Study of the location conditions of convenience facilities in suburban residential areas

(Research period: FY 2018–2022)

ISHII Norimitsu (Ph.D. in Urban and regional planning), Head, Urban Development Division, Urban Planning Department
HASEGAWA Hiroshi (Ph.D. in Engineering), Director, Housing Department
KATSUMATA Wataru (Ph.D. in Engineering), Head, Urban Development Division, Urban Planning Department

Keywords: Suburban residential area, convenience facility, location condition, commercial area population, age, household composition

1. Introduction

After the period of rapid economic growth, many residential areas had been planned and constructed in the suburbs of large cities and formed residential areas in the suburbs. Many of the housing complexes were developed more than 40 years ago, and the aging of houses and residential areas, the decline of commercial and service facilities in residential areas (photo), the increase in the number of vacant houses, the decline of public transportation, and other aspects of an outdated town have become apparent. Yet, such areas have advantages, such as higher coverage of public facilities, thanks to planned development from the past and an environment containing a lot of greenery. Thus, these areas can be described as valuable social assets of cities to be maintained and passed on to future generations.[1]

Therefore, the NILIM is developing technology to promote the regeneration of planned and developed suburban residential areas (housing complexes) in the General Technological Development Project Development of Regeneration Technology for Suburban Residential Areas in Response to a Mature Society (FY 2018–2022), with the aim of using these areas as a base to promote the reorganization and consolidation of suburbs.

This fiscal year, in order to introduce convenience facilities, which are in short supply in suburban residential areas, interviews and surveys were conducted with business owners of convenience facilities regarding their location conditions for opening new stores in suburban residential areas.

Photo: A shopping street where most stores are closed

2. Survey of location condition of convenience facilities

(1) Survey target: convenience facilities

Last fiscal year, a questionnaire survey was conducted (average response rate: 54.6%) of the four complexes (Komamusadai housing complex in Hidaka City, Seibu Kitanodai housing complex in Hachioji City, Shodo housing complex in Sakae, Yokohama City, and Asukano housing complex in Ikoma City) examined as case studies to identify convenience facilities that are preferred to be located in and around the complexes. Based on the results, the following five types of facilities were selected for the study.

(i) Commercial facilities that sell fresh food (mini-supermarkets and convenience stores)

Mini-supermarkets and convenience stores were selected rather than large supermarkets, expecting that elderly households will go there on foot or by bicycle.

(ii) Commercial facilities that sell daily goods (drugstores)

Small-scale drugstores are selected as a main target rather than large home centers.

(iii) Elderly facilities

In addition to fee-based nursing homes and senior homes with care service, a facility pattern was also examined where such facilities are combined with small-scale multifunctional in-home care facilities.

(iv) Childcare facility, regional childcare support base

In addition to the community childcare support centers based on the Child Welfare Act, temporary care service for children was also considered.

(v) Co-working space

Teleworking is expanding and taking root because of the influence of the COVID-19 pandemic, and this was considered in response to requests from residents in an interview survey.

(2) Survey method

The survey examined the basic units related to population, households, etc. that are necessary for the establishment of a location for convenience facilities. In order to collect the basic unit, interviews were conducted with commercial consultants, operators of convenience

facilities, and others to determine the average commercial area population required for the installation of the facilities.

Since the installation potential based on the projected income and expenditures of individual facilities is highly individualized and difficult to study as a theory of urban planning, the study was designed to examine the installation potential using population by age group and the number of households by type that live within a certain range from the facility as basic indicators (Figure).

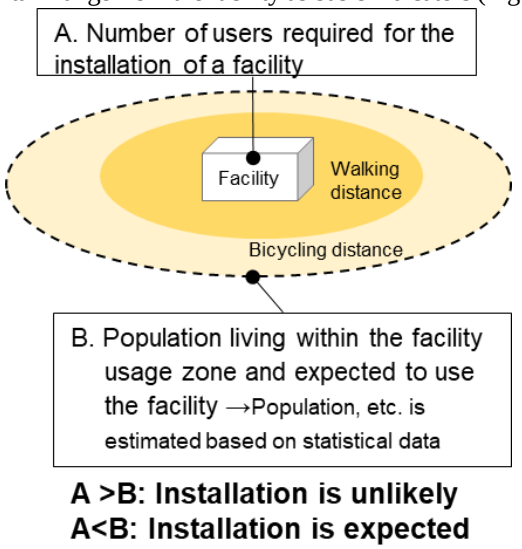

Figure: Image of examining installation potential

(3) Result of commercial population survey etc.

The table shows the result of surveys (i) and (ii) for commercial facilities among the convenience facilities to be studied in (1). The table also shows the data of home centers as a reference. The basic unit shown in the table is based on the assumption that there are no competing stores in the commercial area.

As for supermarkets, which were greatly requested by the residents in the questionnaire survey, it is said that even a mini-supermarket requires a population of about 10,000 people in the surrounding area. Meanwhile, since the four housing complexes that are the subject of the case study in this study all have a population of about 5,000 people, it is considered difficult to install a supermarket in or near these housing complexes. A convenience store can be located in this area in terms of population size.

	Retail area etc.	Population within commercial zone
Convenience store	• Basic retail area is 50 to 60 tsubo (*one tsubo is about 3.3 m^2)	• 3,000 people within the 500 m radius
Supermarket	• Basic retail area is 200 tsubo or more • The number of mini-supermarkets is increasing in recent years (less than 100 tsubo, installed after a convenience store is closed)	• 20,000 people or more within a 2 to 5 km radius • For mini-supermarkets, 10,000 people or more within a 2 km radius
Drugstore	• Basic retail area is 150 tsubo or more (when the store is in suburbs)	• 20,000 people or more within a 2 to 5 km radius
<Reference> Home center	• Basic retail area is 300 tsubo or more	• 30,000 to 50,000 people or more within a 5 km radius

Table: Result of the survey of retail area and commercial area population

(4) Effects of age composition and household composition etc.

When business operators were asked about the impact of age and household composition on the commercial area population of commercial facilities (i) and (ii) in (1), they said that such factors were not major issues for supermarkets and convenience stores and that they would respond by analyzing the sales of products after opening a store and changing the product mix to suit the area. Although not reported in this paper, it goes without saying that age and household composition have a significant impact on facilities for the elderly and children.

3. Conclusion

This study introduced some of the results of a survey on the basic unit, which is a condition for opening a new store in a suburban residential area that lacks convenience facilities. Studies are also being conducted on the conditions for providing services from facilities outside the housing complex, such as mobile stores and home care, which will be reported later. Future studies are going to cover the possibility of installing facilities by combining multiple convenience facilities.

☞For more information:

1) Regeneration of Housing Complex Meeting
https://www.mlit.go.jp/jutakukentiku/house/jutakukentiku_house_tk5_000067.html