizes the role of government and aligns with the country’s conditions is a critical issue [3]. A review of entrepreneurship development policy models reveals that these models are influenced by their designers’ ontological and anthropological foundations, as well as economic, social, institutional, cultural, and technological conditions. These policies depend on the specific circumstances of each country, and there is limited credible evidence regarding their effectiveness [4]. In the field of entrepreneurship, policy-making is the key factor in the success of long-term entrepreneurial programs. Since implementation should not be separated from policy formulation, specific measures must be considered in the policy formation stage. Therefore, policy-making is the primary guarantee for the successful implementation of macro-level entrepreneurship policies [5-8].

One of the major domains of entrepreneurship is urban entrepreneurship. Urban entrepreneurship involves actions taken by individuals who live in cities to meet their needs. By leveraging urban opportunities through the establishment of small businesses in collaboration with private and public sectors, they strive to improve quality of life and well-being. From this perspective, it is essential to focus on how urban entrepreneurship is established by identifying influencing variables. The establishment and institutionalization of urban entrepreneurship is a highly complex process that, despite researchers' efforts to clarify it, still contains many unknown and ambiguous aspects requiring further examination [9].

A central topic in urban entrepreneurship is sustainability. Entrepreneurial policies should be designed in a way that leads to sustainable urban development and revenue generation. Sustainable urban development is a process aimed at achieving sustainability in environmental, political, social, and economic resources, maximizing individual and societal well-being. Policy-making must be structured to enable individuals, either independently or collaboratively, to take financial risks and bear social, ethical, psychological, and financial responsibilities while using creativity and innovation to create new products and contribute to urban entrepreneurship development [10]. From this perspective, promoting entrepreneurial activities is a key strategy for sustainable economic development. These activities have significant impacts on a country's economic growth and employment creation. In recent decades, particularly in discussions on strengthening and accelerating economic growth, considerable attention has been given to entrepreneurship. Moreover, researchers worldwide have conducted extensive studies in this area. Research findings indicate the importance of entrepreneurship in achieving sustainability and sustainable development goals [11].

On the other hand, achieving sustainable employment and revenue is a fundamental issue in urban economies and municipalities. The rapid expansion of urbanization worldwide and the accelerated, unbalanced population growth in the country have posed serious challenges for

municipal institutions, particularly regarding the attainment of sustainable revenues for urban residents. This challenge arises because, with an increasing urban population, numerous needs emerge, many of which fall under the responsibilities of urban managers. However, insufficient and inconsistent financial resources fail to meet the high demand for urban services. This inefficiency is not only rooted in environmental factors, such as the lack of necessary capacities for producing public and urban goods, but also in municipalities' inability to establish a robust financial system, which significantly contributes to financial inefficiency [12].

Today, municipalities, as local governments, are responsible for providing public services in cities. To finance these responsibilities, they require sustainable revenue sources, particularly given the rapid population growth in urban communities, which has made financial resource allocation for addressing citizens' needs a focal issue. A key question for municipalities is: what solutions does the current economic situation offer for establishing a proper revenue structure? The limited access to financial resources directly impacts municipalities' developmental and social activities. The shortage of financial and revenue resources has prompted experts to propose solutions for addressing financial challenges and achieving sustainable revenue generation [13].

Urban entrepreneurship requires specific policy-making approaches, and entrepreneurial development policies in cities should be formulated with a specialized perspective. These policies must focus on achieving economic goals alongside social and environmental objectives [14]. Given the growing importance of urban entrepreneurship, entrepreneurship policy-making requires a precise theoretical foundation to facilitate the establishment of an entrepreneurial economy, encourage more entrepreneurs, and achieve national goals. On an international level, organizations such as the Global Entrepreneurship Monitor have initiated the evaluation, monitoring, and development of urban entrepreneurship indicators to promote sustainable urban economies. Additionally, institutions like the World Bank and the World Economic Forum publish annual reports on business environments, emphasizing the improvement of business ecosystems to foster urban entrepreneurship [15].

Recent research on entrepreneurship policy and its impact on urban and rural development has provided valuable insights into various dimensions of entrepreneurial ecosystems. Karimzadeh and Saadi (2022) conducted a study comparing women's entrepreneurship development in urban and rural areas, revealing that the city of Marivan has a more favorable environment for women's entrepreneurship compared to nearby rural areas, particularly villages experiencing urban sprawl [11]. Similarly, Alvani et al. (2021) developed a policy model for entrepreneurship development in Iran, identifying nine main and 44 subcategories, which were validated using a fuzzy Delphi approach [3]. Rizvandi et al. (2021) explored urban entrepreneurship in major Iranian cities, demonstrating the significant influence of the creative city, entrepreneurial ecosystem, and entrepreneurial production/service conditions, while also identifying the negative moderating role of urban density and the positive role of environmental complexity [9]. Dimiad and Piyastegar (2021) used structural equation modeling to assess the impact of entrepreneurship on sustainable urban development, finding a significant overall effect ($\beta = 0.662$) that explained 44% of the variance in sustainable urban development [16]. Saeidi et al. (2021) analyzed the role of rural entrepreneurship in local sustainability, emphasizing the challenges of rural-urban linkages in the Dalahoo region, where dispersed settlements and market inaccessibility hinder entrepreneurial growth [17]. Shakib et al. (2020) used game theory to model the urban entrepreneurship ecosystem in Kermanshah, concluding that without policy interventions, the status quo is likely to persist, necessitating strategic policy changes to influence actors' preferences [18]. Savadi (2020) examined the factors influencing entrepreneurship in urban settings, particularly in recreational tourism, finding that among political, economic, social, and cultural indicators, only a subset significantly impacted entrepreneurial development [19]. In international studies, Huang et al. (2022) investigated how entrepreneurship policy combinations activate regional innovation, identifying three pathways for high innovation potential in Chinese provinces and emphasizing the importance of localized policy approaches [2]. Egan (2022) proposed a framework for assessing high-tech urban entrepreneurship policies, highlighting variations in welfare effects and non-market activities undertaken by policy institutions [14]. Kantis et al. (2020) introduced a new evidence-based platform for discussing entrepreneurship policies in emerging economies, proposing systemic balance and dual ecosystems as key concepts for understanding entrepreneurial configurations in underdeveloped regions [20]. Collectively, these studies underscore the importance of tailored entrepreneurship policies that consider regional socio-economic conditions and systemic entrepreneurial dynamics.

Accordingly, the present study aims to design and propose an urban entrepreneurship policy-making model for sustainable revenue generation, with a case study of Sabzevar Municipality. In other words, the proposed model simultaneously considers both entrepreneurship policy-making and urban entrepreneurship to achieve sustainable revenue generation outcomes. Notably, previous studies have examined "entrepreneurship policy-making," "urban entrepreneurship," and "sustainability" separately or in pairs, whereas this study adopts an integrated approach that addresses all three components together. Therefore, this study attempts to fill the research gap regarding a comprehensive perspective on sustainable urban entrepreneurship policy development, covering an existing research void. The present study seeks to answer the key question: What is the urban entrepreneurship policy-making model for sustainable revenue generation in Sabzevar Municipality?

2. Methodology

This study is philosophically based on the interpretivist paradigm and was conducted using an inductive approach. In terms of its objective, it is an applied research study aimed at presenting an urban entrepreneurship policy-making model for sustainable revenue generation in Sabzevar Municipality. Regarding data collection, it is a descriptive research study carried out with an exploratory research design.

The study population consisted of entrepreneurship and urban management scholars as well as managers of Sabzevar Municipality. Based on the criteria outlined by Miller et al. (2010), five key factors were considered in participant selection: significance, prominence, theoretical knowledge, diversity, and motivation for participation [21]. The sampling method was purposive, and coding and analysis were performed after each interview. Theoretical saturation was reached after 22 interviews, but to avoid false saturation, three additional interviews were conducted. After completing 25 interviews, it was confirmed that no new themes emerged. For the model development phase, the insights of the same experts were utilized to maintain consistency and methodological integrity in the research.

The primary data collection tools were semi-structured interviews and questionnaires. The interviews included four initial questions and were conducted in a semi-structured manner. In the next stage, a fuzzy Delphi questionnaire and a decision matrix-based questionnaire were used.

The validity of the qualitative section was assessed based on Lincoln and Guba's (1985) four criteria: credibility, transferability, confirmability, and dependability, which were evaluated and approved by expert reviewers. The reliability of the qualitative section and coding of the conducted interviews was examined using Holsti's method. For this purpose, the interview transcripts were coded in two stages, and the percentage agreement observed (PAO) was calculated.

The PAO value in this study was determined to be 0.728, which is greater than 0.6, indicating an acceptable level of reliability for the qualitative section. For assessing the reliability of the structural-interpretive modeling, the intraclass correlation coefficient (ICC) was estimated at 0.84, falling within the range of 0.75 to 0.90, which confirms an adequate level of reliability.

The primary method used in the qualitative section was thematic analysis, through which the themes of the urban entrepreneurship policy-making model for sustainable revenue generation in Sabzevar Municipality were identified. The thematic analysis (coding of themes) was performed using MaxQDA 20 software. In the second phase, to ensure the validity of the identified themes, the fuzzy Delphi method was applied using MatLab software. Finally, the model was developed using structural-interpretive modeling in MicMac software.

3. Findings and Results

In the qualitative phase, 25 participants, including 12 university professors and 13 municipal managers, took part in the study. In terms of gender distribution, 19 participants were male and 6 were female. Regarding age, 2 participants were under 35 years old, 11 were between 35 and 45 years old, and 12 were 45 years old or older. In terms of educational background, 8 participants held a master's degree, while 17 had a doctoral degree. Regarding work experience, 5 participants had between 10 and 20 years of experience, whereas 20 participants had more than 20 years of work experience.

To develop an urban entrepreneurship policy-making model for sustainable revenue generation in Sabzevar Municipality, specialized semi-structured interviews were conducted with municipal managers and urban management scholars. The interview protocol included four initial questions, with the possibility of additional questions being asked as needed. After conducting the interviews, the researcher transcribed the data in detail, incorporating

descriptive elements such as interviewees' emotional expressions in response to questions and environmental conditions. Thematic analysis was performed following the six-step approach proposed by Attride-Stirling (2001).

The first step involved familiarization with the depth and content of the text, achieved through multiple readings and the documentation of initial ideas. The researcher actively engaged with the data by rereading it several times to explore meanings and patterns. Following this, the coding process commenced. Coding was conducted throughout the analysis, with new interviews being coded and analyzed iteratively until data saturation was reached. The criterion for achieving data saturation was the recurrence of extracted codes. A total of 229 initial codes were identified from the interview transcripts. These concepts were categorized into 69 sub-themes, which were then grouped into 12 main themes. The themes of the urban entrepreneurship policy-making model for sustainable revenue generation in Sabzevar Municipality are presented in Table 1.

Table 1. Themes of the Urban Entrepreneurship Policy-Making Model for Sustainable Revenue Generation in Sabzevar Municipality

Comprehensive Themes	Organizing Themes	Basic Themes
Infrastructure Factors	Entrepreneurial Ecosystem	1. Supporting institutions for urban entrepreneurship
		2. Supportive entrepreneurial culture in urban settings
		3. Educational support centers
		4. Professional consultants
		5. Urban stakeholder community
		6. Urban climate
	Creative City	7. Open exchange environment
		8. Suitable cultural environment
		9. Technological infrastructure
		10. Creative urban industries
		11. Regulations and incentives
		12. Entrepreneurship support
		13. Access to infrastructure
		14. Urban livability
	Urban Policy and Prosperity	15. Productivity
		16. Decent work
		17. Equity and social cohesion
		18. Environmental sustainability
		19. Urban governance
Entrepreneurial Production Conditions	Monetary and Financial Facilities	20. Financial and monetary facilities
		21. Industrial and service clusters
		22. Urban marketplaces
		23. Employment exhibitions
		24. Urban branding
		25. Intra-urban jobs
Urban Entrepreneurship	Entrepreneurial Attitude	26. Cultural support
		27. Networking among innovators
		28. Risk acceptance
		29. Innovation skills
		30. Opportunity recognition
	Entrepreneurial Capability	31. Competition
		32. Human capital skills
		33. Technology adoption
		34. Innovation based on opportunities
	Entrepreneurial Vision	35. Financial support
		36. Globalization
		37. High growth potential
		38. Process innovation
		39. Product innovation
Sustainable Revenue Policy	Marketing Strategy	40. Clear vision for urban entrepreneurship and sustainable revenue generation
		41. Defined missions for urban entrepreneurship and sustainable revenue generation
		42. Long-term goal setting for urban entrepreneurship and sustainable revenue generation

		43. Strategic planning for long-term objectives
		44. Short-term goal setting for urban entrepreneurship and sustainable revenue generation
		45. Operational policies for short-term objectives
		46. Providing implementation trends and procedures for urban entrepreneurship and sustainable revenue generation
		47. Developing and enforcing legal and regulatory frameworks for urban entrepreneurship and sustainable revenue generation
Sustainable Revenue Generation	Environmental Performance	48. Supporting green entrepreneurial activities
		49. Assisting entrepreneurs in utilizing renewable energy
		50. Reducing pollution and greenhouse gas emissions
		51. Minimizing toxic and environmentally harmful substances
		52. Implementing green entrepreneurial processes
	Economic Performance	53. Increasing the market share of urban entrepreneurship
		54. Enhancing sales and revenue from urban entrepreneurship
		55. Improving return on investment in urban entrepreneurship
		56. Enhancing the profitability of urban entrepreneurship
	Social Performance	57. Participation in charities and philanthropic activities
		58. Organizing and supporting social events
		59. Supporting public-benefit activities
		60. Active involvement in social initiatives
		61. Addressing societal demands
	Sustainable Revenue Generation	62. Collecting general levies within sustainable revenue streams
		63. Collecting specific levies within sustainable revenue streams
		64. Allocating service fees and institutional revenue to sustainable revenue streams
		65. Allocating revenues from municipal assets and properties to sustainable revenue streams
		66. Governmental and organizational grants in sustainable revenue domains
		67. Donations, gifts, and assets within sustainable revenue domains
		68. Collected fees and revenues contributing to sustainable revenue streams
		69. Allocating received loans within sustainable revenue domains

The main themes of the urban entrepreneurship policy-making model for sustainable revenue generation in Sabzevar Municipality include the entrepreneurial ecosystem, creative city, urban policy and prosperity, entrepreneurial production conditions, entrepreneurial attitude, entrepreneurial capability, entrepreneurial vision, marketing strategy, environmental performance, economic performance, social performance, and sustainable revenue generation.

To screen and identify the final indicators for the urban entrepreneurship policy-making model for sustainable revenue generation in Sabzevar Municipality, the fuzzy Delphi method was employed. Experts' opinions regarding the importance of each indicator were collected using a seven-degree fuzzy scale.

Table 2. Seven-Degree Fuzzy Scale for Indicator Valuation

Linguistic Variable	Fuzzy Value	Fuzzy Numeric Scale
Completely Unimportant	ĩ	(0, 0, 0.1)
Very Unimportant	2̃	(0, 0.1, 0.3)
Unimportant	3̃	(0.1, 0.3, 0.5)
Neutral	4̃	(0.3, 0.5, 0.75)
Important	5̃	(0.5, 0.75, 0.9)
Very Important	6̃	(0.75, 0.9, 1)
Completely Important	7̃	(0.9, 1, 1)

Initially, experts' perspectives on the importance of each indicator were collected and fuzzified using the scale presented in Table 2. Next, experts' opinions were aggregated using the fuzzy mean method. The defuzzification process was conducted using the center-of-

area method, following the approach proposed by Zhang and Tang (1993).

Defuzzified values greater than 0.7 were considered acceptable, while any indicator scoring below 0.7 was eliminated. All indicators obtained scores above the acceptance threshold, and no indicators were removed. However, for greater certainty, an additional round was conducted. The fuzzy Delphi analysis continued for the remaining indicators in the second round. In this round, no indicators were eliminated, signaling the conclusion of the Delphi rounds. A common approach to determining the conclusion of the Delphi method is comparing the mean scores of indicators between the first and second rounds. If the difference between the two rounds is less than the threshold of 0.2, the survey process is terminated.

Table 3. Difference in Definite Scores Between the First and Second Rounds

Indicators	First-Round Score	Second-Round Score	Difference	Result
Supporting institutions for urban entrepreneurship	0.860	0.802	0.058	Consensus
Supportive culture for urban entrepreneurship	0.817	0.779	0.038	Consensus
Educational support centers	0.794	0.859	0.065	Consensus
Professional consultants	0.815	0.850	0.035	Consensus
Urban stakeholder community	0.832	0.825	0.007	Consensus
Urban climate	0.803	0.805	0.002	Consensus
Open exchange environment	0.849	0.857	0.008	Consensus
Suitable cultural environment	0.817	0.812	0.005	Consensus
Technological infrastructure	0.813	0.799	0.014	Consensus
Creative urban industries	0.859	0.845	0.014	Consensus
Regulations and incentives	0.821	0.844	0.023	Consensus
Entrepreneurship support	0.807	0.767	0.040	Consensus
Access to infrastructure	0.815	0.782	0.033	Consensus
Urban livability	0.825	0.813	0.012	Consensus
Productivity	0.826	0.839	0.013	Consensus
Decent work	0.835	0.823	0.012	Consensus
Equity and social cohesion	0.849	0.832	0.017	Consensus
Environmental sustainability	0.783	0.842	0.059	Consensus
Urban governance	0.799	0.830	0.031	Consensus
Financial and monetary facilities	0.825	0.825	0.000	Consensus
Industrial and service clusters	0.804	0.853	0.049	Consensus
Urban marketplaces	0.837	0.807	0.030	Consensus
Employment exhibitions	0.801	0.822	0.021	Consensus
Urban branding	0.834	0.833	0.001	Consensus
Intra-urban jobs	0.805	0.863	0.058	Consensus
Cultural support	0.855	0.820	0.035	Consensus
Innovators' networking	0.799	0.845	0.046	Consensus
Risk acceptance	0.847	0.793	0.054	Consensus
Innovation skills	0.833	0.850	0.017	Consensus
Opportunity recognition	0.860	0.862	0.002	Consensus
Competition	0.825	0.863	0.038	Consensus
Human capital skills	0.839	0.829	0.010	Consensus
Technology adoption	0.832	0.812	0.020	Consensus
Innovation based on opportunities	0.832	0.823	0.009	Consensus
Financial support	0.820	0.817	0.003	Consensus
Globalization	0.792	0.827	0.035	Consensus
High growth potential	0.817	0.850	0.033	Consensus
Process innovation	0.837	0.827	0.010	Consensus
Product innovation	0.839	0.799	0.040	Consensus
Clear vision for urban entrepreneurship and sustainable revenue generation	0.850	0.817	0.033	Consensus
Defined missions for urban entrepreneurship and sustainable revenue generation	0.860	0.857	0.003	Consensus
Long-term goal setting for urban entrepreneurship and sustainable revenue generation	0.845	0.769	0.076	Consensus
Strategic planning for long-term objectives	0.792	0.837	0.045	Consensus
Short-term goal setting for urban entrepreneurship and sustainable revenue generation	0.832	0.812	0.020	Consensus
Operational policies for short-term objectives	0.883	0.862	0.021	Consensus

Providing implementation trends and procedures for urban entrepreneurship and sustainable revenue generation	0.843	0.875	0.032	Consensus
Developing and enforcing legal and regulatory frameworks for urban entrepreneurship and sustainable revenue generation	0.779	0.862	0.083	Consensus
Supporting green entrepreneurial activities	0.812	0.813	0.001	Consensus
Assisting entrepreneurs in utilizing renewable energy	0.829	0.805	0.024	Consensus
Reducing pollution and greenhouse gas emissions	0.840	0.853	0.013	Consensus
Minimizing toxic and environmentally harmful substances	0.873	0.837	0.036	Consensus
Implementing green entrepreneurial processes	0.827	0.832	0.005	Consensus
Increasing the market share of urban entrepreneurship	0.825	0.847	0.022	Consensus
Enhancing sales and revenue from urban entrepreneurship	0.834	0.852	0.018	Consensus
Improving return on investment in urban entrepreneurship	0.815	0.827	0.012	Consensus
Enhancing the profitability of urban entrepreneurship	0.811	0.841	0.030	Consensus

Based on the results presented in Table 3, it was determined that in all cases, the difference was less than 0.2, thereby concluding the Delphi rounds.

The next step involves identifying the internal relationships among the identified indicators and presenting the urban entrepreneurship policy-making model for sustainable revenue generation in Sabzevar Municipality. For this purpose, the structural-interpretive modeling (ISM) method was utilized. The relationships among the comprehensive constructs were determined using four symbols: V (variable i influences j), A (variable j influences i), X (mutual relationship), and O (no relationship). By identifying the relationships among the indicators, the Structural Self-Interaction Matrix (SSIM) was constructed. The SSIM is presented in Table 4.

Table 4. Structural Self-Interaction Matrix (SSIM) of the Urban Entrepreneurship Policy-Making Model for Sustainable Revenue Generation in Sabzevar Municipality

SSIM	C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11	C12
Economic Performance (C01)		X	X	A	A	A	O	A	A	A	A	V
Social Performance (C02)			X	A	A	A	A	A	A	A	A	V
Environmental Performance (C03)				A	A	A	A	O	A	A	A	V
Entrepreneurial Ecosystem (C04)					X	X	A	V	V	V	V	V
Creative City (C05)						X	X	V	V	O	V	V
Urban Policy and Prosperity (C06)							X	V	V	V	V	V
Entrepreneurial Production Conditions (C07)								V	V	V	V	V
Entrepreneurial Attitude (C08)									X	A	V	V
Entrepreneurial Vision (C09)										A	V	V
Sustainable Revenue Policy (C10)											V	V
Entrepreneurial Capability (C11)												O
Sustainable Revenue Generation (C12)												

By converting the Structural Self-Interaction Matrix (SSIM) into a binary matrix (0 and 1 values), the Reachability Matrix (RM) was obtained. In the Reachability Matrix, the diagonal elements were set to 1. Additionally, secondary relationships were verified to ensure consistency. This means that if A leads to B and B leads to C, then A must also lead to C. If direct effects were expected but not initially accounted for, the table was corrected to incorporate these secondary relationships. The Final Reachability Matrix is presented in Table 4.

Table 5. Final Reachability Matrix (RM) of the Urban Entrepreneurship Policy-Making Model for Sustainable Revenue Generation in Sabzevar Municipality

TM	C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11	C12
Economic Performance (C01)	1	1	1	0	0	0	0	0	0	0	0	1
Social Performance (C02)	1	1	1	0	0	0	0	0	0	0	0	1
Environmental Performance (C03)	1	1	1	0	0	0	0	0	0	0	0	1
Entrepreneurial Ecosystem (C04)	1	1	1	1	1	1	1*	1	1	1	1	1
Creative City (C05)	1	1	1	1	1	1	1	1	1	1*	1	1

Urban Policy and Prosperity (C06)	1	1	1	1	1	1	1	1	1	1	1	1
Entrepreneurial Production Conditions (C07)	1*	1	1	1	1	1	1	1	1	1	1	1
Entrepreneurial Attitude (C08)	1	1	1*	0	0	0	0	1	1	0	1	1
Entrepreneurial Vision (C09)	1	1	1	0	0	0	0	1	1	0	1	1
Sustainable Revenue Policy (C10)	1	1	1	0	0	0	0	1	1	1	1	1
Entrepreneurial Capability (C11)	1	1	1	0	0	0	0	0	0	0	1	1*
Sustainable Revenue Generation (C12)	0	0	0	0	0	0	0	0	0	0	0	1

After constructing the Final Reachability Matrix, the next step in determining the relationships and categorizing the indicators involves identifying the "Reachability Set" and "Antecedent Set".

For a given variable C_i, the reachability set (outputs or influences) includes all variables that can be influenced by C_i.

Conversely, the antecedent set (inputs or dependencies) includes all variables that can influence C_i.

Table 6. Set of Inputs and Outputs for Level Determination

Constructs	Output: Influence	Input: Dependence	Common Elements
C01	C01, C02, C03, C12	C01, C02, C03, C04, C05, C06, C07, C08, C09, C10, C11	C01, C02, C03
C02	C01, C02, C03, C12	C01, C02, C03, C04, C05, C06, C07, C08, C09, C10, C11	C01, C02, C03
C03	C01, C02, C03, C12	C01, C02, C03, C04, C05, C06, C07, C08, C09, C10, C11	C01, C02, C03
C04	C01, C02, C03, C04, C05, C06, C07, C08, C09, C10, C11, C12	C04, C05, C06, C07	C04, C05, C06, C07
C05	C01, C02, C03, C04, C05, C06, C07, C08, C09, C10, C11, C12	C04, C05, C06, C07	C04, C05, C06, C07
C06	C01, C02, C03, C04, C05, C06, C07, C08, C09, C10, C11, C12	C04, C05, C06, C07	C04, C05, C06, C07
C07	C01, C02, C03, C04, C05, C06, C07, C08, C09, C10, C11, C12	C04, C05, C06, C07	C04, C05, C06, C07
C08	C01, C02, C03, C08, C09, C11, C12	C04, C05, C06, C07, C08, C09, C10	C08, C09
C09	C01, C02, C03, C08, C09, C11, C12	C04, C05, C06, C07, C08, C09, C10	C08, C09
C10	C01, C02, C03, C08, C09, C10, C11, C12	C04, C05, C06, C07, C10	C10
C11	C01, C02, C03, C11, C12	C04, C05, C06, C07, C08, C09, C10, C11	C11
C12	C12	C01, C02, C03, C04, C05, C06, C07, C08, C09, C10, C11, C12	C12

Based on the results of the structural-interpretive modeling, the constructs of entrepreneurial production conditions (C07), the entrepreneurial ecosystem (C04), the creative city (C05), and urban policy and prosperity (C06) influence the sustainable revenue policy (C10). The sustainable revenue policy (C10) affects entrepreneurial capability (C11) through entrepreneurial attitude (C08) and entrepreneurial vision (C09). Ultimately, economic performance (C01), social performance (C02), and environmental performance (C03) contribute to sustainable revenue generation (C12). The municipal revenue management model is illustrated in Figure 1.

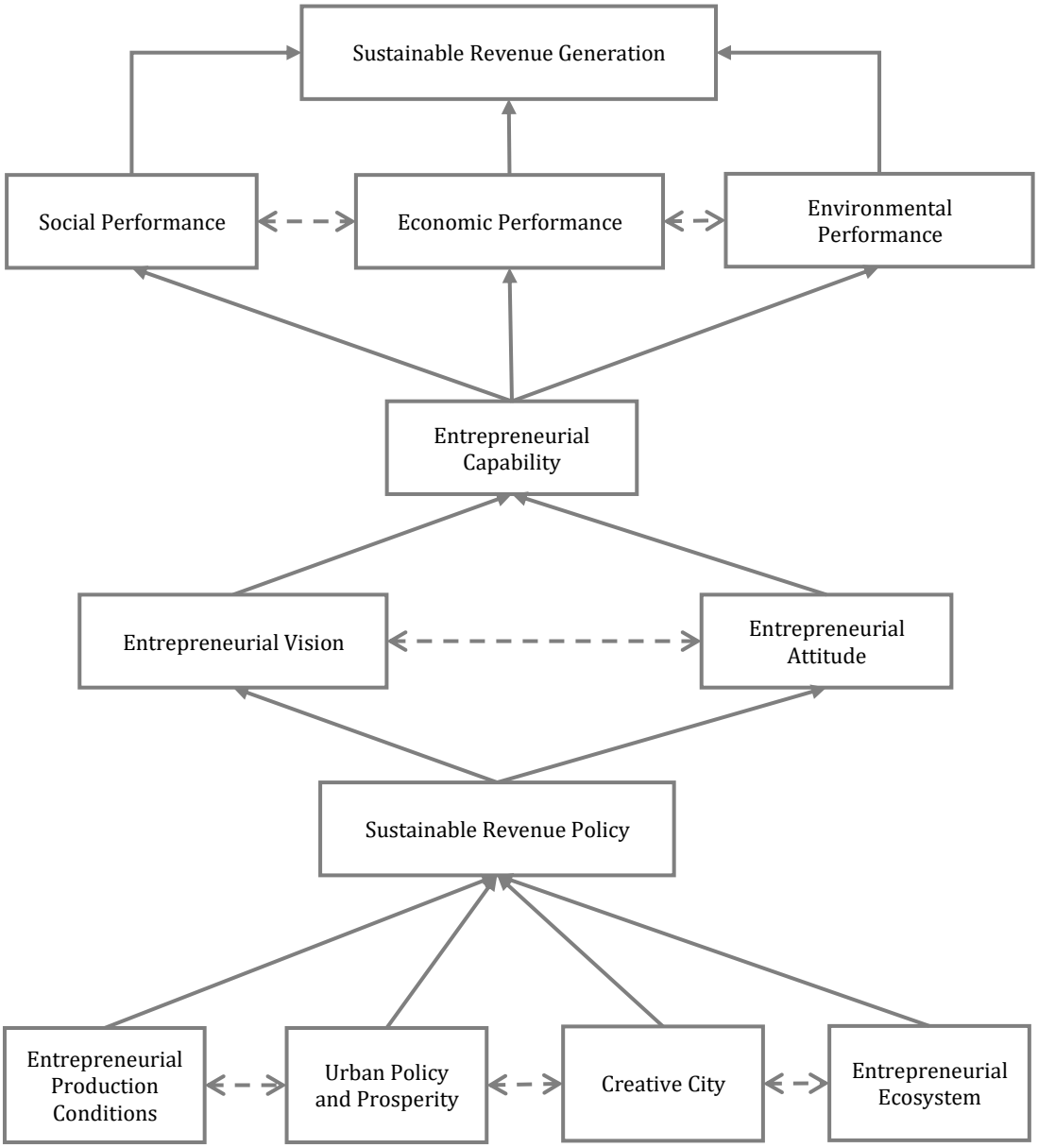

Figure 1. Urban Entrepreneurship Policy-Making Model for Sustainable Revenue Generation in Sabzevar Municipality

The set of inputs and outputs for each element was used to form the influence-dependence matrix (MICMAC analysis). The influence-dependence matrix is presented in Table 7. The ISM model effectively demonstrated the interrelationships, influence dynamics among the criteria, and the connections between different levels, which enhances the decision-making process for managers. To identify key criteria, the final accessibility matrix was created to determine the influence and dependence power of criteria.

Table 7. Influence and Dependence Power of the Urban Entrepreneurship Policy-Making Model for Sustainable Revenue Generation in Sabzevar Municipality

Research Constructs	Dependence Power	Influence Power	Level
Economic Performance (C01)	11	4	2
Social Performance (C02)	11	4	2
Environmental Performance (C03)	11	4	2

Entrepreneurial Ecosystem (C04)	4	12	6
Creative City (C05)	4	12	6
Urban Policy and Prosperity (C06)	4	12	6
Entrepreneurial Production Conditions (C07)	4	12	6
Entrepreneurial Attitude (C08)	7	7	4
Entrepreneurial Vision (C09)	7	7	4
Sustainable Revenue Policy (C10)	5	8	5
Entrepreneurial Capability (C11)	8	5	3
Sustainable Revenue Generation (C12)	12	1	1

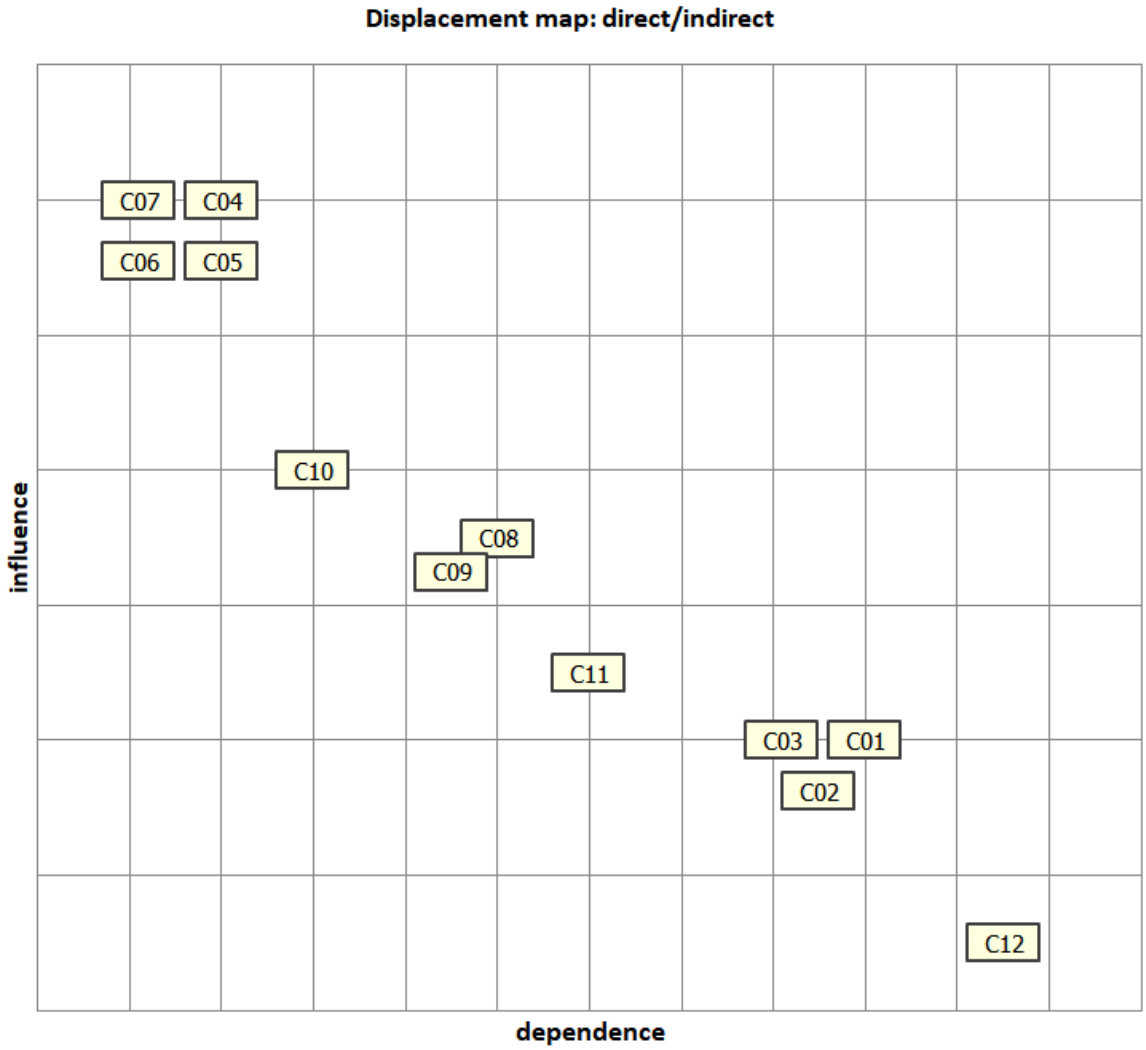

Figure 2. Influence-Dependence Diagram of the Urban Entrepreneurship Policy-Making Model for Sustainable Revenue Generation in Sabzevar Municipality

Based on the influence-dependence diagram, the constructs of entrepreneurial attitude (C08), entrepreneurial vision (C09), sustainable revenue policy (C10), entrepreneurial production conditions (C07), entrepreneurial ecosystem (C04), creative city (C05), and urban policy and prosperity (C06) exhibit high influence power and low dependence, placing them in the category of independent constructs. Conversely, the constructs of sustainable revenue generation (C12), economic performance (C01), social performance (C02), environmental performance (C03), and entrepreneurial capability (C11) demonstrate high dependence but low influence, positioning them in the category of dependent constructs.

No constructs were located in the first quadrant (autonomous zone) or the third quadrant (linkage zone) of the influence-dependence matrix.

4. Discussion and Conclusion

This study examined and proposed an urban entrepreneurship policy-making model for sustainable revenue generation in Sabzevar Municipality. Given the economic and social transformations in contemporary societies, the need for innovative and entrepreneurial approaches in urban management has become more crucial than ever. The proposed model is designed based on identifying local capacities and potentials, strengthening intersectoral collaborations, fostering citizen participation, and creating appropriate platforms for the growth of local businesses.

This model, with an emphasis on sustainable development, not only contributes to increasing municipal revenues but also enhances the quality of life for citizens and strengthens their sense of social belonging. Considering Sabzevar's specific characteristics, implementing this model can serve as a successful framework for other cities as well. These results are consistent with prior findings [1, 2, 10-12, 14, 22-25].

Based on the findings, the following practical recommendations are provided:

Regarding the entrepreneurial ecosystem, it is recommended to enhance the capacity of urban entrepreneurship support institutions while also fostering a supportive entrepreneurial culture. The formulation of sustainable revenue policies depends on the establishment of educational support centers alongside professional consultants, and the engagement of urban stakeholders must be aligned with the city's climatic conditions.

Regarding the creative city, it is suggested that, given the openness of exchange spaces, efforts should be made to create an appropriate cultural environment. The formulation of sustainable revenue policies requires strengthening technological infrastructure and the development of creative urban industries. In this regard, revising and refining regulations and incentives can be beneficial. Additionally, supporting entrepreneurship and increasing access to infrastructure can contribute to achieving the objectives of sustainable revenue policy-making, all of which depend on urban livability.

Regarding urban policy and prosperity, it is recommended that in addition to prioritizing productivity based on decent work principles, social equity and cohesion should also be considered when formulating sustainable revenue policies. Achieving environmental sustainability is possible through proper urban governance, and global regulatory standards should be reflected in urban governance policies.

Regarding entrepreneurial production conditions, it is advised that, in addition to providing financial and monetary facilities to industrial and service clusters, urban marketplaces and employment exhibitions should be reinforced. Sustainable revenue policies should be designed based on urban branding and intra-urban employment to support municipal objectives effectively.

Regarding entrepreneurial attitude, it is recommended that, in addition to providing cultural support within municipalities, efforts should be made to foster networking among innovators. The formulation of sustainable revenue policies is closely tied to risk acceptance, and by strengthening innovation skills and opportunity recognition, existing challenges can be overcome.

Regarding entrepreneurial capability, it is advised that investments be made in human capital skills to enhance competitiveness in sustainable revenue generation. This goal can be achieved through adequate training programs and meritocracy. Additionally, a critical component of sustainable revenue policy-making is the adoption of technology by human resources and the ability to innovate based on opportunities, which should be a priority for relevant decision-makers.

Regarding entrepreneurial vision, it is recommended that, along with securing financial resources, the process of globalization be facilitated through high growth potential, process innovation, and product innovation. This can be achieved by increasing international knowledge and adopting standardized skills.

Regarding marketing strategy, it is suggested that, in addition to establishing a clear vision for urban entrepreneurship and sustainable revenue generation, defined missions aligned with these objectives should be developed. The key aspect of sustainable revenue policy-making lies in long-term goal setting for urban entrepreneurship and establishing a strategic direction toward these goals. Moreover, by implementing short-term goal setting for urban entrepreneurship and defining operational policies for short-term objectives, sustainable revenue policy-making objectives can also be realized.

Relevant managers can achieve their objectives by outlining and implementing operational procedures for urban entrepreneurship and sustainable revenue generation and by developing and enforcing legal and regulatory frameworks for urban entrepreneurship and sustainable revenue generation.

Ultimately, the expected outcomes include environmental performance, economic performance, and social performance, along with sustainable revenue generation. These results translate into revenue sources such as general levies within sustainable revenue streams, specific levies within sustainable revenue streams, allocation of service fees and income from profit-oriented institutions to sustainable revenue, allocation of revenues from municipal funds and assets to sustainable revenue, governmental and organizational grants within sustainable revenue domains, donations, gifts, and assets within sustainable revenue domains, collected fees and revenues contributing to sustainable revenue streams, and the allocation of received loans within sustainable revenue domains.

Authors' Contributions

Authors equally contributed to this article.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

All procedures performed in this study were under the ethical standards.

References

[1] R. Watson, K. R. Nielsen, H. N. Wilson, E. K. Macdonald, C. Mera, and L. Reisch, "Policy for sustainable entrepreneurship: a crowdsourced framework," *Journal of Cleaner Production*, vol. 38, no. 3, pp. 225-234, 2023. [Online]. Available: https://doi.org/10.1016/j.jclepro.2022.135234.

[2] Y. Huang, S. Li, X. Xiang, Y. Bu, and Y. Guo, "How can the combination of entrepreneurship policies activate regional innovation capability? A comparative study of Chinese provinces based on fsQCA," *Journal of Innovation & Knowledge*, vol. 7, no. 3, pp. 201-227, 2022. [Online]. Available: https://doi.org/10.1016/j.jik.2022.100227.

[3] S. M. Alvani, M. M. Javadi, M. Rezaei Mirghaed, M. Mousikhani, and P. Azimi, "Designing a policy model for entrepreneurship development in Iran," *Management Research in Iran*, vol. 25, no. 1, pp. 163-182, 2021.

[4] D. Hosseinpour, V. Ghorbani Zadeh, H. Alikabari, and H. Zare, "Core value components of the entrepreneurial policy framework in the collections of the Mizan al-Hikmah and al-Hayat," *Prospects of Public Management*, vol. 9, no. 4, pp. 151-174, 2018.

[5] A. Gatto and C. Drago, "When renewable energy, empowerment, and entrepreneurship connect: Measuring energy policy effectiveness in 230 countries," *Energy Research & Social Science*, vol. 78, no. 2, pp. 961-977, 2021. [Online]. Available: https://doi.org/10.1016/j.erss.2021.101977.

[6] A. M. V. Silva, H. Muzzio, and D. S. d. Silveira, "Analysing Public Policies for the Creative Economy: A Systematic Literature Review," *Journal of International Development*, vol. 36, no. 6, pp. 2655-2669, 2024, doi: 10.1002/jid.3930.

[7] M. Rahnejat, "Economic diplomacy and national branding in the foreign policy of the 13th government," *Strategic Studies of public policy*, vol. 14, no. 50, pp. 104-123, 2024. [Online]. Available: https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://sspp.iranjournals.ir/article_714635_36335cf947b66469f48c9df8f5403389.pdf&ved=2ahUKEwjfsv3l1fWJAxW7QvEDHb7FOxUQFnoECBcQAQ&usg=AOvVaw1oEQt5se244yUxnDtUIbmb.

[8] H. Hassani, A. Golshani, and S. S. Mirtorabi, "The Public Policy Process and an Examination of China's Success in Attracting Foreign Direct Investment from the 1990s to 2022," *Journal of Political and International Studies*, no. 58, pp. 42-56, 2024.

[9] M. Rizevandi, F. Rahnavard Ahan, and K. Sokhdari, "Explaining the urban entrepreneurship model in large cities of Iran," *Management and Development Process*, vol. 34, no. 116, pp. 3-28, 2021. [Online]. Available: https://doi.org/10.52547/jmdp.34.2.3.

[10] N. Vorkiani Pour and M. R. Cheragheli, "Value chain policy-making for entrepreneurship with a focus on sustainable urban development (case study: Cities of Golestan province)," *Urban Environment Planning and Development*, vol. 2, no. 5, pp. 61-72, 2022.

[11] H. Karimzadeh and S. Saadi, "Comparing the contexts for the development of women's entrepreneurship in rural and urban areas," *Space Economy and Rural Development*, vol. 11, no. 39, pp. 45-66, 2022.

[12] M. Naderi, A. Sefidrou, and H. Mojtabazadeh, "Providing a sustainable income model in urban areas (case study: District 22 of Tehran)," *Geography and Regional Planning*, vol. 12, no. 48, pp. 115-132, 2022.

[13] I. Hassan Zadeh and B. Bahrami, "Investigating the status of revenue generation combined with achieving sustainable income in the municipality of Saqqez," *New Research Approaches in Management*, vol. 5, no. 56, pp. 172-196, 2021.

[14] E. J. Egan, "A framework for assessing municipal high-growth high-technology entrepreneurship policy," *Research Policy*, vol. 51, no. 9, pp. 274-292, 2022. [Online]. Available: https://doi.org/10.1016/j.respol.2021.104292.

[15] M. V. Bidstrup *et al.*, "The RRI Citizen Review Panel: A Public Engagement Method for Supporting Responsible Territorial Policymaking," *Journal of Innovation and Entrepreneurship*, vol. 13, no. 1, 2024, doi: 10.1186/s13731-023-00360-6.

[16] Z. Dimiad and Y. Peyvastegar, "Explaining the effects of entrepreneurship on sustainable urban development using structural equation modeling (case study: Yasuj city)," *Urban Research and Planning*, vol. 12, no. 44, pp. 39-54, 2021.

[17] A. Saeidi, B. Rahmani, and B. Fathi, "Analyzing the role of rural entrepreneurship in local sustainable development,

emphasizing rural-urban continuity (case study: Dalahoo region, Kermanshah province)," *Geography and Urban Planning*, vol. 11, no. 39, pp. 1-20, 2021.

[18] H. Shakib, S. Del Angizan, and Y. Mohammadi Far, "Modeling and strategic analysis of the inclusive urban entrepreneurship ecosystem based on game theory (case study: Kermanshah city)," *Quarterly Journal of Management Improvement*, vol. 14, no. 49, pp. 123-137, 2020. [Online]. Available: https://doi.org/10.1002/sej.1354.

[19] M. Savadi, "An analysis of the factors influencing the development of entrepreneurship in urban environments with an emphasis on recreational sports tourism (case study: Qeshm Island)," *Urban Research and Planning*, vol. 11, no. 43, pp. 193-208, 2020.

[20] H. D. Kantis, J. S. Federico, and S. I. García, "Entrepreneurship policy and systemic conditions: Evidence-based implications and recommendations for emerging countries," *Socio-Economic Planning Sciences*, vol. 72, p. 100872, 2020. [Online]. Available: https://doi.org/10.1016/j.seps.2020.100872.

[21] E. Miller, L. Cross, and M. Lopez, "Sampling in qualitative research," *FBB Research Group*, vol. 19, no. 3, pp. 249-261, 2010.

[22] K. Rostami, "A review of the concept of sustainable income and its instability in municipalities," in *Proceedings of the Ninth National Conference on New Studies and Research in Humanities, Management, and Entrepreneurship in Iran*, 2022: Tehran.

[23] A. Habibi and S. Afridi, *Multi-criteria decision making*. Narvan, Tehran, 2022.

[24] M. Gastaldi, I. D'Adamo, G. Ioppolo, and P. Morone, "An analysis of Sustainable Development Goals in Italian cities: Performance measurements and policy implications," *Land Use Policy*, vol. 120, p. 106278, 2022. [Online]. Available: https://doi.org/10.1016/j.landusepol.2022.106278.

[25] M. Jia, Y. Liu, S. N. Lieske, and T. Chen, "Public policy change and its impact on urban expansion: An evaluation of 265 cities in China," *Land Use Policy*, vol. 97, no. 2, pp. 7344-754, 2020. [Online]. Available: https://doi.org/10.1016/j.landusepol.2020.104754.