

Innovative Approaches for Sustainable Social Housing Supply System

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Abstract

Purpose: This study aims to address the inefficiencies and limitations in Seoul's social housing system by proposing innovative approaches to improve the supply and management processes. Despite a severe shortage of social housing, existing units are underutilized due to structural constraints, leading to high vacancy rates and increased management costs. This research focuses on identifying critical areas for transformation to better serve housing-vulnerable populations. **Research Design, Data and Methodology:** The research employs a multi-faceted methodology; 1. A critical analysis of the current tenant recruitment and location processes to uncover systemic inefficiencies. 2. An in-depth case study of residential mobility patterns among housing-vulnerable groups to assess their needs and movement dynamics. 3. An institutional review of constraints faced by housing welfare centers in providing effective social housing counseling. The study integrates qualitative and quantitative data collected through surveys, interviews and administrative records. **Results:** The findings highlight significant gaps in the current tenant recruitment process, including delays and mismatched allocations that contribute to prolonged vacancies. Residential mobility analysis reveals unmet housing needs and frequent relocations among vulnerable populations, while institutional reviews underscore the lack of adaptive and user-centered counseling frameworks. These inefficiencies collectively hinder the system's capacity to meet demand and increase operational burdens. **Conclusion:** The study underscores the need for a transformative approach to Seoul's social housing supply system. Key recommendations include adopting data driven tenant matching, streamlining administrative processes and enhancing housing welfare services to align better with the needs of housing-vulnerable populations. These reforms are critical to improving the efficiency, responsiveness and equity of the social housing system in Seoul.

Keywords : Social housing, Housing counseling, Housing welfare centers, Vulnerable populations, AI new technology

JEL Classification Code : H41, H44, I38, L32

1. Introduction

1.1. Background and purpose of the study

In his book *The Effective Executive*, Peter Drucker wrote, "Efficiency is doing things right; Effectiveness is doing the right things." Analyzing South Korea's public housing policy from this perspective, starting with a plan to build 2 million permanent social housing in 1988, the South Korean government has been promoting the supply of social housing under

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different policy names for each of the past 30 years. Permanent social housing under Roh Tae-woo, national social housing under Kim Dae-jung and Roh Moo-hyun, housing for the poor under Lee Myung-bak, happy housing under Park Geun-hye, and social housing under Moon Jae-in, Seoul is expected to have 380,000 social housing units by 2022. It is clear that the supply of social housing has increased considerably in a relatively short period of time and that the government has been doing the right thing to provide affordable housing for vulnerable groups.

However, there are questions about whether it has done the right things. It is worth questioning the efficiency of the supply method, as it has not sufficiently reflected the actual housing needs of the vulnerable groups and has continued to supply a one-size-fits-all, provider-driven target, and has been reactive in terms of distribution after mass housing supply without analyzing housing needs. This approach has resulted in additional budget wastage for managing social housing vacancies and social opportunity costs of not being able to provide housing to the right people at the right time.

Therefore, this study aims to propose a proposal for the transformation of the social housing supply service mechanism using AI through a critical analysis of the public recruitment method for social housing tenants, an in-depth case study of the migration of vulnerable groups, an analysis of the institutional constraints faced by the current housing counseling process of 25 housing welfare centers in Seoul, and a proposal for the transformation of the social housing supply system using AI.

2. Limitations of the current social housing supply service mechanism

2.1. Review social housing tenant recruitment practices

The current social housing tenant recruitment system maintains the various types of social housing that were formed in the context of each regime's era, with vacancies and new housing units for each type being supplied once or twice a year. This approach represents a structural limitation that hinders access to real housing opportunities by requiring housing seekers to wade through complex announcements and a thorough understanding of different rental housing types.

From the perspective of LHs and SHs as social housing providers, the process of open recruitment and selection of eligible applicants for different types of social housing is becoming increasingly complex and inefficient, and there are calls for a shift in the supply system.

Recognizing this institutional inefficiency, the National Assembly's Legislative Research Office proposed the integrated social housing type through the study 'Status of Social Housing Type Integration and Future Challenges' and attempted to make an institutional shift to secure the unity of the supply system through legal review. However, in reality, the integrated social housing type is just another type of housing type and does not fundamentally innovate the existing complex supply system.

In the case of existing social housing, such as permanent social housing, national social housing, and happy housing, the criteria for tenants' qualifications and rent are set differently depending on the type of social housing, such as the lowest income group (permanent social housing), low-income people (national social housing), and newlyweds and young people (happy housing), which does not flexibly reflect the demand for social housing, and the complexity of the criteria makes it difficult for consumers to understand. In response, discussions were held on the need to unify the types of social housing from the perspective of consumers, and to simplify complex resident qualifications to make them easier for consumers to understand, and the government provided the direction of detailed standards necessary for the introduction of the system through the Housing Welfare Roadmap in November 2017 and the Housing Welfare Roadmap 2.0 in March 2020, including the unification of resident qualifications, a rent system based on the ability to pay (income-linked), and the introduction of a representative area by number of household members. In September 2020, the Enforcement Decree of the Special Act on Social Housing was amended to include integrated social housing as a type of social housing, thus providing the institutional basis for the integration of social housing types. (National Assembly Legislative Research Service, January 20, 2022, Kang-san KIM)

*citation: KIM K.S. 2022 National Assembly Legislative Research Service

Table 1: Number of recruitment announcements for social housing 2022-2024 (SH Corporation website)

Types of social housing	2022	2023	2024	Total
1. Permanent social housing	1	1		2
2. National social housing	1	1	1	3
3. Redevelopment social housing s		1	1	2
4. Long-term Jeonse I	1	1	2	4
5. Long-term Jeonse II			2	2
6. Happy Housing	1	2	2	5
7. Houses for young people	1	3	2	6
8. Residential social housing		1		1
9. Group homes		1	1	2
10. Buy-to-let	8	8	15	31
Long-term non-rental	3	4	2	9
Customized	1		6	7
Housing for Youth	2	2	1	5
Housing for Young people	2	2		4
Housing for Newlyweds			2	2
General			2	2
Supportive Housing			1	1
Housing for Multi-child			1	1
11. Rent deposit loans(Central government)	1	1	3	5
General	1	1	1	3
Housing for Newlyweds			2	2
Rent deposit loans(Seoul)		2	2	4
Public+private social housing	1	4	11	16
Others	4	1	4	9
Public Jeonse	1	1		2
Publicly Assisted Private Rentals			1	1
Public Hanok	1			1
Community Housing	1			1
Customized Housing	1		1	2
Job-Connected Supportive Housing			1	1
Housing for University students			1	1
Total	19	27	46	92

*There are a total of 30 social housing supply types as per the Seoul Housing Welfare Center Consultation Manual, and each type has different priority supply priorities and selection criteria when competing for the same ranking

2.2. Reviewing barriers to access to information in social housing notices

The structure of the social announcement is as follows: ①Supply schedule, ②Inquiries regarding application, ③Supply status, ④Applicant qualifications and tenant selection method, ⑤Application acceptance, ⑥Information on announcement of applicants for document screening, ⑦Information on submission of screening documents, ⑧Maximum period of residence and renewal contract, ⑨Companion lottery and announcement of winners and reserve (tenants), ⑩Contract date, place, and required documents, ⑪Notes on application, ⑫Notes on complex, ⑬Address of each complex, Appendix 1 Detailed information on rental amount, Appendix 2 Criteria for checking and judging home ownership, Appendix 3 Explanation of income items and public data, and consists of 63 pages in 10-point small font. On average, the length of the announcement varies depending on the size of the offer, but it is often at least 30 pages and well over 60 pages. As housing providers try to list everything they can think of, the announcements keep getting longer and longer, making them harder and harder to read for demanders.

The language in the notices also makes it difficult for public housing residents to access information.

- Dedicated area: The area used exclusively for living quarters (private spaces such as rooms, living rooms, kitchens, and bathrooms).
- Residential Public area: The area between the exterior walls and the centerline of the wall, plus stairs, elevators, and hallways.
- Other Public area: Floor space in areas shared with other residents (walkways, playgrounds, parking lots, community spaces)
- Contract Area: Dedicated area+Residential Public area+Other Public area
- Priority Supply: Allocate supply for those with institutionalized priority needs, such as residency, social protection, etc.
- Supply area: It shows the dedicated area of the house in square meters, but the general public is familiar with the unit of equilibrium, so it is impossible to know the number of rooms and toilets by looking at the square meters.
- Deposit to monthly rent conversion: A system that allows you to convert the security deposit and monthly rent of your home (separate conversion rates apply)

2.3. Vacancies and sources of systemic inefficiency

According to internal data from the SH Corporation, the annual vacancy management fee is KRW 12.2 billion in 2022 and 2023, and KRW 8 billion as of July 2024, and it requires a significant amount of administrative and human resources to pay utility bills and manage the status of vacant units. The average monthly vacancy rate (16,695 units as of July 2024) is the standard for the obligation to pay vacancy management fees and refers to all vacant units, including unsold, uncontracted, and unoccupied units. The vacancy management fee per unit is about 69,068 won.

Table 2: Vacant property management costs by year

(Unit: thousand won)

Housing types	2020	2021	2022	2023	2024.07
Apartments	8,245,806	10,421,535	8,406,445	7,008,506	5,878,990
Residential Housing	39,083	54,697	73,932	70,059	46,099
Housing for Young people	42,876	152,490	273,781	543,181	347,788
Single-family homes, etc.	236,441	1,662,084	2,522,963	3,677,887	1,798,542
Total	8,564,206	12,290,808	11,277,121	11,299,633	8,071,418
Increase/Decrease	1,337,037	3,726,602	▼1,013,687	22,512	-

Housing types	2020	2021	2022	2023	2024.07
Monthly average (YOY)	713,683 (19%)	1,024,234 (44%)	939,960 (↓8.2%)	941,636 (0.18%)	1,153,060 (22.5%)

The Corporation identifies the following factors as the main reasons for the increase in vacancy management costs. The increase in new managed rental housing such as multifamily and multifamily buy-to-let, the time it takes to finalize the amount of supply by type after the initial supply and announce it separately by type, and the delay in re-supply through tenant recruitment announcements once or twice a year after eviction.

Internally, it is argued that as a way to solve vacancies, it is necessary to expand recruitment announcements, manage the waiting list, re-supply long-term unrented vacancies with relaxed qualifications, and adjust the different entry periods by type due to the integration of social housing types, but it is being considered as a long-term task because it requires changing the entire supply service system.

3. Housing mobility and pathways for vulnerable populations

3.1. Status of Housing for the Vulnerable

Seoul operates a fast-track social housing program for vulnerable groups living in non-suitable living environments, such as Jjok-bang, Gosiwon, inns, and semi-basement houses, based on the 'Rules for Housing Support for Vulnerable Groups'. Since 2020, the city has been providing comprehensive support to vulnerable residents from initial counseling, selection of public rental tenants, and final relocation through the 'Housing Upgrading Support Project for the Vulnerable', which is jointly funded by the central and local governments. The project is led by the SH Corporation, and is being implemented through Housing welfare centers in 25 boroughs of Seoul.

Table 3: Performance of housing improvement support projects for vulnerable groups (as of 24.7.31)

Year/Support Services	Housing Counseling (cases)	Social Housing applications (people)	Relocation assistance* (people)	Completing a move (people)
Total	193,732	18,383	6,112	16,874
2020	12,188	1,221	-	2,813
2021	32,629	2,511	-	2,968
2022	24,214	2,299	-	2,987
2023	81,077	7,591	3,866	4,969
2024	43,624	4,761	2,246	3,137

* Moving expenses available for new businesses starting at 2023

* Source: SH internal data

3.2. Review the process for housing transfers for vulnerable populations

There are at least 13 steps in the process of moving to a new home, according to 'the Housing Upgrading Support Project'. The following table summarizes the process by which vulnerable populations are moved. The process is a dash from a minimum of three months to a maximum of one year or more for vulnerable populations. The process of visiting different organizations and submitting documents for housing is often a reason for those who have a passive attitude towards social life to give up on housing.

Table 4: Steps for housing vulnerable populations

Step	Procedures for obtaining housing	Visiting organizations and means
1	Announcements (public report, Recognition)	Internet, promotional materials, text messages
2	Housing Counseling	Housing Welfare Center
3	Prepare paperwork	community center
4	Apply for housing	community center or SH head office
5	Submit documents	community center or SH head office
6	Look up income and assets	Autonomous region or SH head office
7	Notifying the right people	About text and registered mail
8	Pre-visiting Houses	Pre-visit a home (3-5 times)
9	Pick a house	SH head office
10	Contracting	SH head office
11	Deposit to monthly rent conversion / Facilities Claims	SH Social Housing Management Center
12	Pay the balance / Get a key	SH Social Housing Management Center
13	Completing a move (Apply for moving expenses)	Housing Welfare Center

* Source: Organizing the bureaucratic process of finding housing through the Housing Assistance Case

4. Limitations of the housing counseling process in Housing Welfare Centers

4.1. Role and status of Housing Welfare Centers

The Seoul Housing Welfare Center provides ①housing counseling and case management, ②emergency housing expenses support, ③operation of a housing welfare network, ④resource linkage, ⑤Simple repair, ⑥social housing education, and ⑦ housing condition survey. In addition, it operates single-family housing management services, Housing Upgrading Support Project for the Vulnerable, support for households with trash hoarding, and moving expenses.

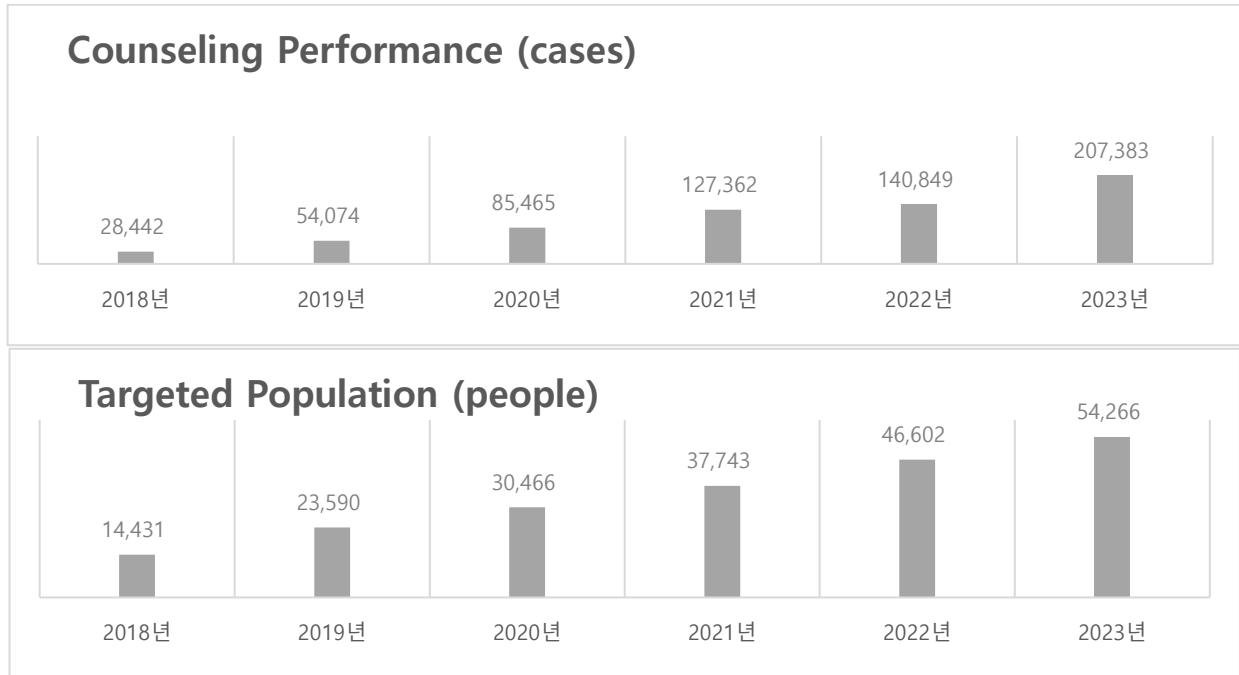
Based on the ‘Basic Housing Act’ and ‘Seoul Housing Basic Ordinance’, the Seoul Metropolitan Government entrusts the SH Corporation to operate a total of 26 housing welfare centers, one in the center and one in each of the 25 autonomous districts. As of December 2023, the total number of employees is 177, and the total operating budget is 17.5 billion won.

Table 5: 2023 Seoul Housing Welfare Center Highlights

Received information by phone or text 171,603cases 37,144people	In-person consultations 41,130cases 18,106people
Resources, such as food and shelter. 850,879thousand won 7,108 households	Provided a comfortable living environment (Housing repair service) 1,214,773 thousand won 3,227 households

Semi-basement house, Jjok-bang, Gosiwon to adequate housing If you have moved 4,969 households 1,348 households * Preparing to moving	Received services with a child 338,440 thousand won 335 households
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* Source: Seoul Housing Welfare Center Housing Counseling Manual2023 Annual Report of Seoul Housing Welfare



* Source: SH internal data

Figure 1. Seoul Housing Welfare Center Performance by Year

4.2. Limitations of housing counseling at Housing Welfare Centers

The Seoul Housing Welfare Center was established in 2006-2007 to provide housing counseling to ensure the right to housing in areas with a high concentration of poor households, and was operated as a social welfare joint fundraising project until 2012, when it was incorporated into the Seoul Public Works Department in 2013 and operated until now, and is a representative public-private partnership project of Seoul. As for the operating organizations, SH took over the project in April 2022 and re-commissioned it to 16 local non-profit private organizations.

According to the analysis of housing counseling data for the five years December 2022, the housing welfare center projects accounted for 16.44% of the subscription information (16.44%), simple information on public rental announcements (14.52%), registration for text notification service (7.45%), and records of missed counseling (7.08%), mainly providing citizens with housing policy information.

Since this project is publicly funded, it is difficult to operate continuously and stably depending on the annual budget secured for the project and, in the case of housing welfare centers operated by SH Corporation, whether or not business personnel can be secured. In addition, due to the limitation of the authority to directly provide housing and access to personal information, it is difficult to provide housing to the target population in a timely manner due to the length of business procedures with administrative agencies, LHs, and SHs for housing support for the residentially vulnerable.

Through the amendment of the law in 2023, public corporations operating housing welfare centers received the authority to inquire about the income and assets of applicants and the legal authority to provide housing directly, but it has not yet been applied in practice.

Article 15.2 of the Rules for Housing Support for Vulnerable Groups (Special Exceptions for Selection of Tenants, etc.)

(1) An investigation agency pursuant to Article 27 of the Notification on the Implementation of Housing Benefits and a business operator that operates a housing welfare center pursuant to Article 22 of the Basic Housing Act may perform the tasks of applying for residence in Article 4 and selecting residents in Article 9.

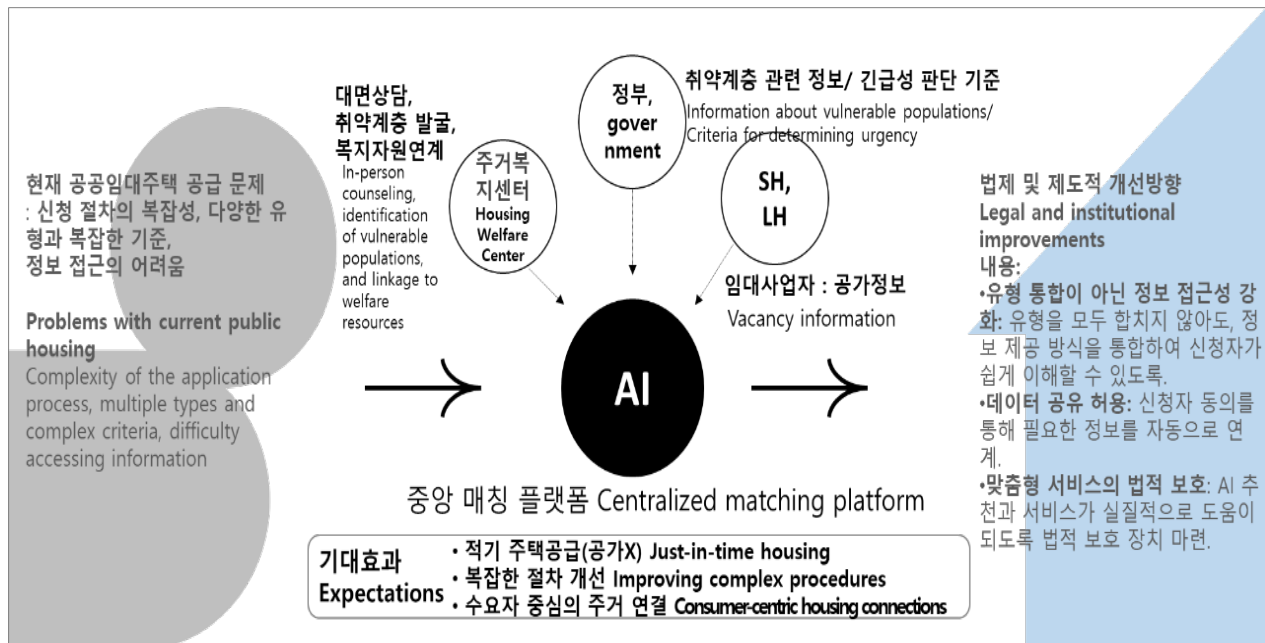
5. Conclusions

In this study, we have comprehensively examined the current landscape of social housing supply services, critically analyzing their systemic challenges and limitations. Based on our research findings, we propose the following transformative approach to address the identified structural inefficiencies.

In order to compensate for the additional costs of managing vacant spaces and the limitations of not supplying housing in a timely manner, social housing should be transformed into a system in which housing welfare centers can manage vacant spaces in the region as a regional base and handle administrative processing related to supply at any time. In addition, the establishment of an integrated public rental housing system is also meaningful to unify the long-term supply system. However, the actual experience of citizens can be improved by innovating the supply system, giving housing welfare centers the authority to supply housing, and shortening the selection process and housing allocation period.

Recognizing the changes in the rental housing supply environment that have made it possible for housing welfare centers to access personal information, use the administrative information sharing network, and qualify and select vulnerable groups, the government should adjust the scope of operation of housing welfare centers to a system where housing applicants can receive housing counseling guidance and moving support at one time, and increase the appropriate number of staff to prevent citizens from moving from one institution to another to find housing.

In order to reduce the proportion of providing information on social housing supply to citizens in the role of housing welfare centers, it is necessary to develop and operate an AI system that manages the type and price of public rental housing that takes into account the situation and financial situation of public rental housing applicants. In the end, it is not important for those receiving public rental housing to know what type of housing they are moving into, but rather that adequate and safe housing is a natural response to their needs.



* Source: The 21st China Japan Korea +ASEAN International Conference on Housing Issues Presentations (2023, Kim Y.J.)

Figure 2: The role of each organization in an AI system for counseling and supplying social housing

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