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## Research on the Construction of a Risk Assessment Checklist for the Socialized Operation of Grassroots Public Cultural Service Facilities

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**Date:** 2023-07-20T00:00:00+00:00

### Abstract

[Purpose/Significance] To address the various risks arising from the rapid development of socialized operation of grassroots public cultural service facilities, this study constructs a risk assessment toolset for the rapid identification and response to risks throughout the socialized operation process of such facilities. [Method/Process] Through systematic review, risk factors were extracted from existing literature to establish a risk assessment indicator system for the socialized operation of grassroots public cultural service facilities. A risk assessment model was developed using the Cov-AHP method, upon which a risk assessment reference table was constructed and validated through illustrative examples. [Results/Conclusion] The risk assessment reference table for socialized operation of grassroots public cultural service facilities can accommodate the particularities of project-specific risks, providing one-stop risk assessment services that meet project requirements. However, scientific indicator systems, models, and tools for the socialized operation of grassroots public cultural service facilities remain inadequate, necessitating enhanced research efforts in the future.

### Full Text

## Construction of a Risk Assessment Checklist for the Socialized Operation of Grassroots Public Cultural Service Facilities

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### Abstract:

[Purpose/Significance] In response to the numerous risks arising from the rapid

development of socialized operation of grassroots public cultural service facilities, this study constructs a risk assessment tool to quickly identify and address risks throughout the socialized operation process. [Method/Process] Using a systematic review methodology, risk factors were extracted from published literature to establish a risk assessment index system for the socialized operation of grassroots public cultural service facilities. A risk assessment model was then developed using the Cov-AHP method, which served as the foundation for constructing a risk assessment checklist. The effectiveness of this checklist was verified through a practical example. [Result/Conclusion] The risk assessment checklist for the socialized operation of grassroots public cultural service facilities can accommodate the particularities of project risks, providing a one-stop risk assessment solution that meets project evaluation needs. However, scientific index systems, models, and tools for the socialized operation of grassroots public cultural service facilities remain insufficient, necessitating further research.

**Keywords:** Public cultural service; Grassroots public cultural service facilities; Socialized operation; Risk assessment; Risk assessment checklist

**Classification Number:** G123

Since China proposed innovative government management approaches and the construction of a service-oriented government, there has been a concerted effort to transform government functions and promote the socialization of public service delivery. Following the 18th Party Congress, the “decentralization, regulation, and service” reforms have yielded significant achievements in public service socialization. As a crucial component of public services, the socialized operation of public cultural services has also developed rapidly. In 2015, the General Office of the State Council issued the “Guiding Opinions on Promoting Government Purchase of Public Cultural Services from Social Forces” and the “Guiding Catalogue for Government Purchase of Public Cultural Services from Social Forces,” which innovatively restructured the public cultural service supply model and provided direction for government procurement. In 2016, the “Public Cultural Service Guarantee Law of the People’s Republic of China” (hereinafter referred to as the “Law” ) was formally enacted, establishing legal principles for social participation in public cultural services and guiding such participation toward institutionalized and legalized development.

Current implementation of public cultural service socialization has progressed most rapidly at the grassroots level. According to statistics from the National Center for Modern Public Cultural Services Research at Peking University, over 10,000 village-level cultural centers have adopted socialized operation—the highest among all types of public cultural institutions—while 700 township cultural stations (including cultural centers) rank third. However, as government-social collaboration in public cultural services deepens and grassroots facility socialization accelerates, associated risks have gradually emerged. Since grassroots public cultural service facilities serve as the most direct interface with the public, their operational quality directly impacts citizen satisfaction. Against this backdrop, risk management is essential to avoid and mitigate potential losses.

Effective risk management requires appropriate tools, and this study addresses risks in the socialized operation of grassroots public cultural service facilities by constructing a risk assessment checklist through the development of risk assessment index systems and models.

## 1. Research Status at Home and Abroad

International research on public service socialization risks began earlier and has produced relatively mature risk assessment and management frameworks, though few studies specifically address public cultural services, particularly at the grassroots level. Current international research focuses on developing risk assessment and management tools based on risk factor identification and evaluation models. For instance, Jiang et al. employed the FISM-MICMAC method to examine relationships among PPP project risks, proposing their findings as a novel risk assessment tool for PPP project management. Li and Wang combined F-ANP with ISM to develop a systematic risk assessment tool for PPP projects. Kukah et al. used the FSEM method to evaluate risks in Ghanaian power PPP projects, developing a corresponding assessment tool. Some studies have enhanced these tools with management functions. Kuru and Artan's PPP-Canvas enables risk assessment while incorporating risk balancing mechanisms, while Akcay's hydropower investment risk assessment tool based on the analytic network process facilitates quantitative risk rating.

Domestic research on public service socialization risks started later, heavily influenced by Western management theories but developing distinctive characteristics through practices in decentralization and service-oriented government construction. Research on public cultural service socialization risks has progressed due to government emphasis. Li Zhuqi and Lu Hejian constructed a full-process risk control system for government-social collaboration in public cultural services using the PDCA cycle. Lu Hejian and Cui Ran analyzed risk response strategies using the Chuzhou Library as a case study. Zhou Ping and Chen Ya examined risk evolution characteristics in the digital transformation of public cultural services. However, existing research on index systems, risk response plans, and recommendations has not evolved into practical risk management and assessment tools, failing to meet the practical needs of grassroots public cultural service facility projects.

Overall, current research remains at the level of public service socialization and public cultural service operation risks, without delving into grassroots facility socialization. Mature and complete risk assessment index systems and models are lacking, as are practical assessment tools for grassroots projects.

### 2.1 Socialized Operation of Grassroots Public Cultural Service Facilities

The socialized operation of grassroots public cultural service facilities falls within the scope of public cultural services. Public cultural services were first proposed

in the “Suggestions of the CPC Central Committee on Formulating the Eleventh Five-Year Plan for National Economic and Social Development,” which called for “increasing government investment in cultural undertakings and gradually forming a relatively complete public cultural service system covering the entire society.” Public culture refers to culture with public attributes—open, public welfare-oriented culture that relies on public spaces and resources. Public cultural services represent the supply behavior for such culture.

Grassroots public cultural service facilities further specify this concept. According to the “Guiding Opinions of the General Office of the State Council on Promoting the Construction of Grassroots Comprehensive Cultural Service Centers” and the “Public Cultural Service Guarantee Law,” grassroots public cultural services refer to those at the township (subdistrict) and village (community) levels. Public cultural service facilities are defined as “buildings, venues, and equipment used to provide public cultural services.” Therefore, grassroots public cultural service facilities are the buildings, venues, and equipment that produce and deliver public products and services aimed at improving citizens’ cultural living standards and literacy at the township (subdistrict) and village (community) levels. Their socialized operation is the process by which government delegates provision and operation of these facilities to social forces to improve public service efficiency.

## 2.2 Risks in Socialized Operation of Grassroots Public Cultural Service Facilities

Defining these risks requires understanding the concept of risk itself. While no authoritative definition is universally accepted, academia generally agrees that risk refers to uncertain but potentially negative future events—essentially linking risk to probability. Drawing on research such as Bechmann’ s view of risk as a measure of achievable certainty and Wynne’ s conception of risk as diminished ignorance of future contingencies, risk can be understood as a deviation between actual outcomes and expected objectives. These deviations result from various internal and external risk factors. Consequently, risks in the socialized operation of grassroots public cultural service facilities can be defined as deviations between socialized operation outcomes and expected objectives, arising from the combined effects of internal facility factors and external socialization factors.

## 3. Establishing the Risk Assessment Index System

To ensure objectivity, this study employs systematic review methodology to identify risk factors from published literature.

### 3.1 Literature Search and Screening

Following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, widely recognized for high-quality systematic reviews, this study established inclusion and exclusion criteria before searching. Based on the research theme, objectives, subjects, and paradigms, and considering China's development trajectory, the inclusion criteria were: (1) formally published academic journal articles, conference papers, or dissertations; (2) publication date on or after September 23, 2014; (3) Chinese national context; (4) empirical research with clear research questions, methods, and conclusions; (5) themes related to grassroots public cultural service facilities; (6) content involving risk factor identification or related expressions. All other literature was excluded.

Given the national characteristics of grassroots facility socialization and relevant foreign literature, CNKI and WoS (Web of Science) were selected as databases. After deconstructing "grassroots public cultural service facilities" and "socialized operation" and considering foreign terminology, search terms were determined. Table 1 shows the search terms and limitations. The search yielded 431 Chinese and 1,635 foreign articles.

Following PRISMA procedures, two independent researchers screened the 2,066 articles through title/abstract review, full-text review, and discrepancy negotiation. Figure 1 [Figure 1: see original paper] illustrates the screening process, resulting in 81 included articles (47 Chinese, 34 foreign).

### 3.2 Risk Factor Identification and Screening

Risk factors were extracted using a two-level coding framework. First-level factors were coded closed-ended according to lifecycle stages: project initiation, selection, finance, design, construction, operation, maintenance, evaluation, and exit. Second-level factors were coded open-ended based on risk characteristics and original literature expressions. Notably, some studies (e.g., Jiang et al. [5]; Kuru and Artan [8]) extracted risk factors from cases or literature not exclusively Chinese; only China-relevant content was coded. This process identified 64 risk factors with 793 total occurrences.

A 7-level risk matrix screened these factors for relevance. Probability values were derived from factor frequencies, while impact values came from expert ratings. Eleven experts (3 academics, 4 project specialists, 4 tripartite stakeholders) independently rated impact on a 1-7 scale, with arithmetic means as final values. Multiplying probability and impact yielded risk levels; level 1 risks (considered negligible) were eliminated: model selection, function selection, bidding, survey/design, cultural heritage protection, pricing, taxation, recognition, sustainability, equipment, subsidy, and government buyback risks. The remaining 52 factors formed the assessment index system shown in Table 2 .

#### 4. Constructing the Risk Assessment Model

With the index system established, a risk assessment model was needed. Various methods exist, including AHP, DEA, TOPSIS, and fuzzy comprehensive evaluation, with AHP and FAHP being most common. However, AHP/FAHP rely on expert subjective judgments during pairwise comparisons, potentially compromising objectivity.

To reduce subjective bias, this study employs Cov-AHP (Covariance Analytic Hierarchy Process), which uses inter-variable covariance to construct judgment matrices reflecting relative importance while following standard AHP procedures.

The Cov-AHP model construction involves: (1) Establishing a three-level hierarchical structure with the goal layer (risk assessment), criterion layer (lifecycle stages), and alternative layer (risk factors). (2) Constructing covariance judgment matrices for alternatives-to-criteria and criteria-to-goal relationships. This requires first building a covariance matrix:

$$CR = \begin{pmatrix} c_{11} & c_{12} & \cdots & c_{1p} \\ c_{21} & c_{22} & \cdots & c_{2p} \\ \vdots & \vdots & \ddots & \vdots \\ c_{p1} & c_{p2} & \cdots & c_{pp} \end{pmatrix}$$

where  $c_{ji}$  represents covariance between factors  $j$  and  $i$ , with  $c_{ji} = c_{ij}$ . Each column's  $c_{ji}$  is divided by  $c_{ii}$  to create a relative covariance matrix with diagonal values of 1. Elements are then calculated as:

$$a_{ji} = \frac{c_{ji}}{c_{ii}} \quad (\text{Formula 2})$$

$$a_{ij} = \frac{c_{ij}}{c_{jj}} \quad (\text{Formula 3})$$

forming covariance judgment matrix  $\mathbf{A}$  with properties  $a_{ji} > 0$ ,  $a_{ii} = 1$ , and  $a_{ji} = 1/a_{ij}$ . (3) Conducting consistency tests using the root method (standard for Cov-AHP) to extract hierarchical single-sorting. All matrices achieved  $CR < 0.1$ , meeting consistency requirements, with normalized eigenvectors  $\omega$  representing the sorting. (4) Calculating total weights for alternative layer factors by multiplying eigenvectors across hierarchical levels. Table 3 presents the normalized eigenvectors.

The resulting total weights for lifecycle stage risk factors were incorporated into the assessment model shown in Table 4 .

## 5.1 Risk Assessment Checklist

The socialized operation of grassroots facilities faces various risks, such as operational management risks from government's "rebuild-but-ignore-management" approach and public welfare risks from low-price procurement. The risk assessment checklist, built upon the model, enables effective risk anticipation and provides decision-makers with management references.

The checklist comprises four elements: risk factors, weight values, assigned values, and analysis values. Risk factors and weights come from the assessment model. Assigned values are integer ratings (1-5: not serious to very serious) given by project decision-makers or risk assessment teams based on actual conditions. Analysis values represent final risk levels, calculated by multiplying weight values by the arithmetic mean of all assigned values. Figure 2 [Figure 2: see original paper] illustrates the checklist structure, which can also be used separately by lifecycle stage as needed.

## 5.2 Application Process

Effective application requires following a standardized process: (1) Identify project-specific risks and existing prevention measures; (2) Assess risks by assigning values and calculating analysis values; (3) Evaluate results—if acceptable, maintain current measures and conclude; if unacceptable, proceed; (4) For unacceptable risks, select appropriate prevention measures and assess residual risks; (5) Evaluate residual risk acceptability—if acceptable, implement new measures and conclude; if not, return to step 4. Figure 3 [Figure 3: see original paper] depicts this process.

## 5.3 Application Example

To validate effectiveness, this study applied the checklist to the socialized operation project of Community Library B in City A, focusing on operation and exit phases.

### 5.3.1 Basic Situation

Established in 2013, Community B was City A's first pilot for transitioning from traditional street-community governance to modern community management, covering approximately 60,000 square kilometers with 120,000 permanent residents. To innovate community governance and enrich cultural life, Community Library B opened in 2014. The 1,000-square-meter facility houses 30,000 volumes and features periodical services, electronic services, and visually-impaired reading areas. The library has undergone three socialized operators.

Initially in 2014, City A outsourced management to Company X through single-source negotiation, with plans for formal bidding once operations stabilized. In 2015, Company Y won the formal bid for overall operations. Upon takeover, Company Y identified issues including unreasonable functional zoning and low

space utilization, subsequently readjusting layouts, purchasing additional books, and organizing special activities.

In mid-2020, Company Y exited upon contract expiration. Inadequate pre-expiration communication and City A' s failure to anticipate non-renewal left the library unmanned and closed for restructuring. In 2021, Company Z won the new bid, facing severe infrastructure damage from the closure period and issues with reader accounts and stored values from the previous operator.

### 5.3.2 Risk Assessment

After resuming operations, Company Z and City A' s cultural management department formed an evaluation team to assess socialized operation risks using the checklist and standard process. The team identified five operation-phase risks and one exit-phase risk, with two having existing but ineffective prevention measures (Table 5 ).

The team engaged a third-party evaluator to assign values based on Table 5 and other data, then calculated analysis values. Results showed analysis values  $> 0.05$  for: team specialization risk, traffic flow risk, profitability risk, operational management risk, and payment risk, in descending order. Figure 4 [Figure 4: see original paper] presents the assessment checklist.

### 5.3.3 Adjusting Prevention Measures and Assessing Residual Risk

Accepting these as critical risks, the team adjusted prevention measures: (1) Formulated the “Community Library B Socialized Operation Management Measures” replacing previous regulations, establishing staff qualifications and training systems, creating a whitelist for profit-making cultural activities, and instituting regular communication mechanisms; (2) Designated library operation funds as a separate special fund from the community service center' s total budget. Post-adjustment residual risk assessment deemed the remaining risk acceptable, concluding the adjustment process.

### 5.3.4 Implementing Risk Management

Company Z implemented risk management according to the new measures and resumed operations, periodically reviewing the checklist to adjust operations based on risk factors and weights. After continuous operation and strategic fine-tuning, the library' s socialized operation returned to normal.

### 5.3.5 Example Summary

The application demonstrated the checklist' s effectiveness for grassroots facility socialized operation projects. As a representative of the emerging “trend” of PPP models for new community libraries, Community Library B' s outsourced operation model reflects current library management innovations. The evaluation team successfully used the checklist to assess risks, adjust prevention measures,

and restore normal operations, proving the checklist can accommodate both universal and project-specific risks. This achieves the study's research objectives.

## 6. Research Conclusions

The 20th Party Congress report emphasizes improving modern public cultural service systems and innovating cultural benefit programs. Promoting public cultural service socialization is a key strategy for building service-oriented governments and innovating service supply models. Grassroots facility socialization, directly affecting every resident, has become crucial to modern public cultural service construction. As China's grassroots public cultural services shift from quantity-focused to quality-focused development, socialized operation experience remains limited, requiring scientific tools for guidance.

This study constructed a risk assessment index system, model, and checklist from existing literature. The literature review revealed insufficient domestic research on grassroots facility socialized operation risk assessment, with existing work failing to meet practical needs for scientific tools. Methodologically, this study innovatively applied PRISMA guidelines to empirical research, systematically synthesizing existing findings to enhance research efficiency, and introduced Cov-AHP to minimize subjective judgment impacts. The resulting checklist provides a one-stop solution for the current lack of scientific tools, promoting project development and helping decision-makers reduce risk probability and damage.

Limitations include: (1) The study did not separately discuss urban-rural and regional differences in grassroots facility socialization; (2) The checklist requires continuous improvement through future project practice.

- [1] Tian Xiaolong. Post-New Public Management Reform and China's Service-Oriented Government Construction[J]. *Public Management and Policy Review*, 2023, 12(02): 157-168.
- [2] Guo Jia. Socialization of China's Public Cultural Services: Realistic Dilemmas and Solutions[J]. *Journal of Hebei University (Philosophy and Social Sciences)*, 2022, 47(02): 118-125.
- [3] Li Longyuan. Implementation and Improvement of Socialization Development Provisions in the Public Cultural Service Guarantee Law[J]. *Library Construction*, 2021(02): 35-41.
- [4] Gao Xiaoping, Liu Yihong, Gao Keqing. Negative Incentives: Reflections on Social Risk Assessment Systems[J]. *Governance Studies*, 2021, 37(06): 77-87.
- [5] Jiang X Y, Lu K, Xia B, et al. Identifying Significant Risks and Analyzing Risk Relationship for Construction PPP Projects in China Using Integrated FISM-MICMAC Approach[J]. *Sustainability*, 2019, 11(19): 5206.
- [6] Li Y, Wang X Y. Using Fuzzy Analytic Network Process and ISM Methods for Risk Assessment of Public-Private Partnership: A China Perspective[J]. *Journal of Civil Engineering and Management*, 2019, 25(02): 168-183.
- [7] Kukah A S K, Owusu-Manu D, Badu E, et al. Evaluation of Risk Factors in

Ghanaian Public-Private-Partnership (PPP) Power Projects Using Fuzzy Synthetic Evaluation Methodology (FSEM)[J/OL]. Benchmarking-An International Journal, 2022(2022-06-27)[2023-06-25]. <https://www.emerald.com/insight/content/doi/10.1108/BIJ-09-2021-0533/full/html>.

[8] Kuru K, Artan D. A Canvas Model for Risk Assessment and Performance Estimation in Public-Private Partnerships[J]. International Journal of Construction Management, 2020, 20(06): 704-719.

[9] Akcay E C. An Analytic Network Process Based Risk Assessment Model for PPP Hydropower Investments[J]. Journal of Civil Engineering and Management, 2021, 27(04): 268-277.

[10] Xu Haiyan. Experience and Path of Social Capital Participation in Public Service Marketization from a Comparative Perspective[J]. Journal of Shenzhen University (Humanities & Social Sciences), 2022, 39(04): 86-95.

[11] Li Zhuqi, Lu Hejian. Research on Full-Process Risk Control of Government-Social Cooperation in Public Cultural Service Supply and Operation in China—Analysis Based on the PDCA Method[J]. Library Construction, 2022(06): 137-147.

[12] Lu Hejian, Cui Ran. Research on Risk Control of Social Forces Participating in Public Cultural Service Construction in China[J]. Library Construction, 2022(03): 146-151+173.

[13] Zhou Ping, Chen Ya. Research on Risk Evolution Characteristics and Control Strategies in the Digital Transformation of Public Cultural Services[J]. Library, 2022(06): 7-13.

[14] Suggestions of the CPC Central Committee on Formulating the Eleventh Five-Year Plan for National Economic and Social Development[J]. The People's Congress of China, 2005(20): 9-18.

[15] Wan Linyan. Public Culture and Its Development in Contemporary China[J]. Journal of Renmin University of China, 2006(01): 98-103.

[16] Guiding Opinions of the General Office of the State Council on Promoting the Construction of Grassroots Comprehensive Cultural Service Centers[EB/OL]. (2015-10-20)[2023-6-25]. [http://www.gov.cn/zhengce/content/2015-10/20/content\\_{10250}.htm](http://www.gov.cn/zhengce/content/2015-10/20/content_{10250}.htm).

[17] Public Cultural Service Guarantee Law of the People's Republic of China[DB/OL]. [2022-10-24]. <https://zwgk.mct.gov.cn/zfxxgkml/zcfg/fl/202012/P020220218490252413657.pdf>

[18] Serezo, Lohan, Wan Dan. A Philosophical and Ethical Analysis of the Risk Concept[J]. Studies in Ethics, 2017(02).

[19] Siddaway A P, Wood A M, Hedges L V. How to Do a Systematic Review: A Best Practice Guide for Conducting and Reporting Narrative Reviews, Meta-Analyses, and Meta-Syntheses[J]. Annual Review of Psychology, 2019, 70: 747-770.

[20] Page M J, McKenzie J E, Bossuyt P M, et al. The PRISMA 2020 Statement: An Updated Guideline for Reporting Systematic Reviews[J]. BMJ-British Medical Journal, 2021, 372: n71.

[21] Seyedhoseini S M, Noori S, Hatefi M A. An Integrated Methodology for Assessment and Selection of the Project Risk Response Actions[J]. Risk Analysis, 2009, 29(05): 752-763.

- [22] Liu Y, Eckert C M, Earl C. A Review of Fuzzy AHP Methods for Decision-Making with Subjective Judgements[J]. *Expert Systems with Applications*, 2020, 161: 113738.
- [23] Lyu H-M, Sun W-J, Shen S-L, et al. Risk Assessment Using a New Consulting Process in Fuzzy AHP[J]. *Journal of Construction Engineering and Management*, 2020, 146(03).
- [24] Xie Zhongqiu. Cov-AHP: An Improvement of the Analytic Hierarchy Process[J]. *Journal of Quantitative & Technological Economics*, 2015, 32(08).
- [25] Lu Hejian, Li Yang. Research on Development Strategies for Socialized Management of Grassroots Public Cultural Services Based on SWOT-PEST Analysis[J]. *Library and Information Knowledge*, 2016(04): 119-128.
- [26] Hu Shouyong. Risk Identification, Causes, and Prevention Paths for Government Purchase of Public Cultural Services[J]. *Library*, 2019(05).
- [27] Hu Yunzhe. Breaking Through the “Last Mile” of Rural Public Cultural Services[J]. *People’ s Tribune*, 2020(01): 54-55.
- [28] Huang Jie, Wang Jie. Research on Construction Practice of Urban Micro Reading Spaces in China—Case Study of Suzhou Library’ s Micro Branches[J]. *Library Theory and Practice*, 2023(03): 48-53+65.
- [29] Xu Jiamin. Research on Innovative Service Operation Models for Community Libraries from a PPP Perspective—Case Study of Guangzhou[D]. South China University of Technology, 2020.
- [30] Chen Bi, Mo Zhenxuan. Research on Evaluation and Selection of Library Outsourcing Models—Case Study of Cataloging Outsourcing[J]. *Journal of Academic Library and Information Science*, 2010, 28(06): 43-46.
- [31] Yang Lin, Wang Lu. Presenting Influencing Factors and Improvements for Unequal Allocation of Public Cultural Service Resources[J]. *Journal of Macro-Quality Research*, 2017, 5(03): 119-132.
- [32] Peng Leiting, Zhang Lu. Research on High-Quality Development Evaluation of Public Cultural Services[J]. *Journal of Macro-Quality Research*, 2023, 11(02).

**Author Contributions:**

Wang Sen: Designed research, collected and processed data, wrote and revised the manuscript.

Chen Zeqian: Conceived the topic, proposed research framework, guided writing and revision.

*Note: Figure translations are in progress. See original paper for figures.*

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