

Original Article

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Explaining the role and position of urban governance in achieving the optimal model of citizen participation: the case of qom*

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Abstract

This research, employing a mixed methodology (qualitative-quantitative), examined the structural relationships between government institutions and social actions. In the qualitative phase, the thematic analysis of semi-structured interviews with 35 experts (including citizens and managers) identified 10 key themes: citizen participation, governance transparency, spatial justice, infrastructure development, citizen education, institutional trust-building, urban technologies, meritocracy, local governance, and cultural cohesion. In the quantitative phase, questionnaire data from 384 citizens were analyzed with statistical tests (Friedman, regression, Pearson correlation, ANOVA, and one-sample t-test). The findings indicated a paradigmatic contrast between a centralized governance model and a multi-stakeholder participatory model, where transparency, spatial justice, and religious identity were highlighted as key dialectical axes. The Friedman test revealed a gap between the current situation (participation: 6.64; satisfaction: 7.05) and the desired state (justice: 20.31; citizen engagement: 20.07). Regression analysis confirmed the significant impact of enhancing participatory processes, conflict management, and technological synergy. A strong correlation was found between transparency, social capital, and participatory processes, indicating the mediating role of these factors. The study proposes a conceptual framework for relational urban governance centered on radical transparency, multi-scale spatial justice, and identity-based activism. By integrating Habermas's theory of communicative action with spatial justice concepts, the model suggests strategies such as strengthening local councils, creating transparent digital platforms, and empowering citizens through related educational initiatives. The results not only expand the governance literature in religious cities but also offer a practical model for sustainable participation.

Keywords

Citizen Participation
Qom City
Social Capital
Spatial Justice
Urban Governance

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1. Introduction

The rapid growth of urbanization in recent decades has transformed cities into complex and multi-layered socio-political ecosystems (Tonne et al., 2021; Faramarzi Asl & Zeynali Azim, 2018; Grandin, Haarstad, Kjærås, & Bouzarovski, 2018). In Iran, the urban population has grown from about 31% in 1956 to more than 75% in 2013 (Statistical Center of Iran, 2025), imposing increasing pressure on the institutional and managerial structures of cities and highlighting the imperative to rethink urban governance patterns. Traditional top-down governance models are facing a crisis of legitimacy and efficiency; they cannot meet the growing expectations of citizens in areas such as spatial justice, urban services quality, and transparent decision-making (Ribeiro-Duthie, Gale, & Murphy-Gregory, 2021; Pierre, 2011; Fernández-Martínez, García-Espín, & Jiménez-Sánchez, 2020; Flinders & Dommett, 2013). These expectations, which are expressed as demands for equal access to services, the right to policymaking, and oversight of public decisions, if left unanswered, will deepen spatial inequalities and reduce social trust.

The concept of urban governance is a response to these challenges and is fundamentally different from governing. Governing is the management of society by the state and formal institutions with a centralized and hierarchical structure, while governance, as an interactive and multi-level framework, emphasizes participation of multiple stakeholders, including citizens of civil society, the private sector, and public institutions for the joint management of the city (Dean, 2018). This paradigm shift from statism to network governance, which means the redistribution of power and decision-making from the center to local and grassroots levels, is explained in the theoretical literature with interactive governance frameworks and policy networks (Kooiman, 1999; Sørensen & Torfing, 2005).

At the international level, the Urban Governance Index (UGI) of the United Nations Human Settlements Program is a valid tool for assessing the quality of urban governance. This index encompasses four key dimensions: efficiency (ability to achieve goals and use resources optimally), accountability (institutions' accountability to citizens), justice (fair distribution of services and opportunities), and participation (involving citizens in the decision-making process) (Beyene, Adam, & Minale, 2023). The present study has chosen these dimensions as its analytical

framework and measures them systematically as follows.

Citizen participation is a main pillar of urban governance (Cortés-Cediel et al., 2021), and its operationalization requires mechanisms such as local councils, periodic surveys, participatory budgeting, and co-creation workshops that allow citizens to have a voice in public decisions (Nabatchi & Amsler, 2014; Michels & De Graaf, 2010). However, active participation in specific socio-religious contexts encounters challenges such as dominance of centralized structures, weak dialogue infrastructures, and cultural sensitivities (Treija, Bratuškina, & Korojova, 2022; Li, Zhu, & Owen, 2023).

Religious cities, especially those that serve as spiritual centers, encounter special situations in the governance sphere. The city of Qom, as a scientific and religious hub of the Shiite world and the destination of millions of annual pilgrims, is a prime example of such an ecosystem in which citizen participation requires both modern governance mechanisms and must be consistent with cultural and spiritual norms. To highlight the characteristics of this context, the present study employs a comparative approach to compare the findings about the city of Qom with those of the city of Mashhad and increase the validity of the results. This study investigates the link between the quality of governance and the level of citizen participation, using a mixed exploratory-explanatory methodological framework based on the pragmatic paradigm. Qualitative data were collected through semi-structured interviews with stakeholders (city managers, citizens, and council representatives). After content analysis, a structured questionnaire was designed and distributed among a sample of 384 people. Data analysis was performed with SPSS 26 software and statistical methods, including exploratory factor analysis and multiple regression, to determine the contribution of each dimension of governance (efficiency, accountability, justice, and participation) in establishing the optimal model of citizen participation in Qom.

This study responds to this fundamental question: Which dimensions of urban governance in the city of Qom have the greatest contribution to citizen participation, and how can a localized framework be designed to promote participation in religious cities? Presenting a conceptual model of the interaction of governance and participation, the findings of this study provide a scientific basis for modern urban policymaking, illustrating that effective governance

does not rely solely on technocratic solutions but roots in the creative use of cultural-spiritual capacities and strengthening citizen agency.

This research, for the first time, integrates Habermas's theory of communicative action with the concept of spatial justice in an analytical framework, providing an interdisciplinary context for the analysis of urban governance. Focusing on the city of Qom as a religious-pilgrimage city enables localizing and practically measuring participatory models in a cultural-religious context, which is rarely seen in previous research focusing mainly on secular cities or general metropolitan areas. In addition, using a sequential mixed method (exploratory-explanatory), conceptual dimensions were first extracted through qualitative analysis and then validated as quantitative data. The mixed method enhances both theoretical richness and the validity of research findings. Thus, this research makes a considerable contribution theoretically and practically to expanding governance knowledge in Iran.

2. Theoretical Foundations

2.1. Urban Governance: Concepts, Dimensions, and Role in Citizen Participation

Urban governance, as a multi-layered and dynamic concept, has gained significance in social and urban science discourse since the 1990s and evolved in interaction with theoretical developments in political science, political geography, and public management (Epstein, 2015). The word governance is derived from the Latin root "gubernare," meaning "to drive" and "to guide" (Fairuzyah, Arkaan, Marfariza, Suhendar, & Khoirunnisa, 2024). However, in contemporary literature, it no longer means simply top-down management, but rather a mechanism for directing, coordinating, and distributing power among a diverse range of actors and institutions (Effendi, Lestari, Zuliansyah, & Linuwih, 2025). This meaning shift is a response to the increasing complexity of urban issues, the emergence of new actors (private sector, civil society, NGOs, and citizens), and the transition from statism to a multi-stakeholder network model.

According to the United Nations definition, urban governance includes the methods, processes, and

institutions through which the common affairs of a city are planned, managed, and monitored, highlighting the role of all sectors, both public and private, in governing the city (Heydarzadeh et al, 2023). This concept encompasses a set of requirements, including preventing poverty and inequality, sustainably providing vital resources such as water and food, adapting to climate change, and promoting public well-being (Tonkiss, 2020; Fuseini, 2021). Therefore, urban governance is a new paradigm of city management that, with an interactive and networked approach, emphasizes stakeholder participation and empowerment, rather than their mere control (Maleki et al, 2019).

In contrast to traditional models of centralized governing, urban governance is centered on multi-level and multi-stakeholder networks of actors, including local government, public institutions, civil society organizations, the private sector, and citizens (Dean, 2018; Tasan-Kok, 2021). This conceptual framework, as an umbrella, encompasses a wide range of phenomena, including policy networks, innovation in public management, inter-sectoral coordination in the urban economy, and various forms of public-private partnership (Zeynaly et al, 2025).

Citizen Participation as a Basis for Governance

Citizen participation is a pivotal indicator of the quality of governance and contributes to the legitimacy of public institutions, deepens democracy, and improves urban policy efficiency (Hajdarowicz, 2022; Lemanski, 2017). This participation is effective when it moves beyond mere consultation and is integrated into the actual decision-making and implementation processes (Edelenbos & Van Meerkerk, 2016). Achieving such participation requires constructive interaction between urban management, civil society, and individual citizens (Healey et al., 2017).

- Three-layer Governance Structure for Effective Participation

To institutionalize citizen participation, a multi-layer structure is required, including strategic, executive, and citizen intervention layers (Jäntti et al., 2023).

Table 1. Urban governance layers and participation requirements

Layer	Key Requirements	Sample Resources
Strategic	Developing a vision for participation, resolving conflicts, defining issues, and coordinating competing stakeholder goals	Kooiman, 1999; Ayres, 2019; Klijn, 2011
Executive	Interactive organizational design, collective decisions about the depth of participation, securing financial and human resources, training staff, linking the participation process to formal decision-making	Edelenbos & Klijn, 2006; Michels & Binnema, 2019
Citizen participation	Local councils and associations, participatory budgeting, dialogue workshops, public surveys	Nabatchi & Amsler, 2014; Sørensen, 2013

Barriers and Challenges to Realize Participation

Literature analysis shows that barriers to participation can be classified into three categories: structural-institutional (power inequality, weak organization of local society, lack of financial resources), executive-procedural (resistance of formal institutions, defective rules, low cooperation skills, and time constraints of citizens), and contextual-cultural (conceptual ambiguity of participation, dominance of centralized structures, limited interaction with global experiences) (Gera, 2016; Jäntti & Kurkela, 2021; Innes & Booher,

2004; Black & Sykes, 2022). In this study, barriers were identified through a mixed method: first, scientific literature was systematically reviewed; then, the findings were synthesized with content analysis of in-depth interviews with city managers and citizens of Qom. This process involved three stages: (1) extracting iterative theoretical criteria, (2) validating and prioritizing criteria in the interviews, and (3) developing a final list of criteria for designing the quantitative phase questionnaire.

Table 2. Final criteria affecting citizen participation (combining theoretical review and field data)

Impact criterion	Explanation	Reference
Reducing conflicts of interest among stakeholders	Stakeholders emphasized the imperative for a conflict resolution mechanism.	Pahl-Wostl, 2019; Mirbageri & Abdi, 2022
Smart programs for participating and reporting	Suggested by Qom city managers to increase transparency.	Bastos et al., 2022
Participatory budgeting and direct citizen participation	Raised as a key need in interviews.	Dubicki, 2021; Yuanhui, 2018
Transparency and institutional accountability	Included as a main measurement variable in the questionnaire.	De & Bandyopadhyay, 2020
Building trust and fortifying civil society	Resulted from coding qualitative data.	Golchini, 2019
Localizing global experiences and social justice	Recorded as a policy solution in the content analysis.	Faridi Thani et al, 2024

This approach ensures that the criteria are both scientifically valid and reflect the real conditions of Qom.

2.2. International Models and Comparison with Qom

A review of global experiences shows that many cities could sustainably enhance citizen participation by designing innovative participatory mechanisms. The Decidim digital platform has increased citizen participation rates in Barcelona by about 40%, providing a transparent and interactive platform and

enabling public tracking of decisions (Calzada & Almirall, 2019). Porto Alegre in Brazil has unprecedentedly improved financial transparency, spatial justice, and accountability of urban management by implementing participatory budgeting (Wampler, 2012). In Seoul, the Open Seoul project has institutionalized open access to urban data and the public oversight of macro-decisions, improving public trust (Kim & Lee, 2020). Comparing these examples with Qom suggests that the city has the potential to adopt such mechanisms from the perspective of institutional and social capacities; however, given its

religious nature and status, the adaptation model is not simply “technology transfer.” First, religious sensitivities require that any participatory digital platform similar to Decidim include mechanisms of religious legitimization, in addition to transparency and security standards. For instance, the voting or participatory budgeting process must be approved by religious authorities as a process consistent with Islamic values to gain public trust. Second, the power structure in Qom, which relies on seminary and religious institutions, can play a dual role: on the one hand, the support of these institutions can facilitate and legitimize participation, and on the other hand, it can increase the likelihood of resistance to new technological tools. Third, Seoul’s successful experience in opening up urban data suggests that transparency can strengthen citizens’ trust; however, in Qom, this requires precise legal and jurisprudential frameworks to define the limits of information dissemination.

Despite these achievements, Qom’s social, institutional, and religious conditions are fundamentally different from those of the mentioned cities, which limits the direct transmission of these experiences. First, digital literacy and technological infrastructure in Qom are not sufficient to implement platforms similar to Decidim or Open Seoul without challenges. Second, public participation in Qom is influenced by traditional structures of trust and religious authority, and without the support of seminary institutions, such mechanisms may not gain social legitimacy. Third, Iran’s culture and political rights differ significantly from those of local democratic systems in Brazil and Spain, which could limit financial transparency and free access to data. Thus, any modeling should be accompanied by critical

adjustment and institutional-cultural adaptation so that, instead of mere imitation, it leads to the design of an indigenous model that considers Qom’s religious and social capacities as an advantage, not an obstacle. From a theoretical perspective, urban governance is the institutional ground for citizen participation and loses its efficiency without active participation. The criteria extracted from the findings of this study are the basis for the conceptual model and the design of a research questionnaire to accurately measure the relationship between governance dimensions and the degree of citizen participation in Qom. In addition to benefiting from global experiences, these criteria are selected in a way adaptable to the cultural and religious context of Qom. The proposed model is not a mere transfer of an “international model,” but an attempt to localize digital participatory approaches in a city with a specific religious and authoritative status. Despite the broad benefits of participatory governance, several theoretical criticisms exist in the literature that must be addressed. Some researchers believe that participation can make the urban decision-making process complicated and time-consuming, ultimately leading to inefficiency rather than improving efficiency. There is also the risk of “superficial participation,” in which citizens are only involved for show, without producing any real output in policymaking. The dominance of elites and influential groups can transform participatory mechanisms into a tool for reproducing power and vested interests. Concerning digital participation, the technological gap and access inequality may exclude low-income and poorly educated groups from the participation process. Thus, any design and localization of a participatory model in Qom should consider these criticisms to avoid inefficiency and the reproduction of inequality.

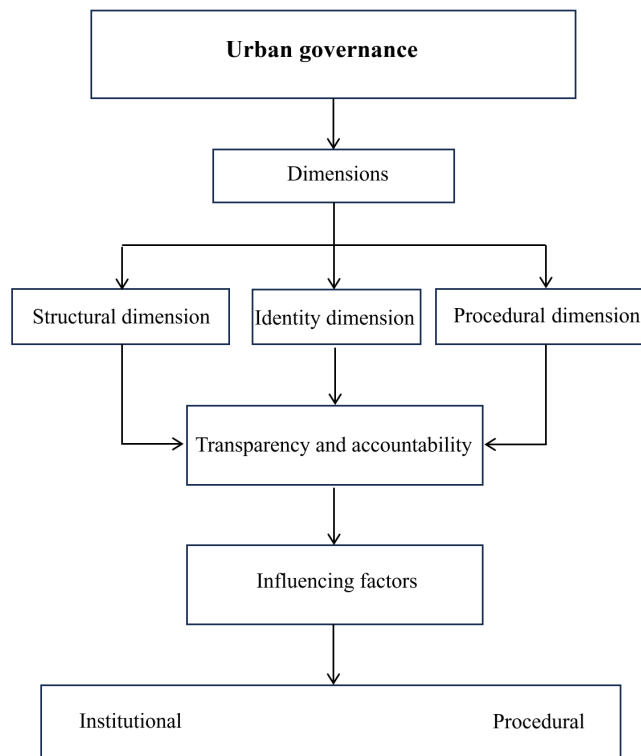


Figure 1. Conceptual model of research

3. Materials and Methods

This study explained the role of urban governance in achieving an appropriate model of citizen participation in the city of Qom. It employed a sequential mixed research model (exploratory-explanatory) within the pragmatic paradigm framework. This approach allowed for the simultaneous study of stakeholders' subjective experiences and measurement of quantitative relationships between dimensions of governance and participation.

3.1. Research Stages

Qualitative Stage: In the first step, theoretical literature was systematically reviewed, and key dimensions of governance and participation were identified. Then, 22 semi-structured interviews were conducted with key stakeholders, including active citizens, city council members, local managers, and urban planning experts. This type of interview was selected due to its flexibility in detecting hidden dimensions and the possibility of follow-up questions to clarify the challenges and suggestions for citizen participation. Sampling was carried out purposefully and with maximum population diversity (age, gender, occupation, and residence duration); it continued until theoretical saturation was achieved. All interviews were recorded with the

participants' consent, transcribed verbatim, and supplemented with field notes. Data analysis was conducted using thematic analysis, and the results served as the basis for developing a conceptual framework and designing a questionnaire for the quantitative phase of the study. In this phase, the "cultural-religious context" of Qom was one of the main themes, extracted based on the role of the Hazrat Masoumeh (PBUH) shrine, pilgrimage economy, and religious norms in shaping citizens' participatory behavior.

Quantitative phase: Based on the qualitative findings, a structured questionnaire with 46 items using a five-point Likert scale was designed. These items covered the four main dimensions of urban governance (efficiency, accountability, justice, and participation) as well as the cultural-religious dimension identified in the qualitative phase. For instance:

- City council decisions are published transparently.
- Equal opportunities exist for citizens to participate in urban planning.
- Citizens can submit their suggestions for urban projects.
- Religious institutions can play an effective role in legitimizing participatory processes.
- The religious sites, such as the Hazrat Masoumeh

(PBUH) shrine, influence the allocation of urban resources.

Five urban planning experts confirmed the content validity of the questionnaire. Its reliability was measured using Cronbach's alpha (0.72 to 0.88 for different dimensions), which indicated appropriate internal consistency. The statistical population consisted of the 1.3 million population of Qom city, and the sample size was determined to be 384 participants using the Cochran formula. Sampling was conducted using a stratified random method

proportional to the population distribution in the neighborhoods. Data were analyzed using SPSS 26 software, and descriptive statistics (mean, standard deviation) and inferential statistics, including exploratory factor analysis and multiple regression, were used to test the hypotheses.

Integration and interpretation stage: Qualitative and quantitative findings were integrated in the final stage to provide an in-depth explanation tailored to the specific context of Qom concerning the influential factors on citizen participation.

Table 3. Reasons for choosing the mixed method

Reason	Brief explanation
Data triangulation	Using qualitative and quantitative data simultaneously to strengthen the validity of findings
Completion and deepening	Using interviews to identify indicators and questionnaires to measure them quantitatively
Generalizability	Using a statistical sample to generalize the results to the entire population
Supporting interpretation	Using qualitative data to explain the relationships observed in quantitative data
Disambiguation	Using surrogate data if the results of one stage are insufficient

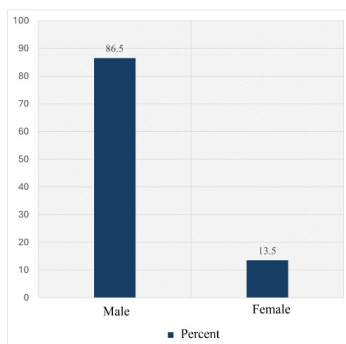


Figure 2. Distribution of the sample population by gender

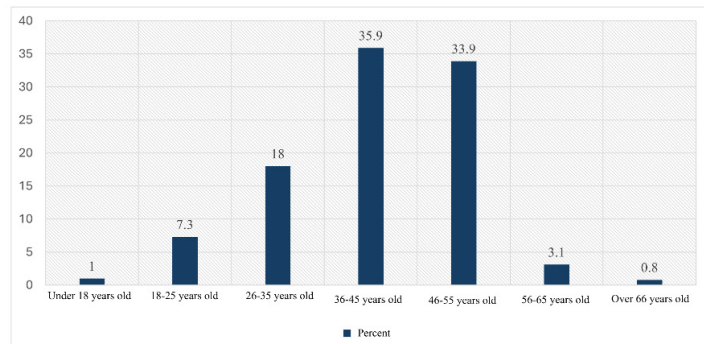


Figure 3. Distribution of the sample population by gender

3.2. Introduction to the Study Area

As one of the important religious cities of Iran and the Islamic world, Qom is a paradigmatic example for the study of urban governance and citizen participation. This metropolis, with a population exceeding 1.3 million people (Statistics Center of Iran, 2016), serves not only as the administrative and political center but also as the cultural and educational hub of the country. The Hazrat Masoumeh (PBUH) Shrine and the Jamkaran Mosque have transformed Qom into a transnational destination for pilgrims, shaping the pilgrimage economy and the city's spatial and social patterns. Rapid population growth, lack of

transportation infrastructure, and the housing crisis have intensified the imperative to transform urban governance models and enhance structured participation mechanisms.

4. Discussion and Analysis of Findings

4.1. Analysis of Qualitative Findings

A qualitative analysis of the research was conducted using thematic analysis and a critical-interpretive approach to reveal hidden themes and structural and cultural complexities of citizen participation in the city of Qom. Data were collected from 35 semi-structured interviews with 15 citizens and 20 urban managers

and experts. The samples were selected through purposive sampling and maximum diversity (age, gender, activity history, education level, and type of relationship with urban management). Data collection continued until theoretical saturation was reached. The interviews lasted between 45 and 75 minutes, and the questions were designed around three axes: current state of participation, institutional and cultural barriers, and feasibility of participatory digital

mechanisms with the religious context of Qom. The analysis process was conducted according to Brown and Clarke's (2006) six steps: familiarization with data, initial coding of 417 semantic units, formation of potential themes, review and refinement of themes, precise definition of themes, and analytical reporting and integration with theoretical frameworks of urban planning.

Table 4. Main research codes

Main theme	Sub-themes (sub-codes)	Brief Analysis	Sample quote
Citizen participation and engagement	Participation methods	Citizens seek tangible channels to intervene in urban decisions.	We expect to have a say in the decisions of our neighborhood.
	Public participation and criticism	Expressing criticism of urban decisions indicates a desire for active participation and increased accountability.	Why are projects always conducted only in tourist areas?
	Role of citizens	Citizens act as stakeholders and surveillants, tending to be involved in various levels of decision-making.	Citizens should be involved in the selection of projects.
Transparent and accountable governance	Transparency in the budget	Financial transparency and disclosure of costs are prerequisites for trust and true participation.	Transparency in budget spending is essential.
	Financial reports	Open access to reports makes institutions accountable and reduces the trust gap.	If we knew where the money was spent, our trust would be greater.
Justice, equality, and social inclusion	Attention to deprived areas	Fair allocation of urban resources is essential to reduce spatial and social discrimination.	Our neighborhood is always forgotten.
	Reducing differences	Reducing inequality strengthens social cohesion and increases citizen participation.	All citizens should have equal opportunities.
Urban development and infrastructure	Sustainable development	Long-term and environmentally-oriented planning increases citizen participation and satisfaction.	Green spaces should be in all neighborhoods.
	Rebuilding old textures	Renovation of old textures should be accompanied by citizen participation and consideration of local interests.	The old textures should be renovated, but residents should not be displaced.
Education, awareness, and capacity building	Education on rights and responsibilities	Citizens must be empowered to participate effectively and informed of their rights in urban processes.	We should know we have the right to participate in councils.
Trust building and relationship management	Building trust	Transparency and accountability of institutions are key to strengthening trust between citizens and urban management.	Trust is built when our voice is heard.
Integration of technology and innovation	Using technology for participation	Digital tools facilitate citizen participation, polling, and active communication.	An app for suggesting ideas is quite useful.
Specialization and meritocracy	Using scientific knowledge and technology	The selection of managers and experts based on competence and expertise ensures the efficiency of urban decisions.	Decisions are right when experts give their opinions.

Citizen Participation and Engagement

Citizens desire to have tangible and active participation in urban decision-making. Themes such as participatory methods and public participation and criticism suggest that people are seeking practical and accessible channels to intervene in local decisions, and their criticism of urban decisions signifies a desire for increased accountability. For instance, one citizen has stated: "We expect to have a say in decisions of our neighborhood." Also, the role of citizens as stakeholders and observers at all levels of decision-making is highlighted: "Citizens should be involved in the selection of projects."

Transparent and Accountable Governance

The concept of transparency, especially in budgeting and financial reporting, has been identified as key to building trust and accountability of institutions. Financial transparency and disclosure of costs are prerequisites for true participation: transparency about budget spending is essential. Free access to financial reports also increases citizens' trust: "If we knew where the money was spent, our trust would be greater."

Justice, Equality, and Social Inclusion

Effective participation is directly linked to the fair distribution of urban resources and specific attention to disadvantaged areas. The citizens emphasized the importance of reducing disparities and equal opportunities: "All citizens should have an equal share of opportunities." Attention to spatial and social justice is a prerequisite for social cohesion and sustainable participation.

Urban Development and Infrastructure

Themes related to sustainable development and renovation of old textures reveal that citizens are concerned with long-term and environmentally oriented planning. They expect the renovation of old textures to be executed with the participation of residents and protection of their interests: "Old textures should be renovated, but residents should not be displaced."

Education, Awareness, and Capacity Building

Educating citizens about their rights and responsibilities and empowering them is a prominent theme of participation. Increasing self-awareness and the capacity for active participation are important beyond mere reporting: "We should know that we have the right to participate in councils."

Trust Building and Relationship Management

Establishing trust between urban institutions and citizens requires continuous transparency and accountability: "Trust is created when our voices are heard."

Integration of Technology and Innovation

Digital tools, such as applications and online platforms, enable citizens' active participation and communication, facilitating accountability and transparency: "An app for suggesting ideas is quite useful."

Specialization and Meritocracy

Using scientific knowledge and selecting managers and experts based on merit helps ensure effective and efficient urban decisions: "Decisions are right when experts give their opinions."

The analysis suggests that achieving an optimal urban governance model in Qom requires a combination of active citizen participation, institutional transparency and accountability, social justice, sustainable development, the employment of technology and expertise, and respect for the city's religious and cultural identity. The findings reveal a paradox of participation; citizens are willing to participate, but structural, psychological, and cultural barriers hinder it. This analysis has formed the basis for designing the quantitative phase questionnaire and the conceptual model of the research. 46 questionnaire items are directly extracted from these themes, reflecting the local reality of Qom and the perceptions of stakeholders.

Table 5. Example of the relationship between the main codes in table 4 and the quantitative questionnaire items

Main code (taken from Table 4)	Selected sub-codes	Sample quotes from interviews	Item designed in the quantitative questionnaire
Transparent and accountable governance	Transparency in budget, transparent financial reports	If we knew where the money was spent, our trust would be greater.	Qom Municipality publishes financial information on urban projects in a transparent and public manner.
Justice, equality, and social inclusion	Fair distribution of services, attention to deprived areas	Our neighborhood is always forgotten.	Urban services and facilities are distributed equally in all neighborhoods of Qom.
Citizen participation and engagement	Neighborhood councils, direct participation in projects	We expect to have a say in the decisions of our neighborhood.	Qom citizens have the opportunity to participate in urban decisions truly.
Education, awareness, and capacity building	Citizenship rights education, awareness raising	We should know we have the right to participate in councils.	Urban management training programs increase citizens' awareness of rights and responsibilities.
Trust building and relationship management	Building trust through transparency	Trust is built when our voice is heard.	Citizens' trust in urban management institutions is increasing.
Integration of technology and innovation	Electronic surveys, digital platforms	An app for suggesting ideas is quite useful.	The necessary digital infrastructure is available in Qom for citizens to submit ideas and suggestions.

To clarify the relationship between qualitative and quantitative results, as requested by the reviewer, Table 5 is designed as a supplement to Table 4, illustrating how themes extracted from in-depth interviews are translated into quantitative questionnaire items. This table, which is directly based on the main codes in Table 4, represents the path of converting field data into quantitative measurement tools in an integrated manner. For instance, the theme of "transparent and accountable governance," which includes the sub-codes such as transparency in budgets and transparent financial reports and is repeated in quotes such as "If we knew where the money was spent, our trust would be greater," has been transformed into the quantitative item "Qom municipality publishes financial information on urban projects in a transparent and public manner." Also, the theme of "justice, equality, and social inclusion" with codes such as attention to deprived areas and fair distribution of services, which is reflected in statements such as "Our neighborhood is always forgotten," has been translated into the statement "Urban services and opportunities are distributed equally in all neighborhoods of Qom." The theme of "citizen participation and engagement," which emphasizes the local councils and the possibility of direct comment

and appears in statements such as "We expect to have a say in the decisions of our neighborhood," has been the basis for designing the statement "Qom citizens have the opportunity to participate in urban decisions truly." Similarly, themes such as citizenship rights education, trust-building through transparency, and the use of digital technologies, which are reflected in repeated quotes such as "We should know that we have the right to participate in councils," "Trust is created when our voices are heard," and "An app for suggesting ideas is quite useful," have been transformed into quantitative items such as "Urban management training programs increase citizens' awareness of rights and responsibilities," "Citizens' trust in urban management institutions is increasing," and "The necessary digital infrastructure is available in Qom for citizens to submit ideas and suggestions," respectively. With this three-step process of identifying qualitative themes, rewriting them in quantitative language, and developing closed-ended items, the quantitative questionnaire, instead of relying solely on abstract theories, directly reflects the lived experience of Qom citizens and the realities of urban governance, thus establishing the link between qualitative and quantitative findings in a clear and reproducible manner.

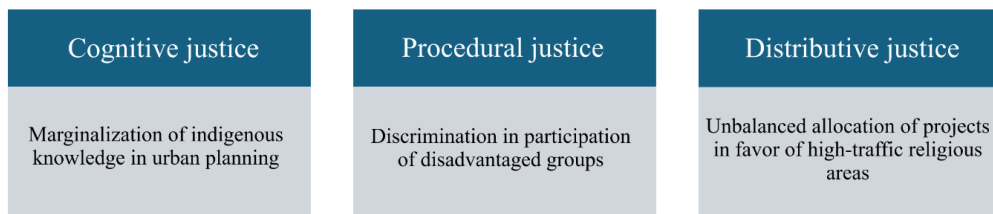


Figure 4. Levels of urban justice in achieving citizen participation

The interviews represent citizen participation paradoxically: on the one hand, as an inherent right of citizens to determine their urban destiny (participation in designing projects), and on the other hand, as a moral duty based on religious identity (cooperation with religious institutions). Sub-keywords such as local identity (highlighting Islamic-Iranian architecture and the role of mosques) and structural barriers (administrative rent, centralization) also act as moderating factors in the relationship between governance and participation. These findings suggest that achieving an optimal participatory model in Qom requires redefining urban governance within a context-based multilevel governance framework that places transparency, justice, and identity in a dialectical interaction. The data propose that the citizens of Qom have an inherent desire to participate in governance processes; however, this desire encounters structural and psychological barriers. For instance, one response states: "Citizens neither can nor want to participate". This contradiction highlights a considerable gap between potential capacity for participation and its practical reality. Urban governance in Qom must resolve this paradox by rebuilding social capital through developing spaces for effective dialogue and reducing the distance between citizens and administrators. The lack of tangible participatory mechanisms, such as active local councils, is a major weakness. Educating citizens on rights and responsibilities is a prominent theme. Responses such as education on rights and citizenship responsibilities underscore this need. Education is more than transferring knowledge; it should lead to empowerment. In Qom, educational programs should move beyond informing and promote citizen awareness and activism. The lack of such an approach reduces participation to a symbolic level. To assess the

reliability of the research, given the semi-structured nature of the questionnaire, all interviews are conducted by one interviewer, which contributes to the validity of the results. In addition, given the research focus on the urban governance structure of Qom, we attempted to ensure that the interviewees were fully familiar with the city's urban governance structure and citizen participation.

The qualitative findings of the research reveal that citizen participation in Qom is influenced by a set of structural-institutional factors (such as transparency of the decision-making process and accountability of institutions), executive-procedural factors (such as access to information, equal opportunities for different groups, and dialogue platforms), and contextual-cultural factors (such as social capital, public trust, and religious sensitivities). The content analysis of the semi-structured interviews identified 12 central themes, which were directly used for designing the research's conceptual model. The themes included institutional transparency, accountability, justice in the distribution of services, decision-making efficiency, structured participation, training and promoting participatory literacy, strengthening local councils, using smart and digital tools, building trust, localizing global experiences, allocating sustainable resources, and improving organizational capacity. The output of this stage played a decisive role in designing the quantitative phase questionnaire; all 46 questionnaire items were extracted from these themes and findings of theoretical literature. This connection ensures that the research's quantitative measurement reflects the local realities of Qom and the perceptions of stakeholders, and that the research's conceptual model is grounded in the lived experiences of the target community, rather than in abstract theories.

4.2. Analysis of Quantitative Findings

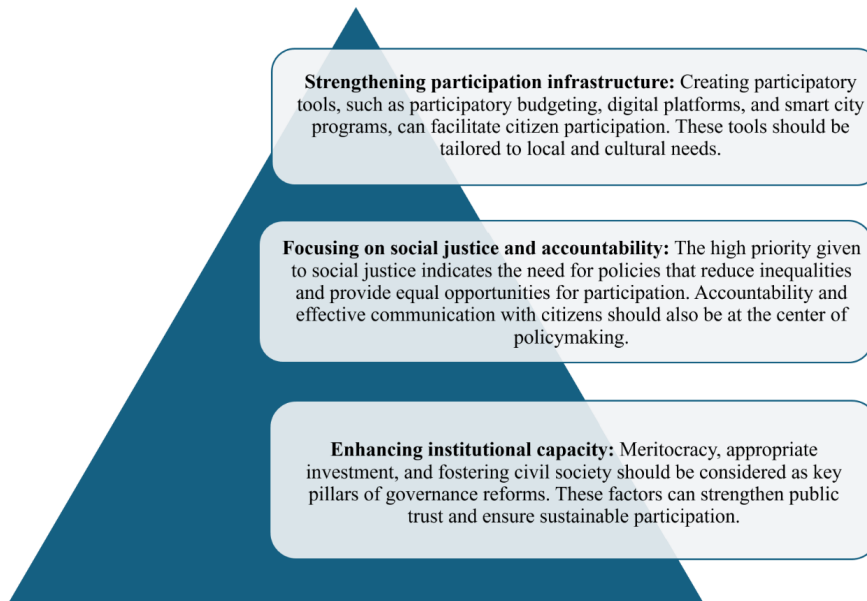


Figure 5. Key areas requiring changes to achieve citizen participation in the city of qom



Figure 6. Requirements to achieve citizen participation based on the pearson correlation test findings

4.3. Quantitative Findings

Table 6. Demographic composition of the sample

Characteristics	Group	Number	Descriptive statistics of respondents (%)
Gender	Female	185	48.2
	Male	199	51.8
Age	18–29 years	87	22.6
	30–39 years	102	26.6
	40–49 years	98	25.5
	50 years and over	97	25.3
Education	Diploma and less	76	19.8
	Associate and Bachelor's degree	165	43.0
	Master's degree	103	26.8
	PhD	40	10.4
Residential duration	Less than 5 years	65	16.9
	5–10 years	92	23.9
	11–20 years	108	28.1
	More than 20 years	119	31.0

The demographic composition is balanced, representing the main spectrum of the Qom population (Table 6). The gender balance (almost equal) strengthens the generalizability of the findings to both sexes. The four-age coverage demonstrates that the participatory attitudes of different generations, from young to elderly, are included in the analysis, which is a strength for participatory policymaking. The predominance of university education (over 80 percent) suggests a high potential for informed participation, underscoring the imperative for

designing knowledge-based participation mechanisms. The long residence duration (more than 59 percent for over 10 years) increases the quality of the respondents' "lived experience", making their recommendations for improving governance more sustainable and realistic. For participatory justice, diverse tools (face-to-face/digital) appropriate for different age groups and media literacy are required to make participation more universal. Ultimately, this combination provides a valid basis for further analyses of the model.

- Descriptive Statistics of the Main Constructs

Table 7. Descriptive indicators of the main research variables

Construct	Mean	Standard deviation
Transparency	3.89	0.72
Accountability	3.75	0.68
Spatial Justice	3.68	0.74
Efficiency	3.81	0.70
Citizen Participation	3.93	0.76

All means are above the Likert median (3), meaning that respondents' evaluation of the state of governance and participation is "relatively favorable." The higher mean of participation (3.93) indicates a desire for participation; however, it requires an "appropriate institutional environment" to flourish. The gap in transparency (3.89) and spatial justice (3.68) indicates the perceived gap between "awareness of decisions" and "fair distribution of benefits", which in religious cities can fuel spatial sensitivities (central/peripheral

neighborhoods) and should be bridged through participatory and map-based budgeting. The small difference in the mean of efficiency and transparency suggests that citizens view the executive performance relatively positively, but do not necessarily experience it as "spatially just." This pattern supports the hypothesis that governance dimensions have a direct effect on participation.

- Prerequisites for Measurement

Table 8. KMO sampling adequacy indicator and bartlett test

Indicator	Value	Significance
KMO	0.87	-
Bartlett (K2)	1234.6	<0.001

The sampling adequacy in Table 8 is 0.87, which is at the "very good" level, indicating that the correlation matrix is suitable for extracting the factor structure. Bartlett's test is 1234.6, and the significance level is less than 0.001. Thus, the variables have sufficient correlation for factor analysis. These results provide legitimacy to continue the path towards the measurement model and then the structural model.

From an urban planning perspective, the measurement tool's reliance on a stable latent structure ensures that governance dimensions in the Qom context are measured coherently and reliably, and any proposed policy relies on valid data.

- Measurement Model (Convergent Reliability and Validity)

Table 9. Measurement model

Construct	Number of Items	Factor Loadings Range	Cronbach's Alpha	Composite Reliability (CR)	AVE
Transparency	10	0.72-0.89	0.81	0.87	0.59
Accountability	8	0.70-0.85	0.79	0.86	0.57
Spatial Justice	9	0.75-0.91	0.83	0.89	0.60
Efficiency	10	0.73-0.88	0.82	0.88	0.58
Citizen Participation	9	0.76-0.90	0.84	0.90	0.61

All alphas and CRs are above 0.7; therefore, the internal reliability of constructs is confirmed. Convergence above 0.5 for all constructs indicates adequate convergent validity, meaning that items explain the variance of their construct well. The range of loadings (minimums above 0.7) suggests that weak items have been discarded and the “core indicator” has been preserved. For the urban policymaker, this

indicates that each dimension (transparency, accountability, spatial justice, efficiency, and participation) can be tracked and periodically monitored through the valid measures; also, the city’s key performance indicators (KPIs) can be designed on this basis.

- Divergent validity (Fornell-Larcker)

Table 10. Fornell-larcker matrix

Construct	Transparency	Accountability	Spatial Justice	Efficiency	Citizen Participation
Transparency	0.77				
Accountability	0.64	0.75			
Spatial Justice	0.59	0.61	0.78		
Efficiency	0.66	0.58	0.63	0.76	
Citizen Participation	0.69	0.63	0.65	0.67	0.79

In all cases, the principal diameter of the square root of convergence is greater than the correlation between the constructs, meaning that each construct is distinct from the other constructs and has no “conceptual overlap.” Thus, from an urban planning perspective, the distinction between transparency and accountability (and spatial justice) means that policies

of “information dissemination” do not necessarily lead to “institutional accountability” or “fair distribution of services”; therefore, reform programs must design different and complementary measures for each dimension.

- Divergent validity (HTMT)

Table 11. Divergent Criterion with (HTMT)

Pair of constructs	HTMT
Transparency - Accountability	0.79
Transparency - Spatial Justice	0.72
Transparency - Efficiency	0.76
Accountability - Spatial Justice	0.74
Accountability - Efficiency	0.69
Spatial Justice - Efficiency	0.73
Each construct - Participation	0.71-0.80

All the constructs’ divergence values with the HTMT test are less than 0.85; therefore, the divergent validity

with a more stringent criterion is also maintained. From a practical perspective, this result confirms that

“transparency” and “accountability” are two independent policy axes, although related. Thus, the city action plan should pursue both simultaneously and with their own specific tools (transparency

platforms, accountability charter, and complaint/follow-up mechanisms).

- In-Model collinearity (VIF)

Table 12. Intra-model collinearity measurement for exogenous constructs (dependent: participation)

Construct	VIF
Transparency	1.89
Accountability	1.74
Spatial Justice	1.68
Efficiency	1.56

The collinearity within constructs should be less than 5. Table 11 illustrates no problematic collinearity between exogenous constructs; therefore, the path coefficients are reliable, and the interpretation of separate effects of each dimension is valid. For the city

of Qom, this means that a “separate basket of measures” can be defined for each dimension in policy terms, without the results being distorted by excessive policy overlap.

- Fit and Prediction R², Q²

Table 13. Model fit and prediction

Dependent variable	R ²	Adjusted R ²	Q ²
Citizen participation	0.62	0.61	0.39

The R² value of 0.62 indicates a strong model for explaining participation, and the adjusted R² is not significantly different from R²; that is, the model is well-fitted and does not contain additional variables. Q² of 0.39 indicates a good predictive power of the

model. For urban management, this means that improving the four governance dimensions can explain a significant share of the changes in participation and provides a suitable tool for policy monitoring.

- Effect size (f²)

Table 14. F² for the effect of each construct on participation

Path	F ²
Participation → Transparency	0.18
Participation → Accountability	0.12
Participation → Spatial Justice	0.10
Participation → Efficiency	0.07

Interpretation: Based on the common thresholds (small 0.02, medium 0.15, large 0.35), “transparency” has a near-medium effect, and the other dimensions have small to near-medium effects. Therefore, policy prioritization should focus on improving transparency (timely publication of project information, council

minutes, and budget dashboards) while enhancing accountability, spatial justice, and efficiency through complementary action packages.

- Structural Model and Hypothesis Testing

Table 15. Path analysis results and hypothesis testing

Path	Path coefficient (β)	T-value	Significance	Result
Participation → Transparency	0.34	7.25	<0.001	Confirmed
Participation → Accountability	0.28	6.80	<0.001	Confirmed
Participation → Spatial Justice	0.24	5.90	<0.001	Confirmed
Participation → Efficiency	0.19	4.70	<0.001	Confirmed

All paths are positive and significant, and “transparency” is the strongest predictor of participation. For the city of Qom, this means that the policies of “increasing public access to information” and “progressive project reporting” have the highest participation returns. “Accountability” is in second place; thus, institutionalizing accountability mechanisms (from claim registration and tracking systems to neighborhood-based performance

reporting) should be implemented simultaneously. “Spatial justice” exhibits a significant effect, emphasizing that without an equitable distribution of services and opportunities, the incentive to participate in underserved neighborhoods is weakened. “Efficiency” also has a smaller effect; however, it is crucial for sustaining participation and preventing the erosion of public trust.

- Direct, Indirect, and Total Effects

Table 16. Direct, indirect, and total effect

Path	Direct effect (β)	Indirect effect	Total effect
Transparency → Citizen Participation	0.34	0.00	0.34
Accountability → Citizen Participation	0.28	0.00	0.28
Spatial Justice → Citizen Participation	0.24	0.00	0.24
Efficiency → Citizen Participation	0.19	0.00	0.19

In this model, no mediating variable is considered; therefore, all effects on citizen participation are direct, and indirect effects are reported as zero. Among the governance dimensions, transparency has the greatest impact with a beta value of 0.34, indicating that free and timely access to information on projects, budgets, and the decision-making process is the strongest driver of participation. Accountability, with a beta value of 0.28, highlights the importance of transparent institutional accountability mechanisms. Spatial

justice, with a beta value of 0.24, can significantly motivate citizen participation, emphasizing the need for a fair distribution of urban services among neighborhoods. Efficiency, with a beta value of 0.19, though weaker than the other dimensions, remains important in maintaining public trust and encouraging participation. Since indirect effects are zero, the total effect equals the direct effect, and the policy priorities become clear: first transparency, then accountability, spatial justice, and finally efficiency.

Table 17. Overall model fit (GOF) indicators and complementary measures

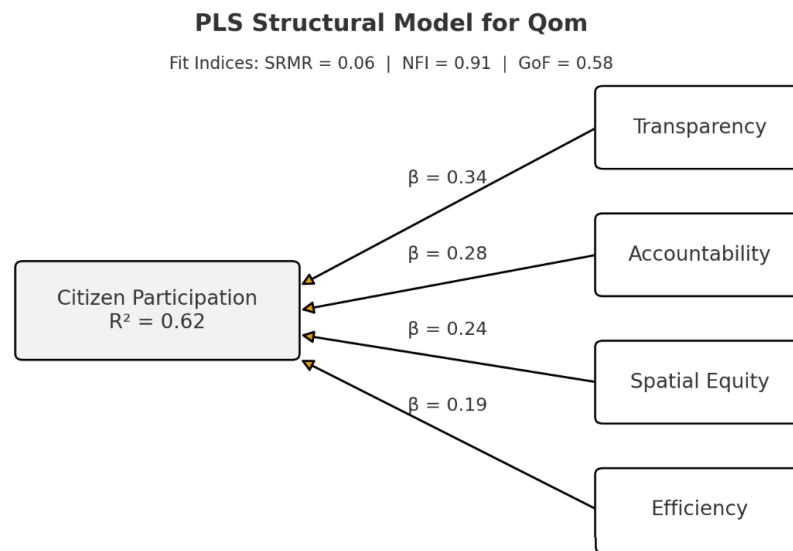
Indicator	Achieved value	Acceptable threshold	Judgment
SRMR	0.06	Appropriate → Less than 0.08	Appropriate
NFI	0.91	Good → 0.90 and above	Appropriate
GOF	0.58	Strong → Greater than 0.36	Strong
Explanation coefficient for participation R^2	0.62	High explanatory → 0.5 and above	Moderate to Strong
Predictive indicator Q^2	0.39	Predictive power → Greater than zero	Predictive
In-model VIF range	1.56-1.89	No collinearity → Less than 5	No Collinearity

The SRMR value is 0.06, indicating a small residual deviation and a good model fit. The NFI, with a value

of 0.91, confirms that the proposed model has a better fit than the independence model. The GOF is 0.58 (in

the strong range(, indicating that the model is at a very good level both in terms of measurement quality (mean variance extracted) and power to explain the relationships between variables. The R^2 coefficient for citizen participation equals 0.62, indicating a relatively high explanation by the governance dimensions. The Q^2 predictive indicator is positive and great with a

value of 0.39, indicating that the model has predictive power and is not merely descriptive. The VIF range between 1.56 and 1.89, confirming the absence of collinearity in the model. Overall, these indicators show that the research model is reliable and decision-supporting in terms of fit, explanation, and prediction for analyzing citizen participation in the city of Qom.



Note: Path coefficients (β) and explained variance (R^2) are based on PLS-SEM results.

Figure 7. PLS structural model for the city of qom, smartpls software output

*Note: Path coefficients (β) and the amount of explained variance (R^2) are reported based on the results of PLS structural equation modeling.

Finally, the study findings suggest that urban governance in Qom, as a multi-layer and evolving context, plays a key role in shaping citizen participation patterns. In the qualitative phase, content analysis of semi-structured interviews with citizens, city managers, and local elites reveals three main categories of barriers to participation: structural barriers (inequality of power and access), procedural barriers (weak consultation and transparency mechanisms), and socio-cultural barriers (lack of trust and a culture of participation). These contextual findings provided the foundation for designing the questionnaire and selecting measurement indicators in the quantitative phase, ensuring that the conceptual model has internal validity and aligns with the Qom context.

The quantitative results, based on PLS structural equation analysis, indicate that the four governance dimensions (namely transparency, accountability, spatial justice, and efficiency) have been able to explain approximately 62% of the variance in citizen participation. R^2 equals 0.62, indicating a relatively

high explanatory power and an “appropriate model fit”. Additionally, the Q^2 indicator of 0.39 shows the predictive power of the model and confirms that the relationships obtained are not solely descriptive but also have generalizability. The GOF indicator is also in the strong range with a value of 0.58, validating the overall fit of the model. Comparing the direct effects of governance dimensions on citizen participation, transparency demonstrates the strongest effect (beta of 0.34). From the perspective of urban governance, this finding underscores that providing citizens with free and regular access to information on projects, budgets, council decisions, and development plans can create the greatest motivation for meaningful participation. Citizens are more likely to participate when they feel that they are informed about decisions promptly and have a true opportunity to influence the processes. Accountability with an effect of 0.28 suggests that establishing formal mechanisms to respond to citizen demands, record and follow up on complaints, and provide performance reports is the second most important factor in promoting

participation. This finding agrees with the governance literature, which acknowledges that institutional responsiveness reproduces social trust.

Spatial justice, with an effect of 0.24, shows a significant effect and emphasizes that the citizens value participation when its results lead to a fair distribution of urban services between neighborhoods. In the religious context of Qom, where noticeable economic and spatial differences exist between central and peripheral neighborhoods, participatory budgeting policies and prioritizing projects by popular vote can intensify the sense of spatial justice and motivation for participation. Finally, efficiency, with an effect of 0.19, demonstrates that the speed and quality of project implementation, although less effective, significantly contribute to maintaining citizen participation and preventing frustration. The experience of unfinished projects or prolonged delays can reduce public trust and motivation for further participation.

The convergent and divergent validity results of the AVE and HTMT also reveal that the constructs are distinct from one another, each measuring an independent dimension of governance. This allows urban policymakers to design separate and synergistic measures, for instance, promoting transparency through the creation of online project dashboards, while developing a municipal accountability charter and spatial justice roadmap.

In terms of effect size (f^2), transparency has a medium effect, with a value of 0.18, and other dimensions have small to near-medium effects. This finding suggests prioritizing interventions. Policymakers should first

focus on transparency, given its more pronounced effect on participation. Then, accountability and spatial justice should be implemented as enhancers of trust and motivation, and efficiency should be considered as a factor for maintaining long-term participation.

From an urban planning perspective, the combination of these findings suggests that citizen participation in Qom is not simply a function of cultural factors but also requires transparent and accountable institutional infrastructure and governance mechanisms. When these mechanisms are in place, even marginalized groups are more willing to engage in participatory processes, which can lead to a more fair distribution of resources, increased social capital, and reduced spatial inequality.

Overall, the integrated analysis of this study suggests that achieving optimal participation in Qom depends on a combined approach: on the one hand, the structural and cultural barriers identified in the qualitative phase must be addressed (through public education, trust building, and institution building), and on the other hand, governance dimensions must be promoted with a priority on transparency and accountability. This synergy between institutional reforms and social capacity building can turn the Qom governance model into a model for other religious cities in the country. The model's strong and meaningful quantitative results also provide the necessary scientific support for formulating operational programs such as participatory budgeting, establishing online reporting systems, designing governance performance indicators, and periodic monitoring of participation.

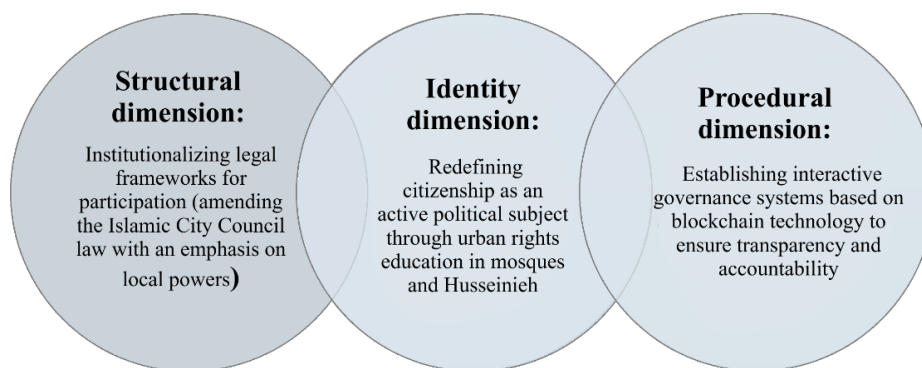


Figure 8. The paradigmatic model of communicative governance to realize the optimal model of urban governance in the city of qom

5. Conclusions

The findings of this study agreed with the growing body of literature on urban participatory governance,

while highlighting the specific characteristics of the city of Qom. Quantitative results showed that transparency was the strongest variable affecting

citizen participation ($\beta = 0.34$), which was consistent with the findings of Edelenbos & Van Meerkerk (2016) and Michels & De Graaf (2010), who also emphasized that open access to data and decision-making processes strongly enhances participation. The importance of accountability ($\beta = 0.28$) was also illuminated in the studies of Nabatchi & Amsler (2014) and Jäntti et al. (2023), who introduced accountability as a nexus between public trust and policy effectiveness. Spatial justice and fair distribution of resources also played a significant role in this study, consistent with the findings of Ryan et al. (2023) and Castro et al. (2020), who expressed the necessity of participatory budgeting in underprivileged neighborhoods. However, the significance of the identity dimension in Qom, which was highlighted in the qualitative section (redefining the concept of citizenship in a religious context and teaching civic rights in mosques and Husseinieh), has received little attention in many international studies and is the innovation of this research. This dimension highlights that in religious cities, strengthening the culture of participation without interfering with the local values and discourses is challenging.

By combining qualitative and quantitative approaches, this research presented a comprehensive picture of the role of urban governance in promoting citizen participation in the city of Qom. Analyses showed that optimal participation is a product of the simultaneous interaction of three dimensions: the structural dimension (reforming the legal frameworks and increasing the power of councils), the identity dimension (training and redefining the role of citizens), and the procedural dimension (creating transparent and responsive systems based on new technologies). The structural model of the research, with an explanation coefficient of 62% and a strong GOF indicator, confirmed the high power of identified variables to explain participatory behavior. From a policy perspective, these findings suggested that improving participation is not solely achievable with legal or administrative tools; it requires synergy between structure, culture, and processes. Achieving an optimal participation model in Qom concurrently requires institutional reforms, social capacity building, and the use of technology for transparency.

6. Research Limitations

Although this study could present a relatively comprehensive picture of Qom urban governance

with a mixed qualitative-quantitative approach, several limitations were encountered:

- Spatial limitation: Focusing solely on the city of Qom makes the results not fully generalizable to other cities in Iran or religious cities with different cultural structures.
- Time limitation: Data collection was conducted within a specific time period, and future socio-political changes may affect the sustainability of the results.
- Respondent Limitation: Although we attempted to ensure maximum diversity, some social groups (especially Sunni minorities or temporary migrants) were less present in the interviews.
- Instrumental Limitation: Although designing a questionnaire based on qualitative findings is highly accurate, there is always a risk of the researcher's interpretative bias in the extraction of codes and items.

7. Research Suggestions

Given the findings and limitations, the following are recommended for future investigations:

- Comparative Studies: Conducting similar research in other religious cities, such as Mashhad or Karbala, to compare participation patterns and validate the conceptual model.
- Longitudinal Follow-up: Conducting longitudinal studies to examine the sustainability of effects of variables such as transparency and accountability over time.
- Expanding sample groups: Focusing on underrepresented groups such as housewives, marginalized youth, and migrants to identify hidden barriers to participation.
- Deeper policy analysis: Examining the impact of national laws and regulations (such as participatory budgeting laws or neighborhood councils) on Qom urban governance.
- Technology-based research: Assessing the impact of new digital tools (such as blockchain or open data platforms) on public trust and the quality of urban decision-making.

Presenting limitations and suggestions helps policymakers and researchers understand the validity limits of results and pursue paths for future improvement and development more accurately.

Authors' contributions

First author, 40 percent; second author, 40 percent; third author, 7 percent; and the fourth author, 13 percent.

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Conflict of Interest

The authors declare no financial, commercial, or other conflicts of interest related to this research. This study received no external financial or material support.

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