A Study on Sustainable Operation of Urban Regeneration Facilities

Youngha Kim[1]
[1] Architecture & Urban Research Institute,
Interdisciplinary Program in Urban Design, Seoul National University

Abstract

This study examines strategies for the sustainable operation of Urban Regeneration Facilities (i.e., Urban Regeneration Anchor Facilities) after the completion of Korea's Urban Regeneration Projects. The key elements for sustainable operation include the operation entity, economic factors, physical environment, support system, and monitoring. The analysis indicates disparities between public and private operational facilities, underscoring the necessity of operational plans for private entities. Case studies emphasize the importance of enhancing the expertise of operational entities, securing operating costs, and involving these entities early in the planning process. The proposed sustainable operational directions include strengthening the capacities of operating entities, ensuring financial viability, and emphasizing early participation in planning.

Keywords: Urban Regeneration, Anchor Facilities, Urban Regeneration Facilities, Sustainable Operation

1. Introduction

Since the enactment of the 'Special Act on the Promotion and Support of Urban Regeneration' in 2013, a total of 534 urban regeneration projects have been promoted in various areas. As of 2021, 37 areas have completed their urban regeneration leading projects, with approximately 90 anchor facilities established in these areas. It is predicted that over 1,500 facilities will be operational after the completion of the leading projects in the 534 areas.

Urban regeneration facilities have been established at approximately three locations per project area and have accelerated in operation with the conclusion of leading projects. However, the focus of urban regeneration projects has been on the 'supply' of facilities, resulting in insufficient preparation for their 'operation'. This has led to issues such as the discontinuation of facility operations after the leading projects have ended. To tackle this issue, the central government has been authorizing village management cooperatives since 2019 (Jang et al., 2021).

However, due to the locational limitations of the anchor facilities situated in declining areas, pursuing profitable projects is challenging. Furthermore, the village management cooperatives, which are organized by residents, lack the necessary experience and professionalism to operate such facilities. In the case of private facilities such as community centers, finding an operator can be challenging due to cost and location limitations, as well as a shortage of capable entities in the area. Furthermore, the operation of anchor facilities may take several months after completion (Kim et al., 2022).

The objective of this study is to identify the factors and improvements required for the sustainable operation and function of urban regeneration facilities, which serve as central points for public services and community activities in declining areas.

2. The Considerations of Urban Regeneration Facilities and Sustainable Operation

The considerations and types of urban regeneration facilities were examined, and systems and policies related to the establishment and operation of these facilities were reviewed. The meaning and requirements for sustainable operation of urban regeneration facilities were derived and utilized as key elements for analysis in subsequent chapters.

Urban regeneration facilities serve two main functions: providing public services and supporting communities. Their uses can be categorized into resident welfare, childcare/caregiving, work/economy, culture/tourism, and management/support. Regarding related systems, the process of establishing anchor facilities, support projects related to operation, and the characteristics of contract methods commonly used for facility operation, such as usage permission and management consignment, were examined.

Although anchor facilities have various types and functions, the elements commonly considered for sustainable operation include operational entities, economic, and physical environment factors, with monitoring systems and administrative/institutional support as additional factors (An et al., 2019; Bae & Park, 2019; Bae & Lee, 2018; Byun et al., 2020; Han & Lee, 2021; Heo, 2010; Jang et al., 2021; Kim & Shin, 2018; Kim & Bae, 2021; Kim & Yoo, 2021; Lee et al., 2018; Park, 2020; Seo & Sung, 2018; Song et al., 2020; Yeo, 2004).

Table 1. Considerations for the Sustainable Operation of Urban Regeneration Facilities

Factor	Description	Classification	Description
Operational entities factors	Elements necessary for the sustainable operation of a facility by the operating entity	Composition	Appropriate Organizational Structure for the Operation
		Capability	Members' Level of Consciousness, Organizational Management Capability
		Expertise	Business Planning and Execution Capability, Experience in Operating Similar Facilities
		Education	Self-Education for Enhancing Capability, Completion of Refresher Training
		Collaboration within the Region	Returning Profits to the Community, Creating Local Jobs, Operating Programs in Connection with the Local Community
		Network	Establishment of Local Community, Intermediary Support Organizations, Private Enterprises, and Residents' Associations.
Economic factors	Economic Factors Including Revenue Models for Facility Sustainability	Profitability	Appropriateness of the Revenue Model and Revenue Generation for Facility Operation
		Business Strategy	Programs and Business Concepts for Facility Operation, and Business Implementation Strategies
		Financial Support	Own Business Income, Membership Fees, Sponsorships, Public Funding, and Linked Projects

Factor	Description	Classification	Description
Physical Environment Factors	Sustainability Factors Based on the Physical Characteristics of the Facility	Location and Size	Facility's Location, Accessibility, and Appropriate Scale for Operation by the Managing Entity (Area, Number of Floors, etc.)
		Programs	Facility Use that Aligns with the Nature of the Facility and the Purpose of Regional Activation
Additional Factors	Other Factors Influencing Operation	Monitoring System	Establishment of a Monitoring System for the Usage Status of the Hub Facility, and Whether an Evaluation System and Performance Review System Have Been Established
		Administrative and Institutional Support	Institutional Support for Flexibility in Contract Methods Support for Linking to Follow-up Projects, Connection with Urban Regeneration Support Centers

3. Current Status of Urban Regeneration Facilities and Operation

The facilities for urban regeneration are mainly small-scale and serve purposes related to revenue generation and resident welfare. The average floor area of these facilities is 649 ㎡, and 78.6% of the analyzed facilities have a total floor area of less than 1,000 ㎡. These facilities are typically small-scale buildings without basements and do not exceed three floors above ground. The facilities are primarily used for resident welfare and convenience, as well as income-generating activities. Resident welfare facilities comprise community spaces, multipurpose halls, and fitness facilities. Income-generating facilities include cafes, restaurants, retail shops, shared kitchens, accommodations, and meeting rooms.

Operational difficulties were generally experienced by privately operated facilities, with most challenges arising from the administration's struggle to secure an operator. Local government officials reported facing more difficulties than personnel from the urban regeneration support center. The main reasons for the difficulty in selecting an operator were identified as the lack of resident capacity and the absence of profitable facilities. It was confirmed that the operating entity is crucial for the sustainable operation of anchor facilities. The importance of the operating entity's capacity and professionalism, economic factors, and the physical environment were highlighted. Respondents suggested that decisions regarding the facility program, operating entity, and operation method should be made during the planning and designing phase of the project. Additionally, there was a significant demand for continued support for facility operation even after the conclusion of the pump projects. There were differing opinions on the suitable extent and duration of support. The administration and urban regeneration support centers were identified as the entities that could participate most extensively in the establishment process.

4. Analysis of Urban Regeneration Facility Operation Cases

This chapter analyzes five operational cases, namely the Tongri Guesthouse (located in Taebaek-si), Wongokgae Village Museum (located in Daegu Metropolitan City), Kim Young-soo Library (located in Jeju-si), Maker's Camp (located in Geoje-si), and Namsun Center (located in Yeongju-si). The focus is on the identified sustainable operational elements, including operational entity, economic and physical environmental factors, monitoring, and post-management. It emphasized the importance of professionalism for the sustainable operation of facilities, exploring various methods to secure operation costs, and highlighted the benefits of involving the operational entity in space design to prevent duplicate investment and create efficient spaces. The establishment of ordinances for post-project management in areas after the leading projects have ended is considered crucial. Additionally, a monitoring system for operational performance and the role of urban regeneration support centers should be implemented.

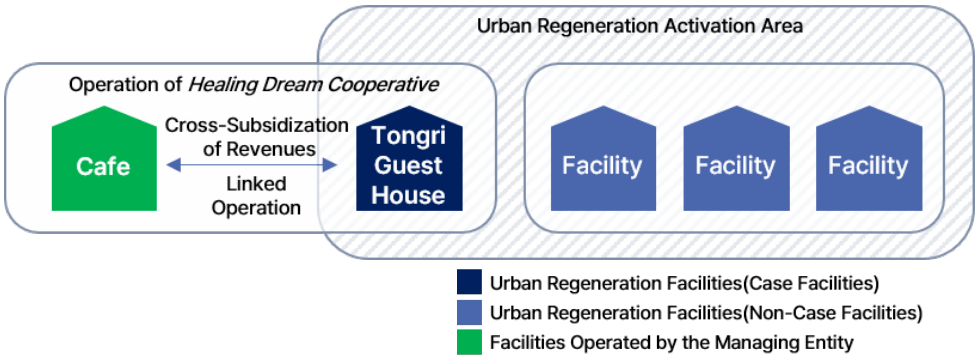
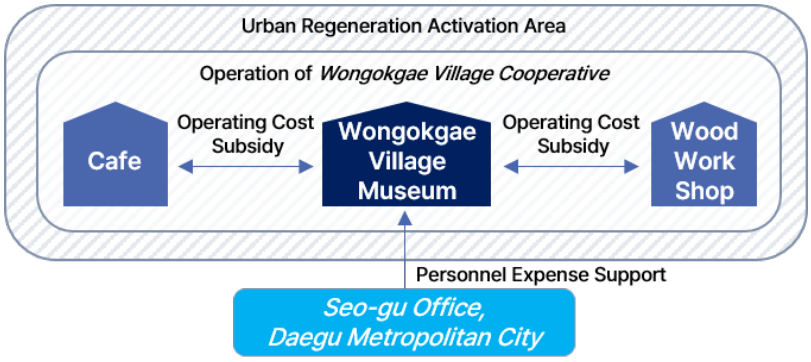
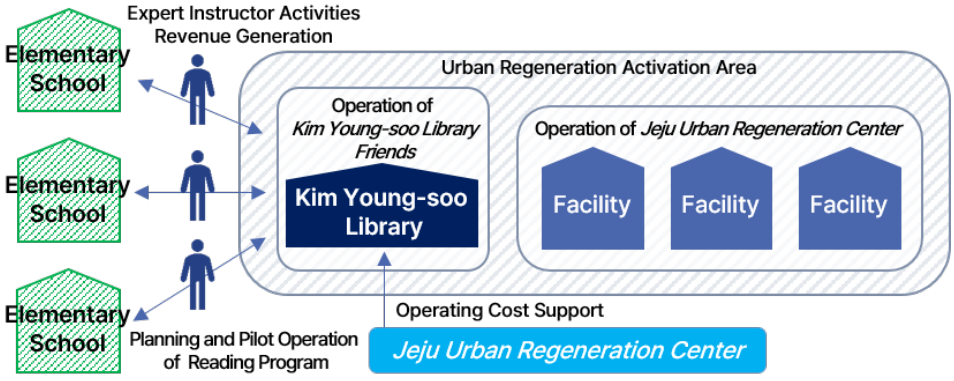
It is necessary to approach the establishment process, operation management phase, and post-management phase separately. When organizing elements for the sustainable operation of urban regeneration hub facilities, they should be considered during the establishment, operation, and post-management stages. During establishment, it is essential for the operating entity to participate in the planning and design process of the hub facility. Conducting pilot operations is also necessary to review the suitability of the operator or program and determine the operational direction. During the operational management phase, it is crucial to establish an appropriate operational direction that aligns with the functions and purposes of the hub facility. Continuous enhancement of the operating entity's capacity is necessary, which can be achieved through measures such as completing education for capacity enhancement and cultivating hub facility operation experience. It is necessary to review the scale of revenue and expenditure during operation and establish an operational plan accordingly. Additionally, an appropriate outsourcing structure should be considered.

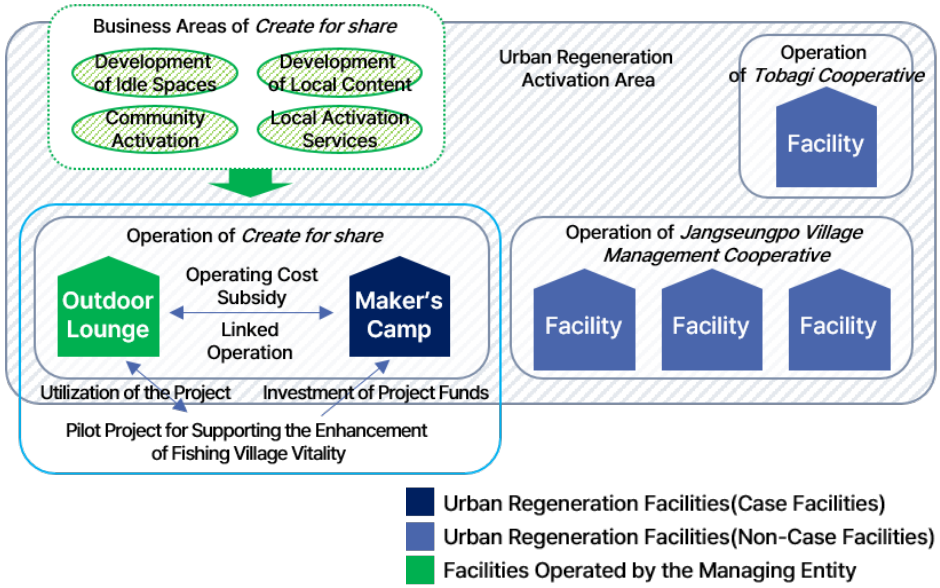
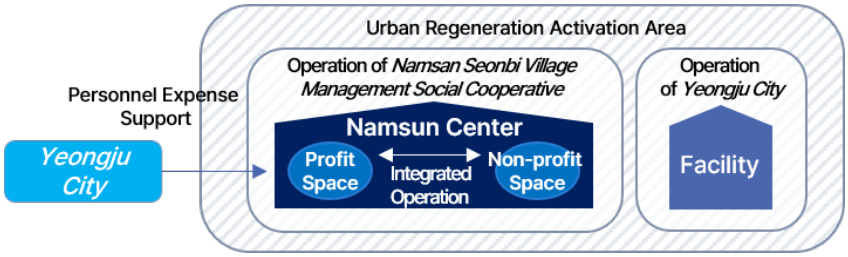
Table 2. Case Analysis Targets of Urban Regeneration Facilities

Project Selection Year	Local Government Unit		Case	Operating Entity	Open Year	Area (㎡)
	Wide-area	Basic unit				
2014	Gangwon-do	Taebaek-si	Tongri Guesthouse	Healing Dream Cooperative	2019	493
2016	Daegu Metropolitan City	Seo-gu	Wongokgae Village Museum	Wongokgae Village Cooperative	2021	495
2016	Jeju-do	Jeju-si	Kim Young-soo Library	Kim Young-soo Library Friends	2019	355
2017	Gyeongsangnam-do	Geoje-si	Maker’s Camp	Create for Share	2022	154
2017	Gyeongsangbuk-do	Yeongju-si	Namsun Center	Namsan Seonbi Village Management Social Cooperative	2022	1,051

In the post-management phase, after the completion of the leading project, when the operation begins with local government budgets, it's necessary to approach from the perspective of post-management of urban regeneration project areas to ensure the continued local functionality of the facility. Instead of approaching with a single public facility operation, it's essential to establish a facility operation and management system that can sustain the regional roles and functions and contribute to the activation of community residents. To support this, it's necessary to add post-management functions of urban regeneration projects to the role of urban regeneration support centers.

Figure 1. Facility Operational System Diagram

Case	Diagram
Tongri Guesthouse, Taebaek-si	
Wongokgae Village Museum, Daegu Metropolitan City	
Kim Young-soo Library, Jeju-si	

Case	Diagram
Maker's Camp, Geoje-si	
Namsun Center, Yeongju-si	

5. Sustainable Operation Plans for Urban Regeneration Facilities

To ensure the sustainable operation of urban regeneration anchor facilities, it is necessary to establish directions for each stage, from establishment to operation and post-management. During the establishment phase, the operational entity should participate in the planning and design process of the facility. Pilot operations should also be conducted to review the appropriateness of the operational entity and programs. During the operational management phase, it is necessary to establish the appropriate operational direction and plan based on the facility's function. It is also important to continuously enhance the operational entity's capacity and attract follow-up projects. In addition, conducting profitability reviews and establishing appropriate consignment structures are crucial for securing operational costs. During the post-management phase of an urban regeneration project, it is necessary to manage facilities from a post-project management perspective. Urban regeneration support centers play a crucial role in providing support. To achieve this, it is necessary to construct an establishment system that takes into account facility operation. Planning facilities according to local residents' demands, establishing a basic direction and creation plan for the facilities through regional surveys, and improving guidelines related to facility establishment and operation are all important steps. Additionally, it is crucial to develop a detailed regional

analysis to establish a strategy for creating facilities that the operational entity can manage. In addition, it is suggested to consider changes to the evaluation items for selecting urban regeneration projects and propose improvements to the guideline review items at each stage of facility establishment. It is also recommended to pre-review income and expenditure to establish an operation plan and examine consignment methods. The central government should propose detailed operation plan items to improve the overall level of operation plans. In addition, it is recommended to increase the operational entity's capacity through phased operations such as social experiments and pilot programs. If necessary, pre-selection methods for operational entities should be implemented, and follow-up linkage projects should be supported. To manage facilities after establishment, it is suggested to establish facility operation governance, assign monitoring and management roles to urban regeneration support centers, propose policy and system improvement plans for analyzing the effects of facility establishment, revise ordinances for post-management of facilities and areas after the leading projects end, and amend detailed operational standards for management consignment to encourage capable private entities' participation.

Acknowledgements

This research was conducted as a research project by the Architecture & Urban Research Institute, with Associate Research Fellow Minyoung Jang and Assistant Research Fellow Kyungjae Lee as members of the research team. I am grateful for the support of the Architecture & Urban Research Institute and the research team.

References

An, H., Song, A., Park, J., & Yoon, H. (2019). A Qualitative Analysis of the Urban Regeneration Priority Projects : Focused on Eleven Neighborhood-Based Regeneration Areas. *Korean Journal of Urban Planning*, 54(3), 91-105. https://doi.org/10.17208/jkpa.2019.06.54.3.91

Bae, W., & Park, T. (2019). Operation Direction Of Community Facilities In Residential Environment Management Projects By The Village Community Management Association Accounting Status- Focused on 15 Villages where the Residents Public Facilities have been Completed. *Journal of Urban Design Institute of Korea*, 20(1), 73-89.

Bae, Y., & Lee, J. (2018). Promoting Cooperative Enterprise Participation in Urban Regeneration. *Korea Research Institute for Human Settlements*.

Byun, H., Ryu, S., Baek, M., Son, K., & Hong, B. (2020). A Study on the Operation Plan of Village Management Cooperatives for Sustainable Urban Regeneration Projects. *Chungbuk Research Institute*.

Han, S., & Lee, J. (2021). Transferring Public Facilities to Community Assetsfor Boosting the Urban Regeneration Project in Busan Metropolitan City. *SH Urban Research & Insigh*, 11(1), 81-100.

Heo, I. (2010). A Study on the Registration Status of Local Government Property and the Improvement Plan for Management. *Korean Accounting Journa*l, 30(5), 41-73, http://dx.doi.org/10.24056/KAJ.2021.08.004

Jang, M., Seo, S., Lim, B., & Byun, E. (2021). Management and Operation of Anchor Facilities for Neighborhood Regeneration Revitalization. *Architectural & Urban Research Institute*.

Kim, I., & Shin, J. (2018). The Influence of Community-based Facilities on Residents' Empowerment - Focused on Residential Environment Management Project Site of Seoul, *Journal of the urban design institute of Korea*, 19(1), 83-100.

Kim, W., & Bae, W. (2021). Sustainable Operations of the Community Facilities for Residents in Consideration of Construction and Operation Characteristics - Focused on the 27 Facilities in the Residential Environment Management Project Zone in Seoul. *Journal of Urban Design Institute of Korea*, 22(6), 97-112. https://doi.org/10.38195/judik.2021.10.22.6.97

Kim, Y., & Yoo, J. (2021). A Study on the Important Factors for Revitalizing Profit-Type Community Facilities of Urban Renewal New Deal Project. *Journal of the Architectural Institute of Korea*, 37(8), 83-91. https://doi.org/10.5659/JAIK.2021.37.8.83

Kim, Y., Jang, M., & Lee, K. (2022). Sustainable Operation Strategies for Urban Regeneration Facilities. *Architectural & Urban Research Institute*.

Lee, H., Kim, Y., & Lee, S. (2018). The Analytical Research on Community Centers Used as Hub Spaces of Communities and Their Utilization Status - Focus on the Community Center in Daegu. *Journal of the Architectural Institute of Korea - Planning & Design*, 34(9), 31-42. https://doi.org/10.5659/JAIK_PD.2018.34.9.31

Park, S. (2020). A Study on the Efficient Operation Plan through the Diagnosis of the Operation of Urban Regeneration Community Facilities : Focusing on the Busan Community Facilities. *Journal of Korea Planning Association*, 55(3), 5-16. https://doi.org/10.17208/jkpa.2020.06.55.3.5

Seo, S., & Sung, E. (2018). Sustainability and the Roles of the Community-led Social Economic: Organization for Urban Regeneration. *Space and Environment*, 28(3), 12-47. https://doi.org/10.19097/kaser.2018.28.3.12

Song, Y., Park, S., & Moon, B. (2020). Business Model for Sustainable Smart City Service. *Architectural & Urban Research Institute*.

Yeo, Y. (2004). A Comparison of Organizational Effectiveness in Facility Management According to Operational Entities. *The Korean journal of local public enterprises,* 1(1), 1-34.